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December 23, 2008

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

RECEIVED

2:15 pm, Dec 24, 2008

Alameda County
Environmental Health

Subject: **StID#3337**

Site Address: 3609 International Blvd., Oakland, California

Dear Mr. Wickham:

SOMA's "Vapor Intrusion Evaluation" report for the subject property has been uploaded to the State's GeoTracker database and Alameda County's FTP site for your review.

Thank you for your time in reviewing our report. If you have any questions or comments, please call me at (925) 734-6400.

Sincerely,

Mansour Sepehr, Ph.D., PE
Principal Hydrogeologist



Enclosure

cc: Mr. Abolghassem Razi w/report enclosure
Tony's Express Auto Service

Mr. Vince Tong w/report enclosure
Traction International

Vapor Intrusion Evaluation

**3609 International Boulevard
Oakland, California**

December 23, 2008

Project 2332

**Prepared for:
Mr. Abolghassem Razi
50 Stewart Drive
Tiburon, California**

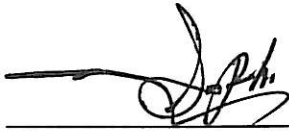


ENVIRONMENTAL ENGINEERING, INC.

6620 Owens Drive Suite A Pleasanton CA 94588 Ph: 925.734.6400 F: 925.734-6401 www.somaenv.com

CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report on behalf of Mr. Abolghassem Razi, property owner of 3609 International Boulevard, Oakland, California, to comply with the request of Alameda County Environmental Health Services in correspondence dated October 7, 2008.



Mansour Sepehr, PhD, PE
Principal Hydrogeologist



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1. INTRODUCTION

1.1 Overview

SOMA Environmental Engineering, Inc. (SOMA) has prepared this report on behalf of Mr. Abolghassem Razi, owner of the property at 3609 International Boulevard, Oakland, California situated at the intersection of International Boulevard and 36th Avenue (Figure 1). This soil vapor sampling was conducted in accordance with Alameda County Environmental Health Services (ACEHS) workplan approval contained in correspondence dated October 7, 2008.

A gasoline station, Tony's Express Auto Services, operates on the site, which is located in an area of primarily commercial and residential use. During Third Quarter 2002, the station was remodeled and several hydraulic hoists were removed. The station no longer has an auto repair facility. Figure 2 shows locations of the main service station, dispenser islands, underground storage tanks (USTs), on-site and off-site groundwater monitoring wells, and other site features and neighboring properties. A summary of previous environmental assessments and remediation background is included in Appendix A.

1.2 Site Hydrogeology

Based on data from previous investigations, groundwater has been encountered at depths ranging between 7 and 14 feet. Figure 2 shows locations of on- and off-site groundwater monitoring wells. Groundwater flows from north to south with an average gradient of 0.014 feet/feet. Based on results of a pumping test conducted by SOMA, hydraulic conductivity of the saturated sediments ranges between 1.5 and 18.3 feet per day. Assuming an effective porosity of saturated sediments of 0.35, the groundwater flow velocity ranges between 22 and 267 feet per year.

2. SCOPE OF WORK

The scope of work included the following tasks:

1. Permit acquisition, preparation of Health and Safety Plan (HASP), underground utility clearance
2. Soil vapor borehole advancement and soil vapor sampling
3. Laboratory analysis
4. Report preparation evaluating the potential for vapor intrusion

These tasks are described in detail below.

2.1 Permit Acquisition, Health and Safety Plan Preparation, and Subsurface Utility Clearance

Prior to initiating field activities, SOMA obtained a well permit from Alameda County Public Works Agency (No. W2008-0384, Appendix C).

Before conducting field activities, a site-specific Health and Safety Plan (HASP) was prepared by SOMA. The HASP is a requirement of the federal Occupational Safety and Health Administration (OSHA), "Hazardous Waste Operation and Emergency Response" guidelines (29 CFR 1910.120) and the California Occupational Safety and Health Administration (Cal/OSHA) "Hazardous Waste Operation and Emergency Response" guidelines (CCR Title 8, section 5192). The HASP is designed to address safety provisions during field activities and protect the field crew from physical and chemical hazards resulting from drilling and sampling. It establishes personnel responsibilities, general safe work practices, field procedures, personal protective equipment standards, decontamination procedures, and emergency action plans. Field staff and contractors reviewed and signed the HASP prior to beginning field operations.

On November 11, 2008, prior to drilling activities, SOMA's field crew visited the site and marked proposed boring locations, using chalk-based white paint. Underground Service Alert (USA) clearance verifying that drilling areas were clear of underground utilities was obtained November 11, 2008 (Ticket 579256). SOMA oversaw a private utility locator (Cruz Brothers) survey proposed drilling locations on November 14, 2008 to locate any additional subsurface conduits.

2.2 Soil Vapor Study

To evaluate progress toward case closure as requested by ACEHS, on November 14, 2008 SOMA oversaw advancement of seven soil vapor sampling boreholes by Gregg Drilling & Testing. They were advanced along the downgradient portion of the property for evaluation of vapor intrusion using soil vapor sampling. Prior to beginning drilling activities, SOMA confirmed that no significant precipitation had occurred in the area of the site within the previous five days.

As shown on Figure 3, SV-1 through SV-7 were advanced to a depth of 5 feet below ground surface (bgs) around the station building and the downgradient portion of the property using Geoprobe. The soil vapor sampling procedure using Geoprobe entails drawing a soil vapor sample from the subsurface and into the sampling manifold. The soil vapor sampling diagram is shown in Figure 4. Samples were collected according to established guidelines outlined in Appendix C. Boring logs are cataloged in Appendix D. General field procedures are attached in Appendix E.

A Geoprobe rod was hydraulically advanced to approximately 5 feet bgs, the target vapor sampling depth. The lead drill rod was fitted with a sampling adaptor known as a Post-Run Tubing (PRT) adaptor. Approximately 15 feet of 1/4-inch-outer diameter (OD) nylaflo sampling tube was connected into the sampling port at the end of the rod. The sampling tube was then capped with a vapor-tight valve. Once the target sampling depth was reached, the probe was retracted 6 inches and allowed to equilibrate for approximately 20 to 30 minutes.

Hydrated bentonite was placed around the drill rod to inhibit surface air migration down the outer portion of the drill rod. SOMA utilized Air Toxics manifold setup (Appendix C), which allows automatic leak checking of the canister sample train. A pre- and post-sample vacuum reading was recorded for each sample Summa canister on chain-of-custody documents. The initial vacuum of each canister was greater than 25 inches of Hg; therefore, all canisters were utilized during the field test. Once the sampling train was assembled, all connections between the summa canisters and valve on the downhole side of the regulator were leak tested for 10 minutes by opening and closing the purge canister valve to place a test vacuum on the assembly. When the sampler opens and then closes the purge can, a vacuum is created within the canister lines and fittings. When this vacuum is maintained the train is considered leak free. In addition, because there is only one connection (probe tubing to sample train) the potential for leaks is greatly reduced.

The sampling manifold was pressure tested and approximately three volumes of gas were purged from the manifold and boring prior to sampling. When gauge vacuum was maintained for 10 minutes and it had been at least 20-30 minutes since the drill rod was sealed at the surface with bentonite, the purge canister valve and the valve on the downhole side of the regulator were opened to begin purging ambient air from the sampling apparatus and borehole. The purge canister valve was closed when three volumes of air had been purged from the sample apparatus and borehole.

Adequacy of purging was determined based on inches of pressure drop on the purge canister as well as time required for purging based on anticipated purged volume. The volume of air sampled is a linear function of the canister vacuum pressure drop, and was calculated accordingly based on the initial vacuum reading. The purge volume or "dead space volume" was estimated based on a summation of volume of the sample container (i.e., glass bulbs), internal volume of tubing used, and annular space around the probe tip.

Following is the calculation for the appropriate purge volume and purge time:

The effective volume of 1/4-inch OD diameter Teflon tubing is about 4.4 mL/ft; the average vapor flow rate through the sampling tube was 167 mL/min, the total length of the Teflon tubing was approximately 15 feet.

Because it is recommended that purge volumes and sample volumes be collected at the same flow rate, SOMA utilized a soil gas sampling manifold with a built-in flow restrictor (both the purge canister and sample canister are in line after the flow restrictor), the flow restrictor was calibrated by the laboratory to 167 mL/min (Figure 4). Additionally, the volume of the 6-inch-long retracting probe rod was about 80 mL. During the sampling event, three tube volumes were purged through the sampling tubes. Therefore, the total purged air volume (three volume purge) was calculated as follows:

$$\text{Total volume of purged air} = (4.4 \text{ mL/ft} \times 15 \text{ ft} + 80 \text{ mL}) \times 3 = 438.00 \text{ mL}$$

Since volume of air sampled is a linear function of the canister vacuum pressure drop, it was calculated accordingly based on the initial vacuum reading. For example, if initial vacuum was 30 inches of Hg, 438.00 mL corresponded to a drop of 2.19 inches of Hg. To calculate time during purging, 438.00 mL is divided by 167 mL/min, which equals 2.62 minutes for purging.

SOMA utilized 6-L summa canisters, and sampling was terminated when the sample canister gauge indicated approximately 5 inches Hg of vacuum remaining in the canister. Therefore, sample collection duration at flow rate of 167 mL/min was approximated at:

$$\text{Sample collection time} = 5,000 \text{ mL} / 167 \text{ mL/min} = 29.94 \text{ minutes}$$

For canisters with initial vacuum below 30 inches Hg, sample duration was recalculated accordingly. For example if the initial vacuum was recorded at 29 inches of Hg, sample collection duration at flow rate of 167 mL/min was approximated at:

$$\text{Sample collection time} = 4,965 \text{ mL} / 167 \text{ mL/min} = 29.73 \text{ minutes}$$

Pressure drops along with sample collection times at each location were recorded on chain-of-custody documents.

Leakage during soil gas sampling may dilute samples with ambient air and produce results that underestimate actual site concentrations or contaminate the sample with external contaminants. A leak test was conducted to determine whether leakage was present (i.e., the leak check compound is detected and confirmed in the test sample after its application). During sampling, isopropyl alcohol (2-propanol, IPA) was used as a tracer to test for leaks. This was accomplished by placing gauze soaked with isopropyl alcohol along the drill rod, and around valves, joints, and pressure regulators. The gauze with isopropyl alcohol was remoistened every 5 minutes.

A duplicate field sample was collected from boring SV-4, at the same location and depth immediately after the original sample. The sampler put on new, unused gloves prior to assembling the sampling train and collecting each vapor sample to limit potential cross-contamination. Any reusable parts were field decontaminated. The general procedure for decontaminating sampling equipment was as follows: clean equipment with a brush using a non-phosphate detergent solution, rinse equipment with control water (i.e., water having a known chemistry), use deionized/distilled water rinse to finish decontamination.

Following soil vapor sampling, borings were abandoned with a neat cement grout mixture tremmied into place and completed at the surface with materials to match existing grade.

2.3 Laboratory Analyses

Soil vapor samples were delivered to Air Toxics Ltd. a California state-certified environmental laboratory for analysis under appropriate sample handling protocol. The samples were analyzed for the following:

- EPA Method TO-14A (TO-15): benzene, toluene, ethylbenzene, total xylenes (collectively termed BTEX); methyl tertiary-butyl ether (MtBE); and volatile organic compounds (VOCs)
- EPA TO-3: total petroleum hydrocarbons as gasoline (TPH-g)

In addition to isopropyl alcohol, SOMA analyzed atmospheric gases O₂, CO₂, and methane (ATM 1945). The reporting limit for O₂, CO₂, and methane was specified to be less than concentrations of these gases in the atmosphere. SOMA ensured that laboratory-reporting limits for chemicals of concern were below shallow soil gas environmental screening levels (ESLs) that address inhalation of contaminants in an indoor setting, set by California Regional Water Quality Control Board (CRWQCB)–San Francisco Bay.

2.4 Results and Discussion

The soil vapor samples were collected to evaluate the exposure pathway by volatilization to indoor residential air. The sampling manifold held the test vacuum prior to sampling. Furthermore, no significant breakthrough was indicated during the vapor sample collection, as the IPA (leak check compound) was either non-detectable or detected at low concentrations. The IPA level was well below 10,000 µg/m³, the detection limit recommended in DTSC guidance (DTSC 2003). IPA was detected at low concentrations ranging from 91 µg/m³ to 17 µg/m³ except at SV-5 and SV-7, where it was below the laboratory-reporting limit.

Petroleum hydrocarbons were detected in most soil vapor samples. The majority of TPH-g concentrations ranged from 6,800 µg/m³ (SV-6) to 16,000 µg/m³ with

significantly higher concentrations at SV-5 of 75,000 $\mu\text{g}/\text{m}^3$ and 66,000 (laboratory duplicate). Benzene concentrations ranged from non-detectable to 78 $\mu\text{g}/\text{m}^3$, MtBE was detected only in soil vapor from SV-2, at 58 $\mu\text{g}/\text{m}^3$. Oxygen was detected in all samples at concentrations ranging from 19 to 22 percent; methane was detected in all samples at concentrations ranging from 0.0002 to 0.0061 percent; and carbon dioxide was detected in all samples at concentrations ranging from 0.069 to 1.7 percent. Soil vapor analytical data is summarized in Table 1; certified analytical reports and chain-of-custody documentation are included in Appendix F.

Oxygen, carbon dioxide, and methane data indicate that aerobic biodegradation is occurring. Compared with average oxygen and carbon dioxide concentrations in air (21 percent oxygen, 0.036 percent carbon dioxide by volume), oxygen and carbon dioxide concentrations in soil gas show that oxygen is being consumed and carbon dioxide is being generated. Similarly, elevated levels of methane (concentration in air 0.00017 percent by volume) methane indicate that anaerobic methogenesis is active. Review of oxygen and carbon dioxide data shows that the two samples collected at SV-4 (SV-4-1), adjacent to the southern property boundary contained the lowest oxygen and highest carbon dioxide concentrations, suggesting that aerobic biodegradation is occurring as hydrocarbons migrate to downgradient areas.

CRWQCB–San Francisco has developed shallow soil gas ESLs using the USEPA spreadsheet version of the Johnson and Ettinger (1991) model for soil gas intrusion into buildings that addresses inhalation of contaminants in an indoor setting. The ESLs assume a one-story building with 100 m^2 foundation area with soil of high permeability (fill material-sand) underlying the building foundation. The encountered site-specific lithology at soil vapor sampling locations is less permeable than the one utilized in ESL calculation, and ranged from gravelly silty clay at SV-1 adjacent to the station building to silty clay in the remaining borings.

Comparison of soil gas analytical data (Table 1) to ESLs for residential land use scenario (CRWQCB, November 2007, revised May 2008) indicates that except for TPH-g, no analytes detected in any soil gas samples exceed their respective ESL. With respect to TPH-g, except for SV-5, all shallow soil gas data were below the ESLs for commercial/industrial land use, and samples from SV-4 and SV-6 were below ESLs for residential land use. TPH-g concentrations at SV-5 (adjacent to the property boundary south of MW-4R) exceeded ESLs for commercial/ industrial land use scenario. The contour map of TPH-g concentrations in soil vapor is presented in Figure 5.

Soil gas screening levels do not take into account the actual chemical mass present, and could be overly conservative for evaluating long-term impacts to indoor air. At sites where a limited amount of impacted soil or groundwater is present and natural attenuation and site remediation are active, the concentration

of a chemical in soil gas can be expected to decrease over time as the supply of the chemical is depleted. This would lead to steadily decreasing impacts to indoor air and, while impacts to indoor air may initially exceed ESLs, average long-term impacts could conceivably fall below ESLs. Although most contaminants of concern are below ESLs, the elevated TPH-g concentrations in shallow soil gas indicate a potential exposure pathway for the site and vicinity by volatilization from affected soil and groundwater and vapor intrusion into buildings. Soil gas analytical data is summarized in Table 1; certified analytical reports and chain-of-custody documentation are in Appendix F.

3. CONCLUSIONS AND RECOMENDATIONS

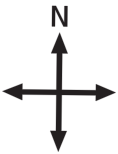
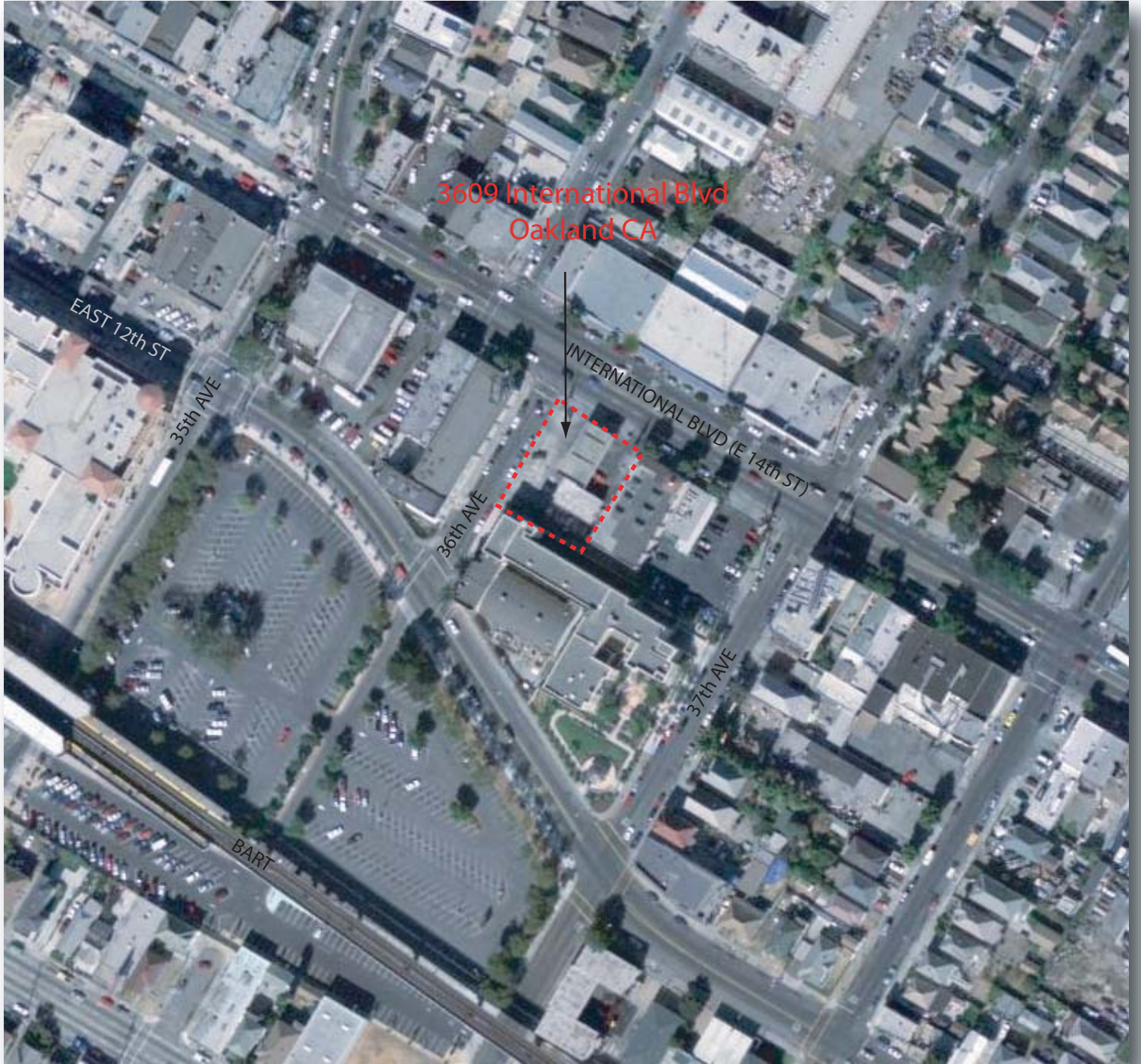
During this investigation, SOMA evaluated the relevant exposure pathway for the site and vicinity by volatilization from affected soil and groundwater, diffusion/advection through the vadose zone, and residential indoor accumulation and inhalation.

Soil gas samples were collected from the site to evaluate the health risk associated with the indoor inhalation exposure pathway. Samples were analyzed for TPH-g, BTEX, MtBE, 2-propanol, oxygen, carbon dioxide, and methane.

- Oxygen and carbon dioxide data suggest aerobic degradation of hydrocarbons is occurring as hydrocarbons migrate downgradient from the site.
- The IPA compound was either non-detectable or detected at a very low concentration, indicating there was no significant breakthrough during vapor sample collection. The level of IPA was well below 10,000 $\mu\text{g}/\text{m}^3$, the detection limit recommended in DTSC guidance (DTSC 2003). IPA was detected in most samples, except at SV-5 and SV-7 where it was at low concentrations ranging from 91 $\mu\text{g}/\text{m}^3$ to 17 $\mu\text{g}/\text{m}^3$.
- Although comparison of soil gas concentrations to shallow soil gas screening ESLs indicates that most residual petroleum hydrocarbons in soil gas at the site do not appear to pose a significant risk to human health, one of seven samples exhibited elevated TPH-g concentrations (above ESLs for commercial/ industrial exposure scenario) at 5 feet bgs, indicating a potential exposure pathway for the site and vicinity by volatilization from affected soil and groundwater and vapor intrusion. However, due to the low-permeability strata and building concrete slab, the potential for impact to indoor air is presumed to be limited at this time.
- Results of recent soil gas sampling indicate that fine grain soils surrounding the French drain are acting as a filter retaining petroleum hydrocarbons. In order to reduce soil vapor concentration and reduce petroleum hydrocarbon concentrations in soils surrounding the French

drain, SOMA recommends expanding the radius of influence of multi-phase extraction (MPE) to include the impacted areas. Therefore, based on elevated TPH-g concentrations in the general vicinity of the French drain, SOMA recommends expanding MPE to include wells MW-8 and MW-4R during future remedial events.

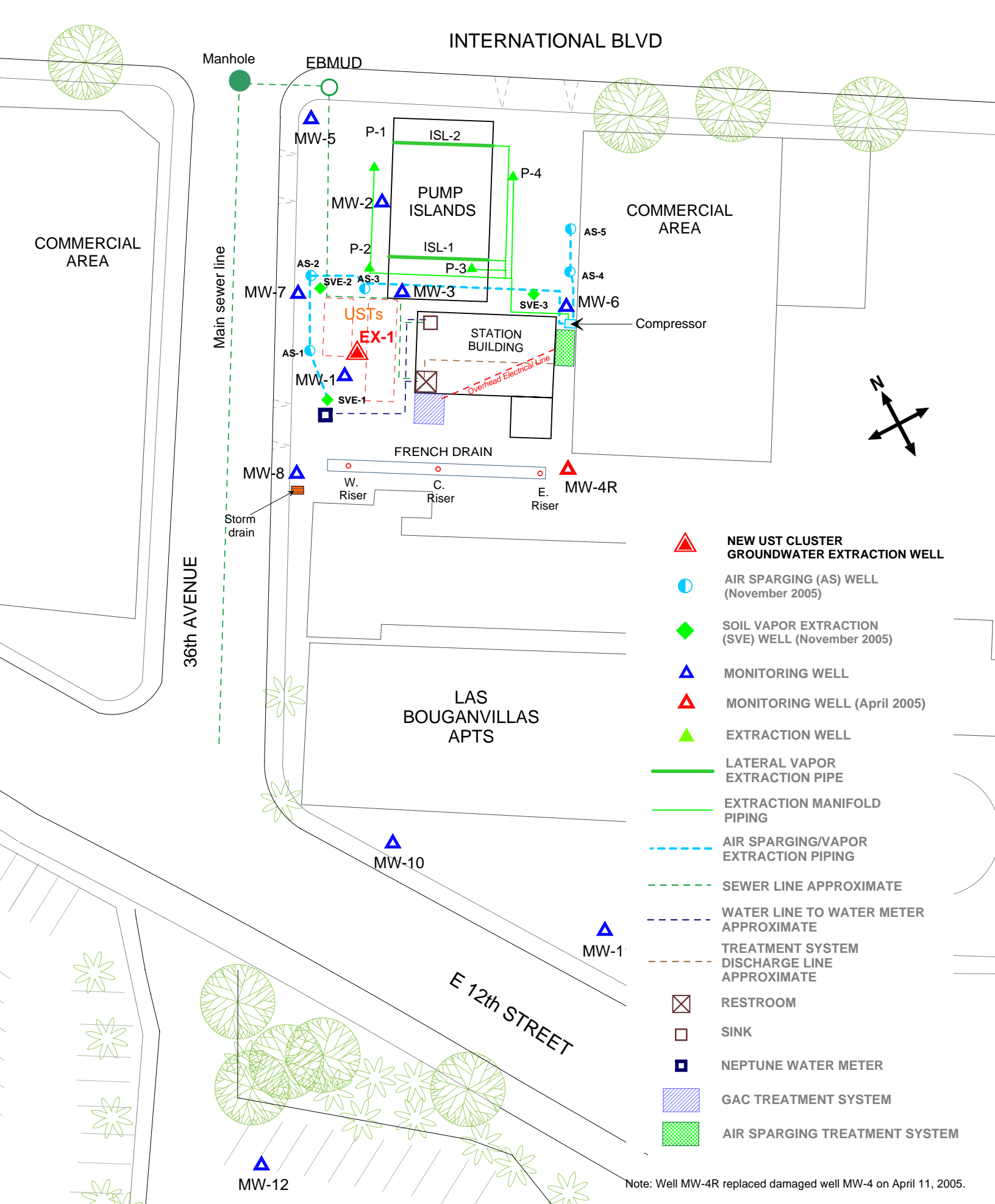
FIGURES



approximate scale in feet



Figure 1: Site vicinity map.



approximate scale in feet

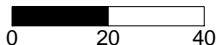
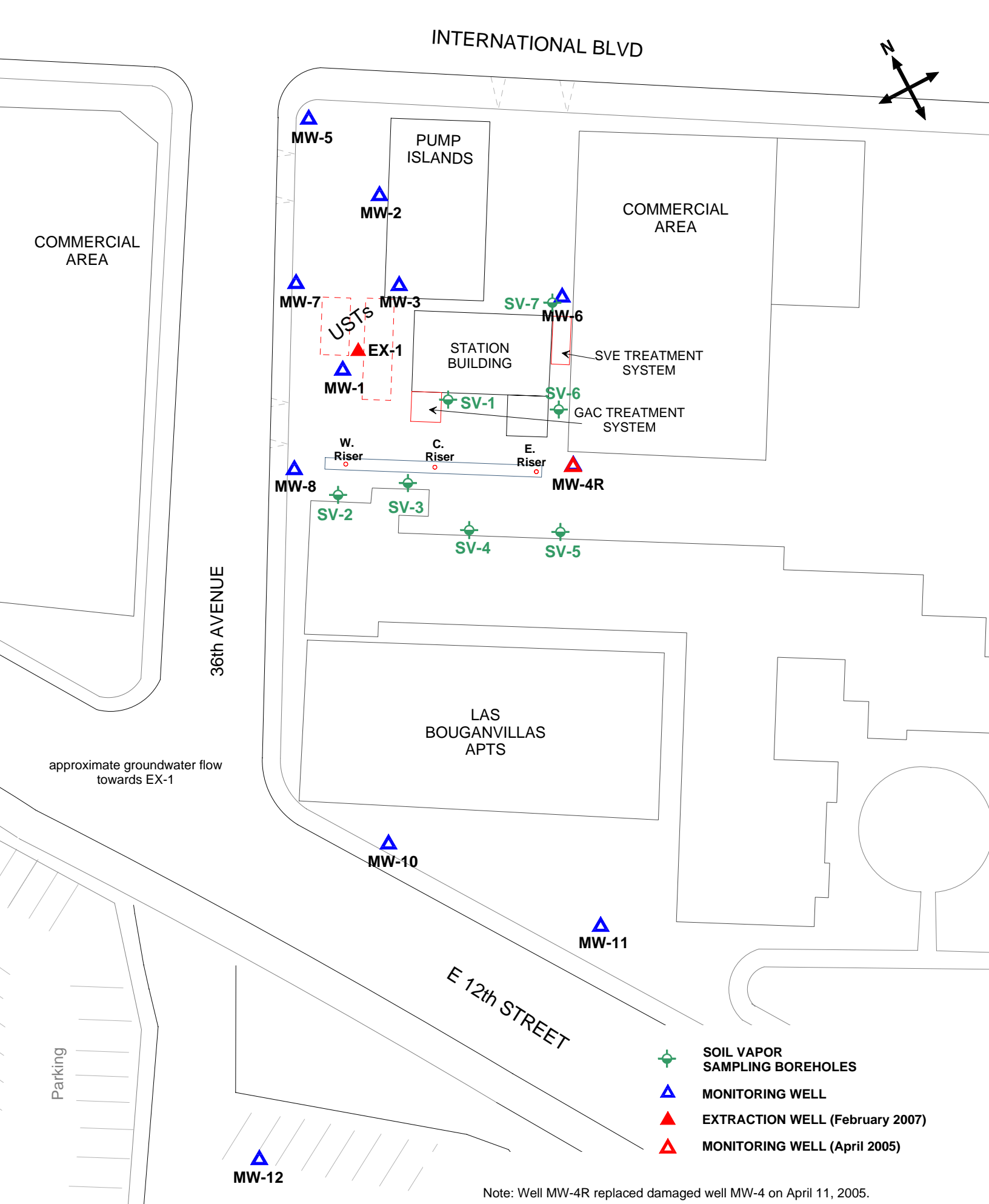






Figure 2: Site Map Showing Locations of Wells, GAC and SVE Systems, and Other Site Features



approximate groundwater flow towards EX-1

-  SOIL VAPOR SAMPLING BOREHOLES
-  MONITORING WELL
-  EXTRACTION WELL (February 2007)
-  MONITORING WELL (April 2005)

Note: Well MW-4R replaced damaged well MW-4 on April 11, 2005.

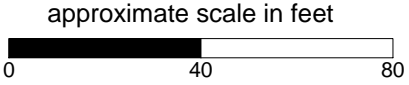
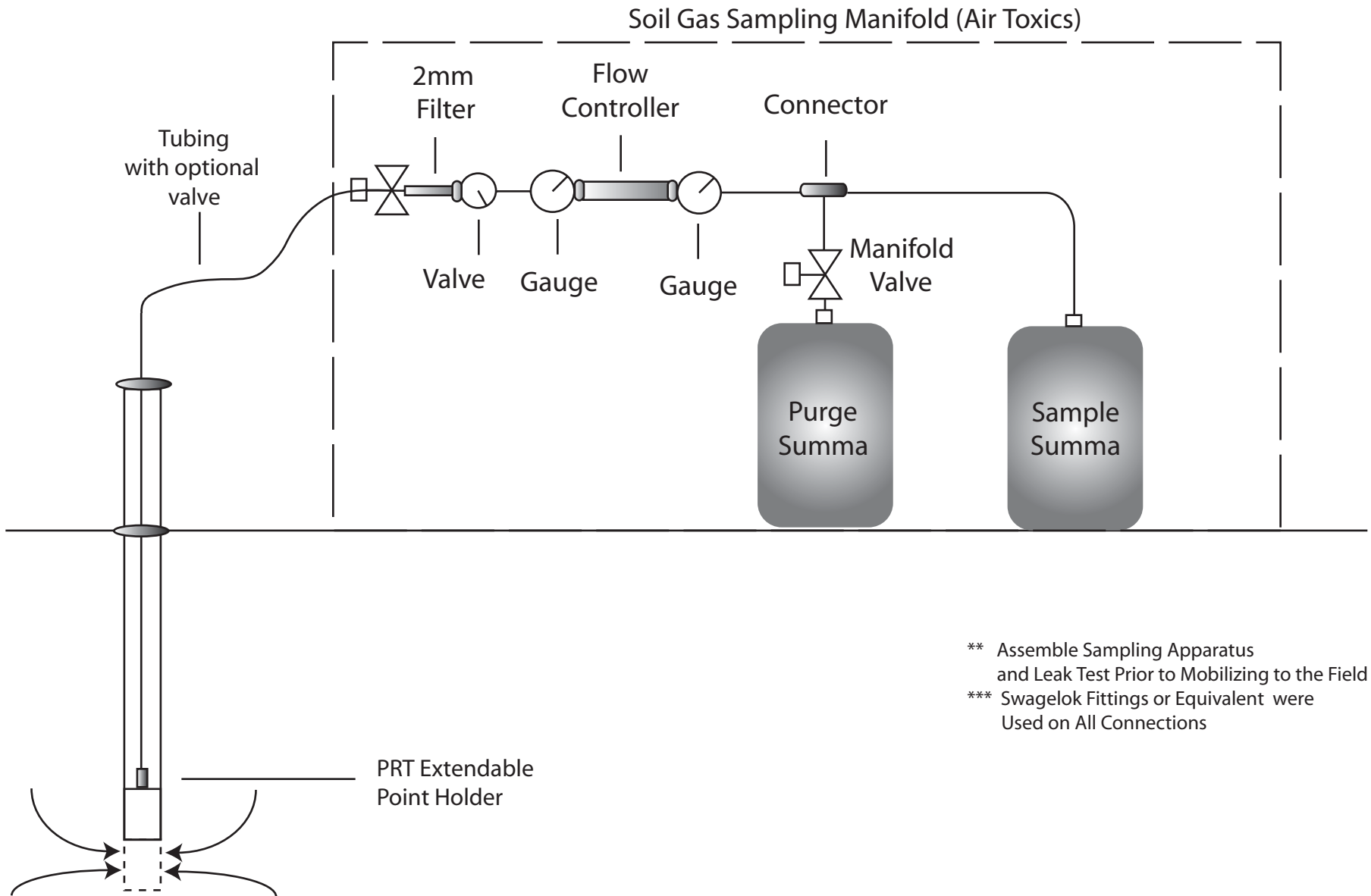


Figure 3: Site Map Showing the Locations of Soil Vapor Sampling Boreholes

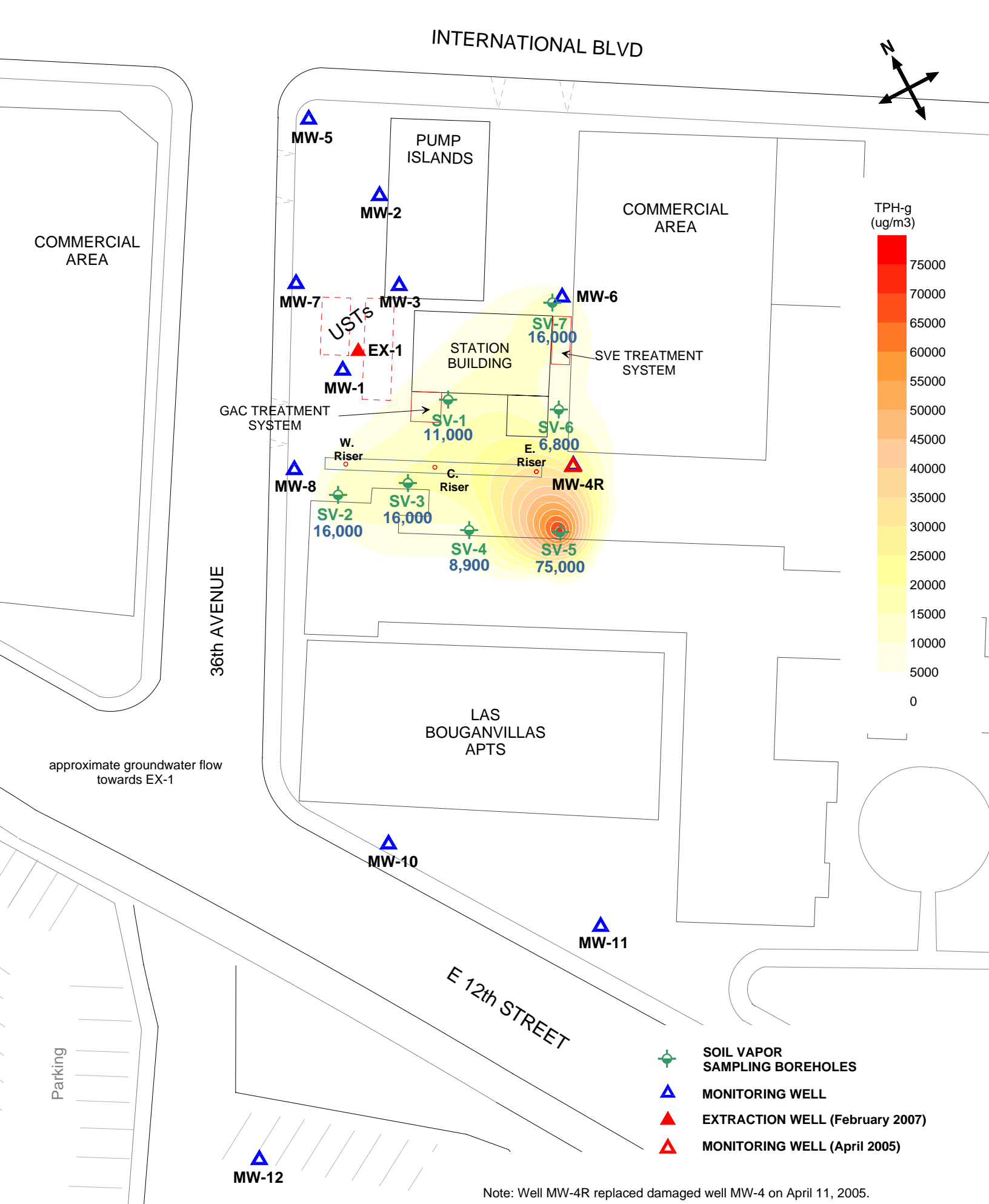




** Assemble Sampling Apparatus and Leak Test Prior to Mobilizing to the Field

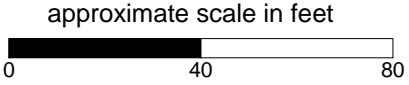
*** Swagelok Fittings or Equivalent were Used on All Connections

Figure 4: Soil Vapor Sampling Diagram



Note: Well MW-4R replaced damaged well MW-4 on April 11, 2005.

Figure 5: Contour Map Showing TPH-g Concentration in Soil Vapor



TABLE

Table 1
Soil Vapor Analytical Results
3609 International Blvd.
Oakland, California
November 14, 2008

Compound	Sample ID										ESLs	
	SV-1 (uG/m3)	SV-1 Lab Duplicate (uG/m3)	SV-2 (uG/m3)	SV-3 (uG/m3)	SV-4-1 (uG/m3)	SV-4-2 (uG/m3)	SV-5 (uG/m3)	SV-5 Lab Duplicate (uG/m3)	SV-6 (uG/m3)	SV-7 (uG/m3)	Residential (uG/m3)	Commercial (uG/m3)
TPH-g	11000	NA	16000	16000	8400	8900	75000	66000	6800	16000	10,000	29,000
Benzene	4	3.9	47	12	28	28	78	NA	<2.5	5.1	84	280
Toluene	8.6	8.2	36	15	25	26	<42	NA	6.4	23	63,000	180,000
Ethyl Benzene	4.5	4.3	8.5	4.4	5.6	5.7	<49	NA	<3.4	12	980	3,300
Total Xylene	5.8	5.8	41	8.7	8	7.4	<49	NA	3.5	33.9	21,000	58,000
MtBE	<3.0	<3.0	58	<3.4	<3.4	<3.4	<40	NA	<2.8	<3.0	9,400	31,000
Acetone	120	130	330	190	200	210	230	NA	150	95	660,000	1,800,000
Hexane	11	12	64	11	46	60	15,000	NA	4.4	120	NL	NL
Carbon Tetrachloride	<5.3	<5.3	<5.5	<6.0	<5.9	<5.9	<70	NA	<5.0	20	19	63
2-Propanol	36	37	73	27	91	79	<110	NA	17	<8.1	NL	NL
2-Butanone	64	68	84	54	63	67	86	NA	37	49	1,000,000	2,900,000
Ethanol	13	12	7.4	14	8.3	8.6	<84	NA	7.4	19	NL	NL
-	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	-	-
Oxygen	22	NA	20	22	19	20	21	20	22	21	NA	NA
Methane	0.00085	NA	0.0061	0.0012	0.0019	0.0019	0.0041	0.0040	0.0002	0.00063	NA	NA
Carbon Dioxide	0.16	NA	1.7	0.18	1.7	1.6	0.87	0.84	0.069	0.12	NA	NA

Notes:

TPH-g: Total Petroleum Hydrocarbons, gasoline range

Modified EPA Method TO-15, TO-3, ASTM D-1945

NA: Not Analyzed

NL: Not Listed

Lab Duplicates: duplicate samples run by the laboratory for QC purposes

Duplicate SUMA canisters submitted for SV-4 (-1 and -2)

ESL: California Regional Water Control Board Environmental Screening levels, Interim Final November 2007, Revised May 2008, Table E, Indoor Air and Shallow Soil Gas

APPENDIX A

Site History

1992: Soil Tech Engineering, Inc. conducted an initial environmental investigation to determine whether soil near the product lines and USTs had been impacted by petroleum hydrocarbons.

July 1993: Soil Tech Engineering, Inc. removed one single-walled 10,000-gallon gasoline UST, one single-walled 6,000-gallon gasoline UST, and one 550-gallon waste oil UST, and replaced them with the three double-walled USTs currently beneath the Site: one 10,000-gallon gasoline UST, and two 6,000-gallon gasoline USTs. UST locations are shown in Figure 2.

December 1997: Mr. Razi retained Western Geo-Engineers to conduct additional investigations and quarterly groundwater monitoring, results of which indicated elevated levels of petroleum hydrocarbons and methyl tertiary-butyl ethyl (MtBE) in groundwater.

April 1999: Mr. Razi retained SOMA to conduct groundwater monitoring, risk-based corrective action (RBCA) and corrective action plan (CAP) studies, and soil and groundwater remediation. RBCA study categorized the site as a high-risk groundwater site, thereby warranting soil and groundwater remediation in on- and off-site areas. The source of petroleum hydrocarbons in groundwater was believed to be the USTs removed in 1993, which had stored gasoline. CAP study results indicated that installation of a French drain combined with a vapor extraction system would be the most cost-effective remediation alternative.

August 1999: SOMA installed a French drain and groundwater treatment system to prevent further migration of chemically impacted groundwater. This treatment system has been in operation since early December 1999.

July 2000: Following ACEHS approval, SOMA installed a vapor extraction system as recommended in the CAP document dated July 1, 1999.

January 2002: Environmental Fabric removed old product dispensers and installed new ones in the fuel islands.

July 25, 2003: SOMA installed an additional on-site extraction pump in the western French drain riser, to create a capture zone around the USTs and contain off-site migration in the southwestern corner of the site.

April 1, 2005: SOMA conducted a pilot test to evaluate use of ozone sparging to actively remediate groundwater at the site. The test revealed that the unsaturated zone was permeable enough to allow operation of an ozone sparging system. However, ozone injection, especially in the region of more impacted wells MW-1 and MW-3 in the vicinity of the UST cavity, posed a potential explosion hazard. Based on safety concerns, air-sparging technology was selected for site remediation.

November 17 to 23, 2005: SOMA oversaw installation of air sparge and vapor extraction wells by Woodward Drilling of Rio Vista, California.

February 22 to March 6, 2006: SOMA oversaw installation of the air sparge system by ACRC, Inc. of San Ramon, California.

February 5, 2007: An extraction well, EX-1, was installed in the vicinity of the UST cavity due to the continued significant contaminant source within this region. The well diameter is 4 inches with an approximate depth of 20 feet.

April 2007 : SOMA began extracting groundwater from the new groundwater extraction well EX-1.

Impacted groundwater from the well is being treated and discharged through the granular activated carbon (GAC) system. Increased groundwater contaminant removal within the UST cavity is being achieved since startup of extraction from EX-1. Well and remedial line locations are shown in Figure 2.

December 2007 to October 2008: Following a pilot test in December 2007, SOMA conducted six monthly multi-phase extraction (MPE) events on the site from March through October 2008. As of the October 2008 MPE event, the cumulative total mass of VOCs extracted by MPE from extraction wells is 612.64 lbs; this includes 64 lbs extracted during the December 2007 pilot test, 24.3 lbs during the March 2008 event, 43.06 lbs during the April 2008 event, 46.19 lbs during the May 2008 event, 58.0 lbs during the June 2008 event, 239.48 lbs during the September 2008 Event and 137.61 lbs during the October 2008 Event.

October-November 2008: ACEHS approved SOMA's workplan for vapor intrusion evaluation in their letter dated October 7, 2008. SOMA performed the approved soil vapor sampling at the site on November 14, 2008.

APPENDIX B

Well Permit

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: 10/23/2008 By jamesy

Permit Numbers: W2008-0812
Permits Valid from 11/14/2008 to 11/14/2008

Application Id: 1224717946493	City of Project Site: Oakland
Site Location: 3609 International Blvd.	Completion Date: 11/14/2008
Project Start Date: 11/14/2008	
Requested Inspection: 11/14/2008	
Scheduled Inspection: 11/14/2008 at 1:00 PM (Contact your inspector, Ron Smalley at (510) 670-5407, to confirm.)	

Applicant:	SOMA Environmental Engineering, Inc. - Erica Fisker 6620 Owens Drive, Suite A, Pleasanton, CA 94588	Phone: 925-734-6400
Property Owner:	Abolghassem Razi 25 N. Terrace, Triburon, CA 94920	Phone: 415-690-0098
Client:	** same as Property Owner **	
Contact:	Erica Fisker	Phone: 925-734-6400 Cell: 574-250-5205

Receipt Number: WR2008-0384	Total Due:	\$230.00
Payer Name : Mansour Sepehr	Total Amount Paid:	\$230.00
	Paid By: VISA	PAID IN FULL

Works Requesting Permits:

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 7 Boreholes
Driller: Gregg Drilling & Testing - Lic #: 485165 - Method: DP

Work Total: \$230.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2008-0812	10/23/2008	02/12/2009	7	2.00 in.	5.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Applicant shall contact Ron Smalley for an inspection time at 510-670-5407 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.
5. 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,

Alameda County Public Works Agency - Water Resources Well Permit

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.

6. 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.

7. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a 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.

8. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

APPENDIX C

Soil Vapor Sampling Procedures

USING A GEOPROBE TO COLLECT SUBSURFACE VAPOR SAMPLES FOR HUMAN HEALTH RISK EVALUATION

- Do not mobilize to sample subsurface vapor if measurable precipitation or site irrigation near the sampling location has occurred within the previous 5 days;
- Drill continuous cores as necessary to identify permeable strata (target vapor sampling locations) then backfill the borings with Portland cement (previous assessment may have provided this data);
- Connect a PRT adaptor to approximately 10 to 15 feet of tubing (assuming the total depth of the boring will be approximately 5 feet below grade), install a vapor tight valve on the other end of the tubing, close the vapor tight valve, and seat the PRT adaptor into the bottom of the lead drill rod;
- Hydraulically push the Geoprobe rod to the target vapor sampling depth then raise the drill rod approximately 6 inches’;
- Place hydrated bentonite around the drill rod to inhibit surface air migration down the outer portion of the drill rod (do not simply add water to a pile of bentonite chips or pellets placed around the drill rod);
- Connect a tee fitting to the top of each purge and sample Summa canister and install a pressure gauge on the top of this fitting;
- Connect 1 to 2 feet of tubing to the tee fitting on each purge and sample canister (the consultant may opt to install an optional valve on the downhole side of the tee connected to the purge canister);
- Connect the free ends of each of the above tubes to a separate (third) tee fitting;
- Connect a 100 to 200 milliliter/minute flow regulator to the downhole side of the third tee fitting and connect the laboratory supplied particulate filter to the downhole side of the regulator (if required);
- Connect the vapor-tight valve in Bullet #3 to the downhole side of the filter (or regulator if the filter was built-in to the regulator);
- Vacuum test the connections between the summa canisters and valve on the downhole side of the regulator for 10 minutes by opening and closing the purge canister valve to place a test vacuum on the assembly (terminate further work if gauge vacuum can not be maintained for 10 minutes);
- If gauge vacuum was maintained for 10 minutes and it has been at least 30 minutes since the drill rod was sealed at the surface with bentonite, then open the purge canister valve and

Vapor Intrusion Evaluation

the valve on the downhole side of the regulator to begin purging ambient air from the sampling apparatus and borehole (record the time purging commenced);

- Close the purge canister valve when three volumes of air have been purged from the sample apparatus and borehole (the consultant must know how to calculate the appropriate purge volume prior to mobilization - the adequacy of purging must be based on the inches of pressure drop on the purge canister gauge and not time);
- Open the sample canister valve to begin sample collection (record the time sample collection begins);
- Drop a few pieces of isopropyl alcohol (leak test compound) moistened gauze down the inside of the drill rod and on the downhole side of the valve on the borehole side of the regulator (tin foil is useful to hold the gauze in place - be careful not to pour isopropyl alcohol directly on the tubing and sample apparatus connections);
- Remoisten the gauze with isopropyl alcohol every 5 minutes";
- Close the sample canister valve when the sample canister gauge indicates approximately 5 inches Hg of vacuum remain in the canister (this should take approximately 25 minutes for a 6L Summa canister connected to a 200 milliliters/minute flow regulator);
- Record the time sample collection was stopped and replace the tee fitting on the sample canister with the laboratory supplied brass plug;
- Label the sample and record on the chain of custody the sample name, final vacuum, and the canister and flow controller serial numbers;
- Store the sample in a container that blocks sunlight and do not subject the sample to significant changes in pressure and temperature (avoid airline shipping of sample containers);
- Remove the drilling rod and sampling apparatus and backfill the borehole with Portland cement mixed at 6 gallons of water per 94-pound bag of cement.

FOOTNOTES:

1 - Hard drilling conditions may shear off the PRT fitting during drilling. In these conditions you must install the PRT fitting/valve assembly after reaching the target drilling depth, but before lifting the drilling rod 6 inches.

2 - Isopropyl alcohol moistened gauze must be added to all fitting connections if the reduction in sample canister gauge vacuum indicates sample collection will exceed one hour.

GENERAL NOTES:

Assemble and leak check the sampling apparatus prior to mobilizing to the field.

Use Swagelok® type fittings or equivalent for all connections. Wear a new pair of gloves when you assemble the sampling apparatus to limit potential cross-contamination.

APPENDIX D

Boring Logs

PROJECT: 2332

DATE DRILLED: 11/14/08

SITE LOCATION: 3609 International Blvd.,
Oakland

CASING ELEVATION: NA

DRILLING COMPANY: Gregg Drilling & Testing

DEPTH TO GW: NA

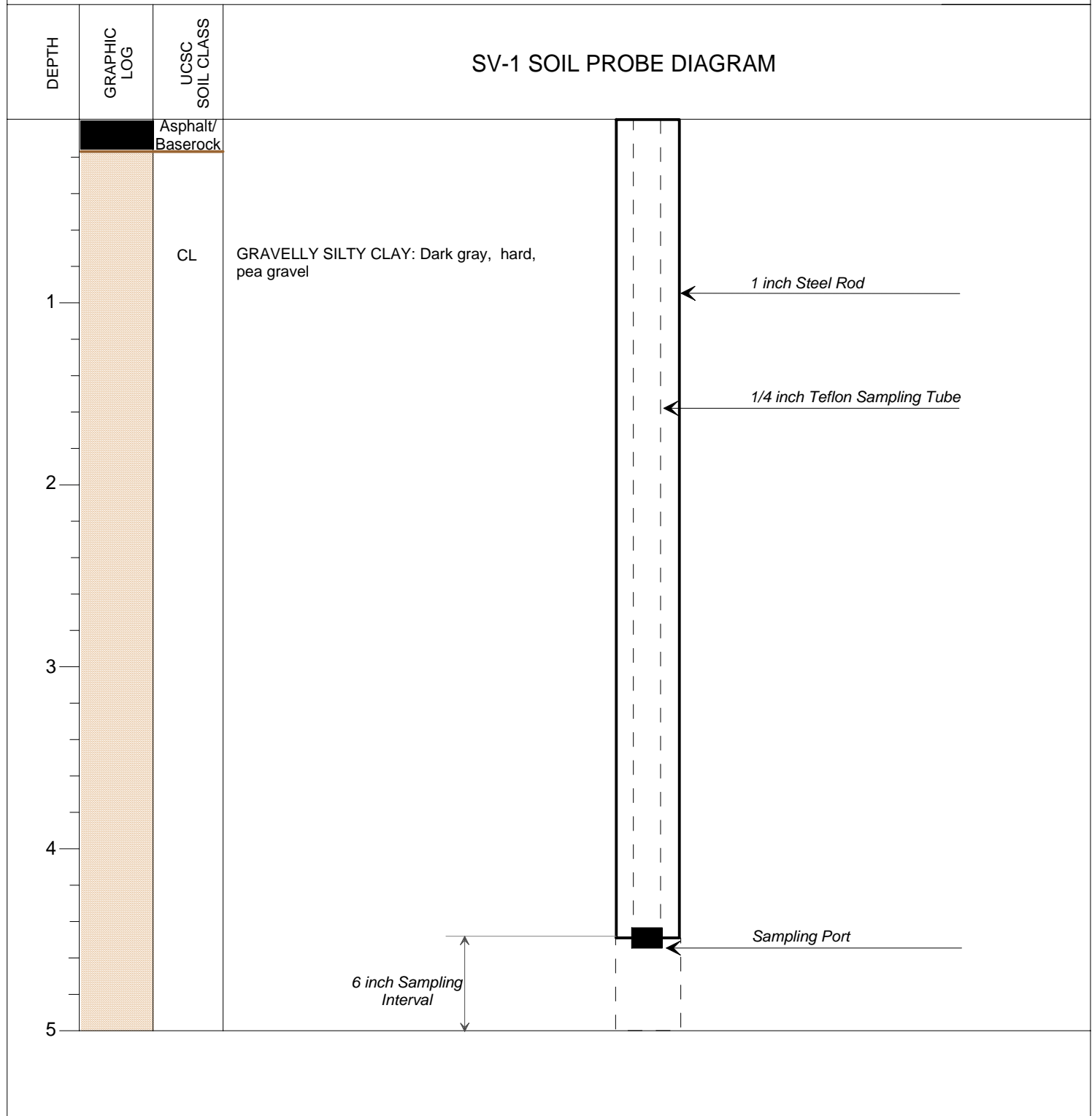
DRILLING METHOD: Geoprobe Hydraulically
Driven Sampling

T.O.C. TO SCREEN: NA

SCREEN LENGTH: NA

NOTES: Lithology is extrapolated from MW-1 (8/23/1993)

APPROVED BY: M. Sepehr. Ph. D., P.E.



PROJECT: 2332

DATE DRILLED: 11/14/08

SITE LOCATION: 3609 International Blvd.,
Oakland

CASING ELEVATION: NA

DRILLING COMPANY: Gregg Drilling & Testing

DEPTH TO GW: NA

DRILLING METHOD: Geoprobe Hydraulically
Driven Sampling

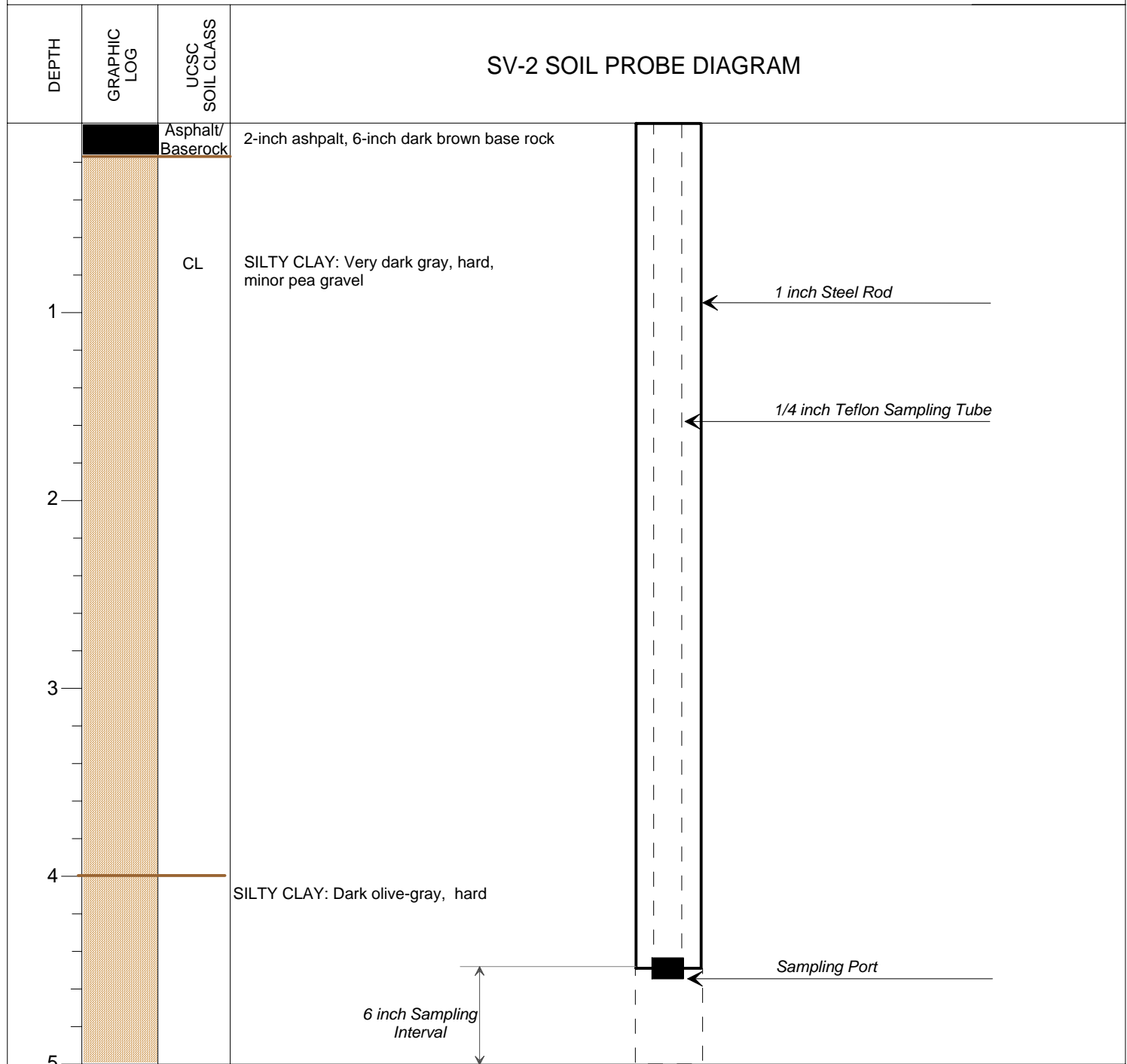
T.O.C. TO SCREEN: NA

SCREEN LENGTH: NA

NOTES: Lithology is extrapolated from MW-8 (8/31/1995)

APPROVED BY: M. Sepehr. Ph. D., P.E.

SV-2 SOIL PROBE DIAGRAM



PROJECT: 2332

DATE DRILLED: 11/14/08

SITE LOCATION: 3609 International Blvd.,
Oakland

CASING ELEVATION: NA

DRILLING COMPANY: Gregg Drilling & Testing

DEPTH TO GW: NA

DRILLING METHOD: Geoprobe Hydraulically
Driven Sampling

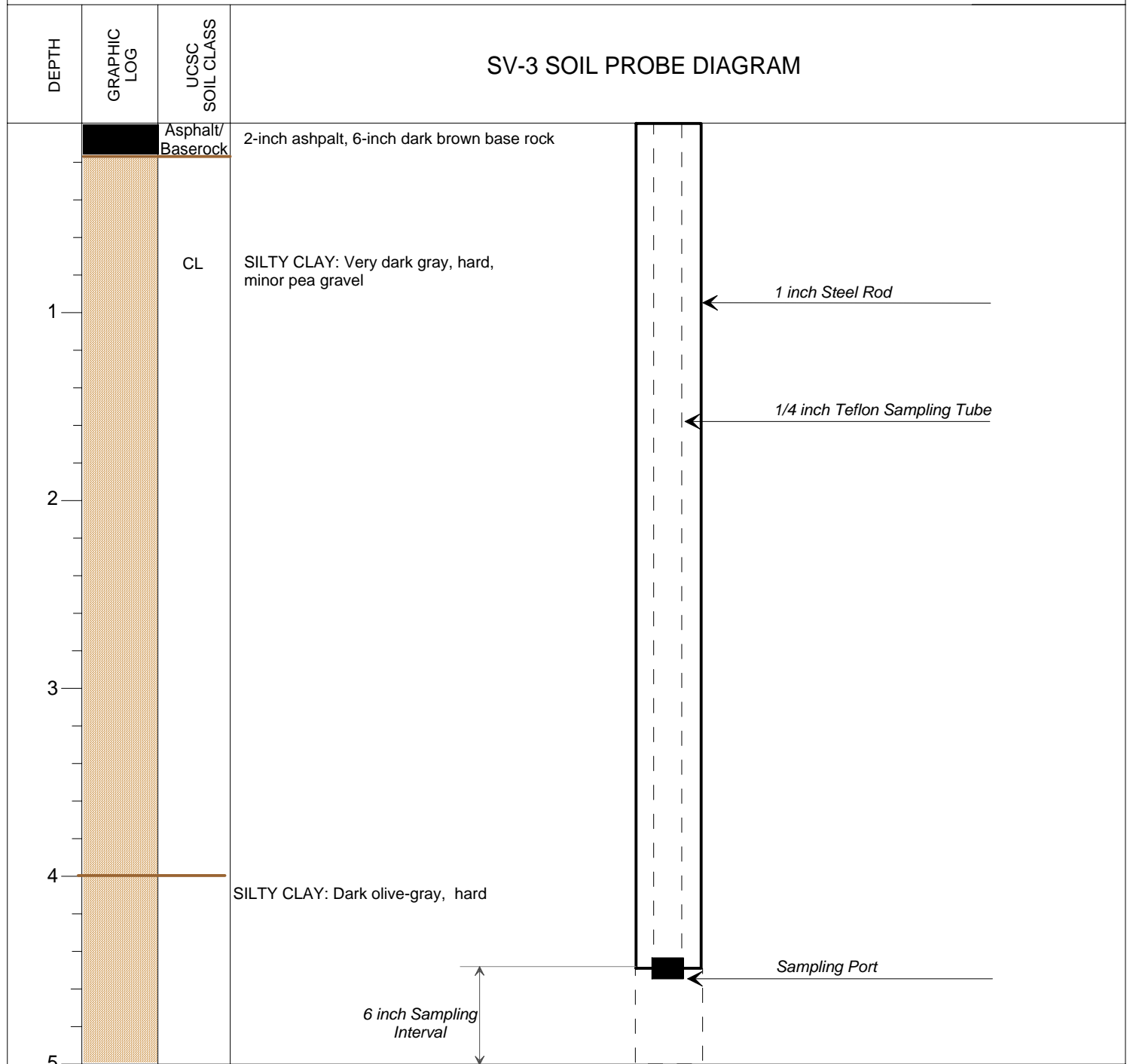
T.O.C. TO SCREEN: NA

SCREEN LENGTH: NA

NOTES: Lithology is extrapolated from MW-8 (8/31/1995)

APPROVED BY: M. Sepehr. Ph. D., P.E.

SV-3 SOIL PROBE DIAGRAM



PROJECT: 2332

DATE DRILLED: 11/14/08

SITE LOCATION: 3609 International Blvd.,
Oakland

CASING ELEVATION: NA

DRILLING COMPANY: Gregg Drilling & Testing

DEPTH TO GW: NA

DRILLING METHOD: Geoprobe Hydraulically
Driven Sampling

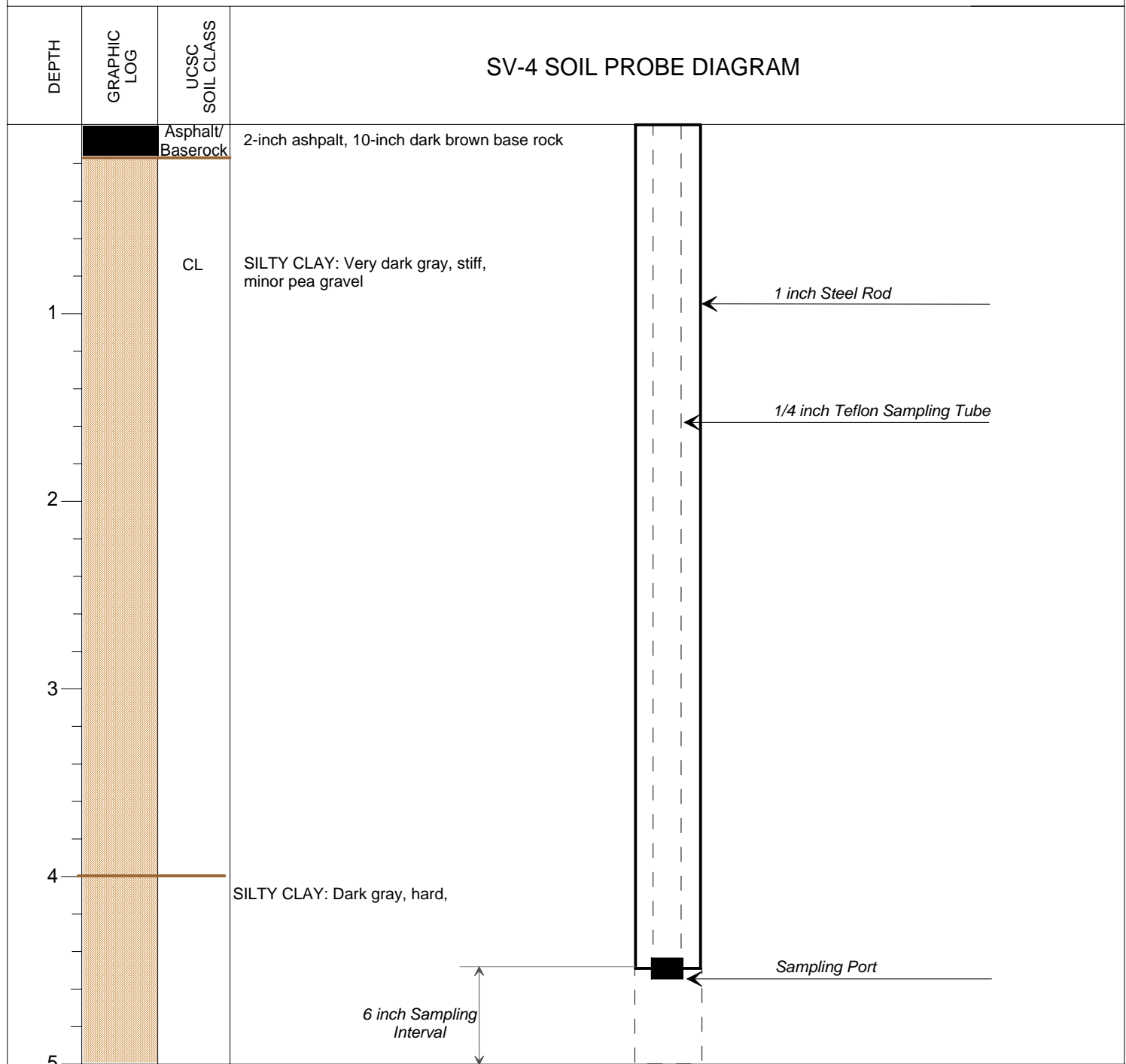
T.O.C. TO SCREEN: NA

SCREEN LENGTH: NA

NOTES: Lithology is extrapolated from MW-4 (8/30/1995)

APPROVED BY: M. Sepehr. Ph. D., P.E.

SV-4 SOIL PROBE DIAGRAM



PROJECT: 2332

DATE DRILLED: 11/14/08

SITE LOCATION: 3609 International Blvd.,
Oakland

CASING ELEVATION: NA

DRILLING COMPANY: Gregg Drilling & Testing

DEPTH TO GW: NA

DRILLING METHOD: Geoprobe Hydraulically
Driven Sampling

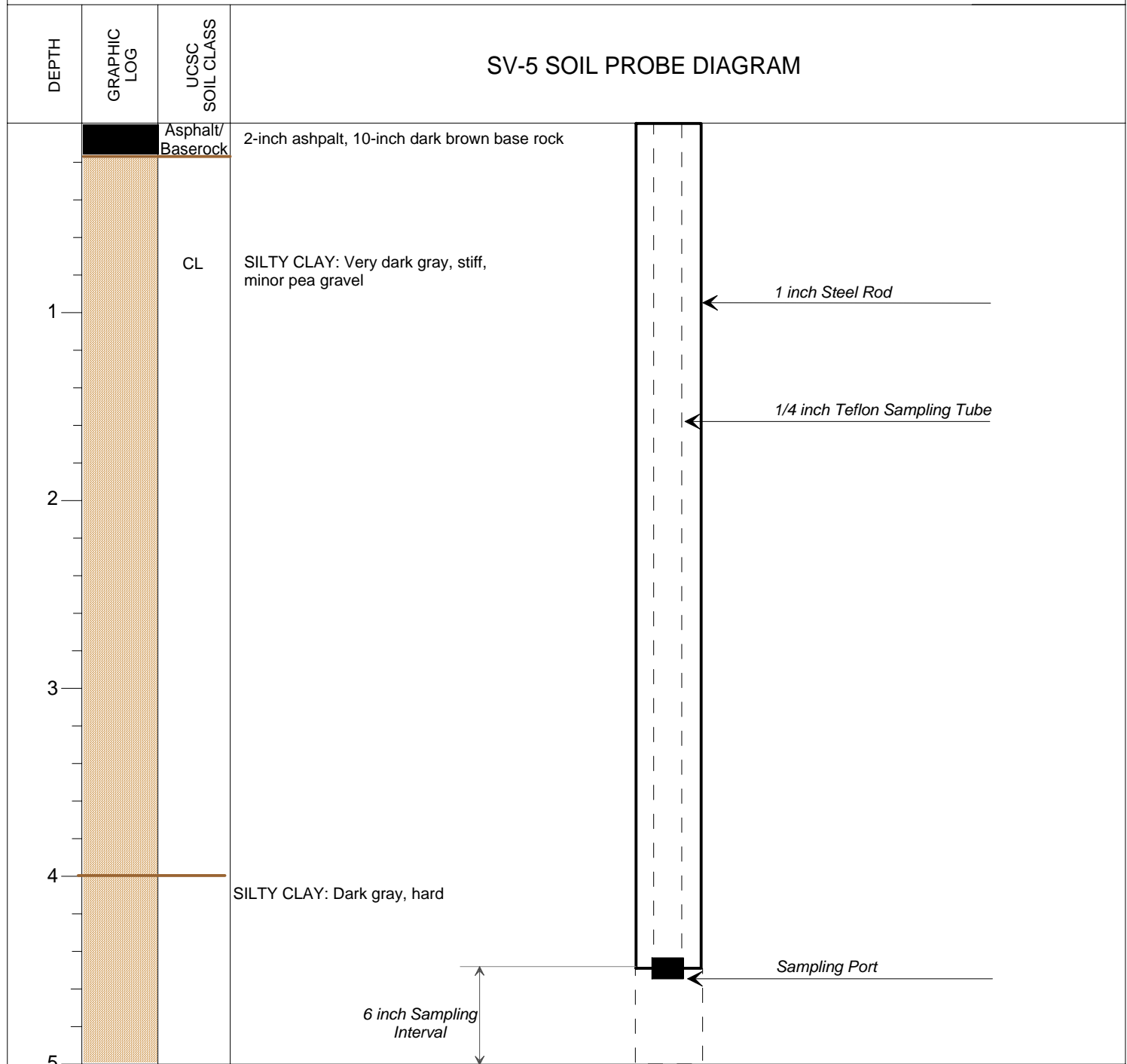
T.O.C. TO SCREEN: NA

SCREEN LENGTH: NA

NOTES: Lithology is extrapolated from MW-4 (8/30/1995)

APPROVED BY: M. Sepehr. Ph. D., P.E.

SV-5 SOIL PROBE DIAGRAM



PROJECT: 2332

DATE DRILLED: 11/14/08

SITE LOCATION: 3609 International Blvd.,
Oakland

CASING ELEVATION: NA

DRILLING COMPANY: Gregg Drilling & Testing

DEPTH TO GW: NA

DRILLING METHOD: Geoprobe Hydraulically
Driven Sampling

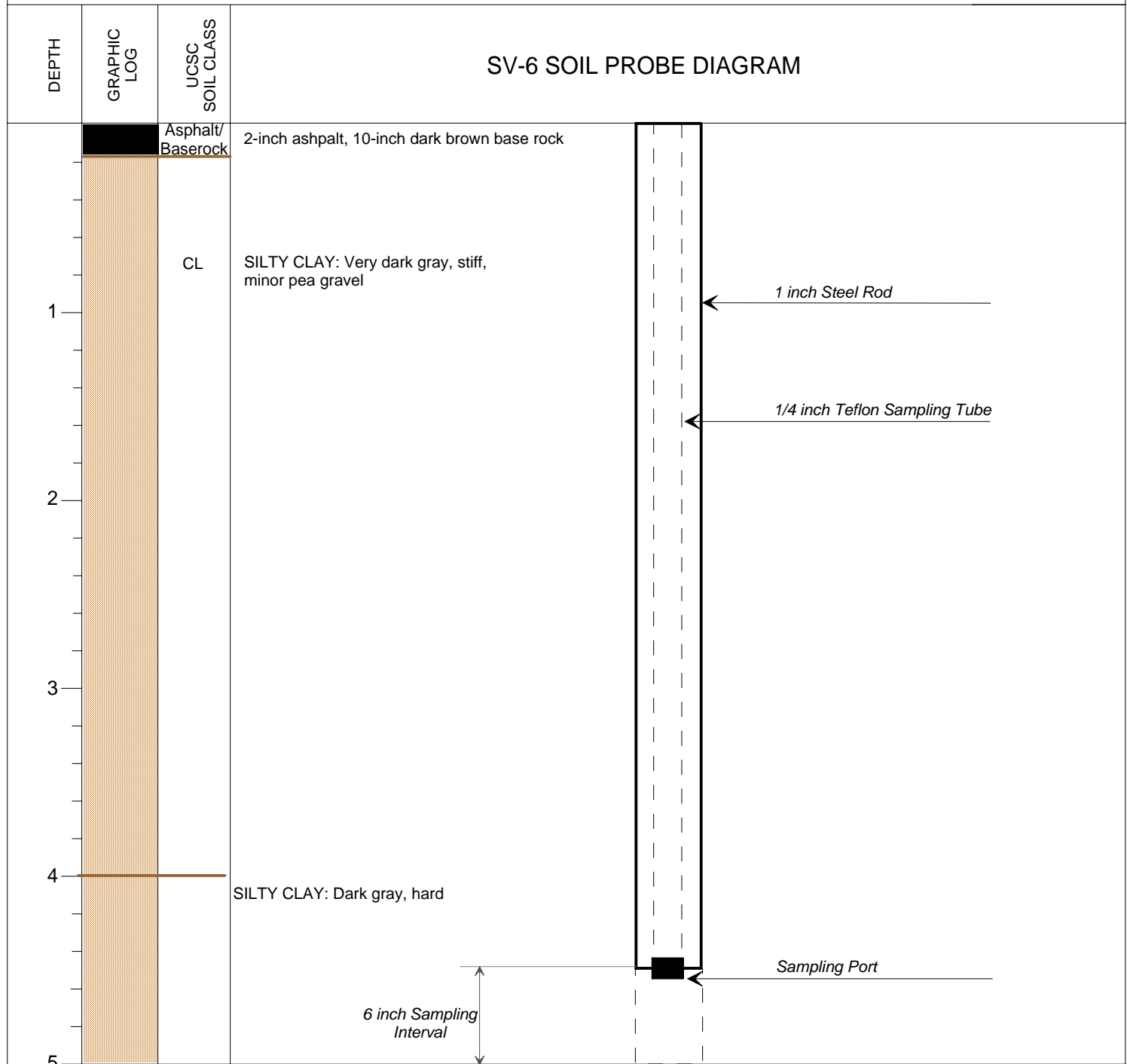
T.O.C. TO SCREEN: NA

SCREEN LENGTH: NA

NOTES: Lithology is extrapolated from MW-4 (8/30/1995)

APPROVED BY: M. Sepehr. Ph. D., P.E.

SV-6 SOIL PROBE DIAGRAM



PROJECT: 2332

DATE DRILLED: 11/14/08

SITE LOCATION: 3609 International Blvd.,
Oakland

CASING ELEVATION: NA

DRILLING COMPANY: Gregg Drilling & Testing

DEPTH TO GW: NA

DRILLING METHOD: Geoprobe Hydraulically
Driven Sampling

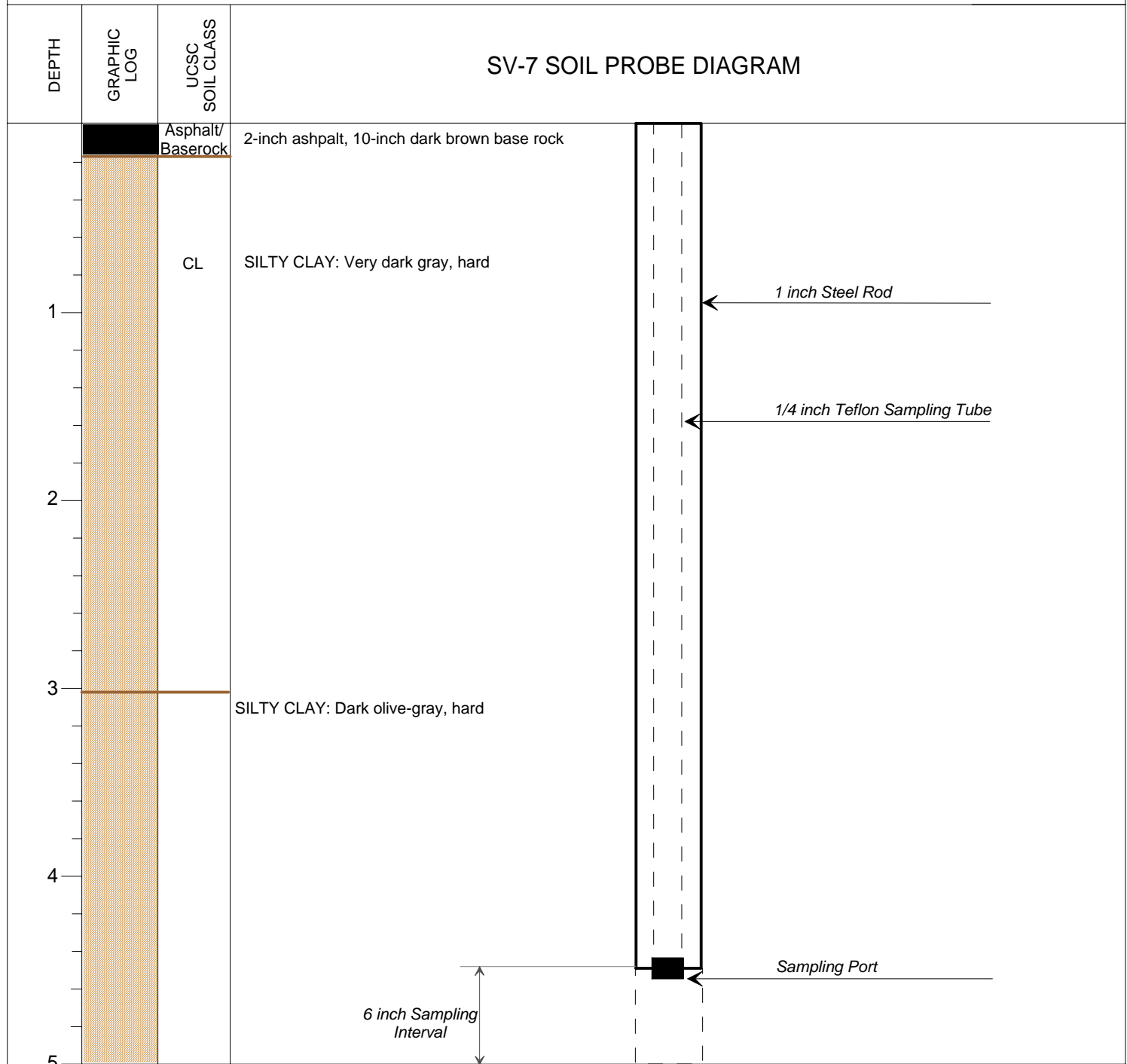
T.O.C. TO SCREEN: NA

SCREEN LENGTH: NA

NOTES: Lithology is extrapolated from MW-6 (8/31/1995)

APPROVED BY: M. Sepehr. Ph. D., P.E.

SV-7 SOIL PROBE DIAGRAM



APPENDIX E

General Field Procedures

Utility Locating

Prior to drilling, boring locations are marked with white paint or other discernible marking and cleared for underground utilities through Underground Service Alert (USA). In addition, the first five feet of each borehole are air-knifed, or carefully advanced with a hand auger if shallow soil samples are necessary, to help evaluate the borehole location for underground structures or utilities.

Borehole Advancement

Pre-cleaned push rods (typically one to two inches in diameter) are advanced using a hydraulic push type rig for the purpose of collecting samples and evaluating subsurface conditions. The drill rod serves as a soil sampler, and an acetate liner is inserted into the annulus of the drill rod prior to advancement. Once the sample is collected, the rods and sampler are retracted and the sample tubes are removed from the sampler head. The sampler head is then cleaned, filled with clean sample tubes, inserted into the borehole and advanced to the next sampling point where the sample collection process is repeated.

Soil Sample Collection

The undisturbed soil samples intended for laboratory analysis are cut away from the acetate sample liner using a hacksaw, or equivalent tool, in sections approximately 6 inches in length. The 6 inch samples are lined at each end with Teflon® sheets and capped with plastic caps. Labels documenting job number, borehole identification, collection date, and depth are affixed to each sample. The samples are then placed into an ice-filled cooler for delivery under chain-of-custody to a laboratory certified by the State of California to perform the specified tests. The remaining collected soil that has not been selected for laboratory analysis is logged using the United Soil Classification System (USCS) under the direction of a State Registered Professional Geologist, and is field screened for organic vapors using a photo-ionization detector (PID), or an equivalent tool. Soil cuttings generated are stored in Department of Transportation (DOT) approved 55-gallon steel drums, or an equivalent storage container.

Groundwater Sample Collection

Once the desired groundwater sampling depth has been reached, a Hydropunch tip is affixed to the head of the sampling rods. The Hydropunch tip is advanced between approximately 6 inches to one foot within the desired groundwater sampling zone (effort is made to emplace the Hydropunch screen across the center and lower portion of the water table), and retracted to expose the Hydropunch screen.

Grab groundwater samples are collected by lowering a pre-cleaned, single-sample polypropylene, disposable bailer down the annulus of the sampler rod. The groundwater sample is discharged from the bailer to the sample container through a bottom emptying flow control valve to minimize volatilization.

Because the sampling section of the non-discrete groundwater sampler is not protected or sealed, this sampler should only be used where cross contamination from overlying materials is not a concern. Discrete groundwater samplers are driven to the sample interval, then o-rings, a protective tube/sheath, and an expendable point provide a water-tight seal.

Collected water samples are discharged directly into laboratory-provided, pre-cleaned vials or

Vapor Intrusion Evaluation

containers and sealed with Teflon-lined septum, screw-on lids. Labels documenting sample number, well identification, collection date, and type of preservative (if applicable, e.g., HCl for TPPH, BTEX, and fuel oxygenates) are affixed to each sample. The samples are then placed into an ice-filled cooler for delivery under chain-of-custody to a laboratory certified by the State of California to perform the specified tests.

Borehole Completion

Upon completion of drilling and sampling, the rods are retracted. Neat cement grout, mixed at a ratio of 6 gallons of water per 94 pounds of Portland cement, is introduced, *via* a tremmie pipe, and pumped to displace standing water in the borehole. Displaced groundwater is collected at the surface into DOT approved 55-gallon steel drums, or an equivalent storage container. In areas where the borehole penetrates asphalt or concrete, the borehole is capped with an equivalent thickness of asphalt or concrete patch to match finished grade.

Organic Vapor Procedures

Soil samples are collected for analysis in the field for ionizable organic compounds using a PID with a 10.2 eV lamp. The test procedure *involves* measuring approximately 30 grams from an undisturbed soil sample, placing this subsample in a Ziploc-type bag or in a clean glass jar, and sealing the jar with aluminum foil secured under a ring-type threaded lid. The container is warmed for approximately 20 minutes (in the sun); then the head-space within the container is tested for total organic *vapor*, measured in parts per million as benzene (ppm; volume/volume). The instrument is calibrated prior to drilling. The results of the field-testing are noted on the boring logs. PID readings are useful for indicating relative levels of contamination, but cannot be used to evaluate petroleum hydrocarbon levels with the confidence of laboratory analyses.

Equipment Decontamination

Equipment that could potentially contact subsurface media and compromise the integrity of the samples is carefully decontaminated prior to drilling and sampling. Drill augers and other large pieces of equipment are decontaminated using high pressure hot water spray. Samplers, groundwater pumps, liners and other equipment are decontaminated in an Alconox scrub solution and double rinsed in clean tap water rinse followed by a final distilled water rinse.

The rinsate and other wastewater are contained in 55-gallon DOT-approved drums, labeled (to identify the contents, generation date and project) and stored on-site pending waste profiling and disposal.

Soil Cuttings and Rinsate/Purge Water

Soil cuttings and rinsate/purge water generated during drilling and sampling are stored onsite in DOT-approved 55-gallon steel drums pending characterization. A label is affixed to the drums indicating the contents of the drum, suspected contaminants, date of generation, and the boring number from which the waste is generated. The drums are removed from the site by a licensed waste disposal contractor under manifest to an appropriate facility for treatment/recycling.

APPENDIX F

Certified Laboratory Analytical Reports and Chain-Of-Custody Documentation



CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

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

Project Manager: Joyce Bobek
 Collected by: (Print and Sign) E. Hightower E. Hightower
 Company SOMA Environmental Email jbobek@somaenv.com
 Address 6620 Owens Dr, Suite A City Pleasanton State CA Zip 94588
 Phone 925-734-6400 Fax 925-734-6401

Project Info: P.O. # <u>2332</u> Project # <u>Tony's Express Auto</u> Project Name <u>3609 International Blvd, Oakland</u>	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush	Lab Use Only Pressurized by: Date: Pressurization Gas: N ₂ He
	specify	

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
D1A	SV-1		11/14/08	15:10	TO-15, TO-3, Atm 1945	29	5		
O2A	SV-2			12:27		29	6		
O3A	SV-3			16:21		29	5		
O4A	SV-4-1			15:24		28	5		
O5A	SV-4-2			15:24		28	5		
O6A	SV-5			13:51		30	5		
O7A	SV-6			13:43		30	5		
O8A	SV-7		✓	10:59	↓	30	5		

Relinquished by: (signature) <u>E. Hightower</u> Date/Time <u>11/17/08 17:04</u>	Received by: (signature) <u>Elena Manzo</u> Date/Time <u>11/17/08 17:05</u>	Notes: <u>Include 2propanol</u> <u>EDF req.</u>
Relinquished by: (signature) <u>Elena Manzo</u> Date/Time <u>11/18/08 9:55</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/18/08 625</u>	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>drop off</u>	Air Bill # <u>NA</u>	Temp (°C) <u>NA</u>	Condition <u>good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>0811379</u>
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AN ENVIRONMENTAL ANALYTICAL LABORATORY

12/3/2008

Ms. Joyce Bobek
SOMA Environmental
6620 Owens Drive
Suite A
Pleasanton CA 94588

Project Name: Tony's Express Auto 3609 International
Project #:

Dear Ms. Joyce Bobek

The following report includes the data for the above referenced project for sample(s) received on 11/18/2008 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

A handwritten signature in black ink that reads 'Kelly Buettner'.

Kelly Buettner
Project Manager



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0811379A

Work Order Summary

CLIENT:	Ms. Joyce Bobek SOMA Environmental 6620 Owens Drive Suite A Pleasanton, CA 94588	BILL TO:	Ms. Joyce Bobek SOMA Environmental 6620 Owens Drive Suite A Pleasanton, CA 94588
PHONE:	925-734-6400	P.O. #	2332
FAX:	925-734-6401	PROJECT #	Tony's Express Auto 3609 International
DATE RECEIVED:	11/18/2008	CONTACT:	Kelly Buettner
DATE COMPLETED:	12/03/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SV-1	Modified TO-15	6.0 "Hg	5 psi
01AA	SV-1 Lab Duplicate	Modified TO-15	6.0 "Hg	5 psi
02A	SV-2	Modified TO-15	7.0 "Hg	5 psi
03A	SV-3	Modified TO-15	9.0 "Hg	5 psi
04A	SV-4-1	Modified TO-15	8.5 "Hg	5 psi
05A	SV-4-2	Modified TO-15	8.5 "Hg	5 psi
06A	SV-5	Modified TO-15	6.0 "Hg	5 psi
07A	SV-6	Modified TO-15	4.5 "Hg	5 psi
08A	SV-7	Modified TO-15	5.5 "Hg	5 psi
09A	Lab Blank	Modified TO-15	NA	NA
10A	CCV	Modified TO-15	NA	NA
11A	LCS	Modified TO-15	NA	NA

CERTIFIED BY: 

DATE: 12/03/08

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09

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

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

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

LABORATORY NARRATIVE
Modified TO-15
SOMA Environmental
Workorder# 0811379A

Eight 6 Liter Summa Canister samples were received on November 18, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

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

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

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Daily CCV	<= 30% Difference	<= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

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

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.

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

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: SV-1

Lab ID#: 0811379A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.84	2.4	1.8	5.3
Ethanol	3.4	6.8	6.3	13
Acetone	3.4	52	8.0	120
2-Propanol	3.4	15	8.2	36
Hexane	0.84	3.2	3.0	11
2-Butanone (Methyl Ethyl Ketone)	0.84	22	2.5	64
Cyclohexane	0.84	3.3	2.9	11
2,2,4-Trimethylpentane	0.84	2.1	3.9	10
Benzene	0.84	1.2	2.7	4.0
Heptane	0.84	2.1	3.4	8.4
Toluene	0.84	2.3	3.2	8.6
Ethyl Benzene	0.84	1.0	3.6	4.5
m,p-Xylene	0.84	1.3	3.6	5.8
Styrene	0.84	1.7	3.6	7.1

Client Sample ID: SV-1 Lab Duplicate

Lab ID#: 0811379A-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.84	2.2	1.8	4.9
Ethanol	3.4	6.6	6.3	12
Acetone	3.4	53	8.0	130
2-Propanol	3.4	15	8.2	37
Hexane	0.84	3.3	3.0	12
2-Butanone (Methyl Ethyl Ketone)	0.84	23	2.5	68
Cyclohexane	0.84	3.3	2.9	11
2,2,4-Trimethylpentane	0.84	2.1	3.9	9.9
Benzene	0.84	1.2	2.7	3.9
Heptane	0.84	2.2	3.4	9.0
Toluene	0.84	2.2	3.2	8.2
Ethyl Benzene	0.84	1.0	3.6	4.3
m,p-Xylene	0.84	1.3	3.6	5.8
Styrene	0.84	1.7	3.6	7.1

Client Sample ID: SV-2

Lab ID#: 0811379A-02A



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: SV-2

Lab ID#: 0811379A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.88	40	1.9	88
Ethanol	3.5	3.9	6.6	7.4
Acetone	3.5	140	8.3	330
2-Propanol	3.5	30	8.6	73
Carbon Disulfide	0.88	5.2	2.7	16
Methyl tert-butyl ether	0.88	16	3.2	58
Hexane	0.88	18	3.1	64
2-Butanone (Methyl Ethyl Ketone)	0.88	28	2.6	84
Cyclohexane	0.88	7.5	3.0	26
2,2,4-Trimethylpentane	0.88	1.7	4.1	8.2
Benzene	0.88	15	2.8	47
Heptane	0.88	4.4	3.6	18
Toluene	0.88	9.5	3.3	36
Ethyl Benzene	0.88	2.0	3.8	8.5
m,p-Xylene	0.88	6.4	3.8	28
o-Xylene	0.88	3.0	3.8	13
Styrene	0.88	0.99	3.7	4.2
Propylbenzene	0.88	1.4	4.3	7.1
4-Ethyltoluene	0.88	4.0	4.3	20
1,3,5-Trimethylbenzene	0.88	1.1	4.3	5.6
1,2,4-Trimethylbenzene	0.88	1.2	4.3	5.8

Client Sample ID: SV-3

Lab ID#: 0811379A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.96	19	2.1	42
Ethanol	3.8	7.6	7.2	14
Acetone	3.8	81	9.1	190
2-Propanol	3.8	11	9.4	27
Hexane	0.96	3.1	3.4	11
2-Butanone (Methyl Ethyl Ketone)	0.96	18	2.8	54
Cyclohexane	0.96	1.2	3.3	4.3
2,2,4-Trimethylpentane	0.96	7.3	4.5	34
Benzene	0.96	3.9	3.0	12
Heptane	0.96	1.7	3.9	6.9
Toluene	0.96	4.0	3.6	15



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: SV-3

Lab ID#: 0811379A-03A

Ethyl Benzene	0.96	1.0	4.1	4.4
m,p-Xylene	0.96	2.0	4.1	8.7
Styrene	0.96	1.6	4.1	6.8

Client Sample ID: SV-4-1

Lab ID#: 0811379A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.94	22	2.1	50
Ethanol	3.7	4.4	7.0	8.3
Acetone	3.7	83	8.9	200
2-Propanol	3.7	37	9.2	91
Carbon Disulfide	0.94	1.7	2.9	5.2
Hexane	0.94	13	3.3	46
2-Butanone (Methyl Ethyl Ketone)	0.94	21	2.8	63
Cyclohexane	0.94	2.5	3.2	8.6
Benzene	0.94	8.8	3.0	28
Heptane	0.94	3.3	3.8	14
Toluene	0.94	6.7	3.5	25
Ethyl Benzene	0.94	1.3	4.0	5.6
m,p-Xylene	0.94	1.8	4.1	8.0
Styrene	0.94	1.5	4.0	6.5

Client Sample ID: SV-4-2

Lab ID#: 0811379A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.94	24	2.1	53
Ethanol	3.7	4.6	7.0	8.6
Acetone	3.7	88	8.9	210
2-Propanol	3.7	32	9.2	79
Carbon Disulfide	0.94	1.7	2.9	5.2
Hexane	0.94	17	3.3	60
2-Butanone (Methyl Ethyl Ketone)	0.94	23	2.8	67
Cyclohexane	0.94	2.6	3.2	8.8
Benzene	0.94	8.8	3.0	28
Heptane	0.94	3.4	3.8	14
Toluene	0.94	7.0	3.5	26



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: SV-4-2

Lab ID#: 0811379A-05A

Ethyl Benzene	0.94	1.3	4.0	5.7
m,p-Xylene	0.94	1.7	4.1	7.4
Styrene	0.94	1.6	4.0	6.9

Client Sample ID: SV-5

Lab ID#: 0811379A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	11	79	25	170
Acetone	45	98	110	230
Hexane	11	4300	39	15000
2-Butanone (Methyl Ethyl Ketone)	11	29	33	86
Cyclohexane	11	21	38	72
Benzene	11	24	36	78
Heptane	11	26	46	110

Client Sample ID: SV-6

Lab ID#: 0811379A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.79	0.78 J	1.7	1.7 J
Ethanol	3.2	3.9	6.0	7.4
Acetone	3.2	64	7.5	150
2-Propanol	3.2	7.0	7.8	17
Hexane	0.79	1.2	2.8	4.4
2-Butanone (Methyl Ethyl Ketone)	0.79	12	2.3	37
Heptane	0.79	1.7	3.2	6.8
Toluene	0.79	1.7	3.0	6.4
m,p-Xylene	0.79	0.81	3.4	3.5
Styrene	0.79	1.0	3.4	4.4

Client Sample ID: SV-7

Lab ID#: 0811379A-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,3-Butadiene	0.82	3.3	1.8	7.2
Ethanol	3.3	10	6.2	19



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: SV-7

Lab ID#: 0811379A-08A

Acetone	3.3	40	7.8	95
Carbon Disulfide	0.82	0.86	2.6	2.7
Hexane	0.82	34	2.9	120
2-Butanone (Methyl Ethyl Ketone)	0.82	16	2.4	49
Chloroform	0.82	1.6	4.0	7.7
Cyclohexane	0.82	10	2.8	35
Carbon Tetrachloride	0.82	3.2	5.2	20
2,2,4-Trimethylpentane	0.82	34	3.8	160
Benzene	0.82	1.6	2.6	5.1
Heptane	0.82	44	3.4	180
Toluene	0.82	6.2	3.1	23
Ethyl Benzene	0.82	2.8	3.6	12
m,p-Xylene	0.82	6.0	3.6	26
o-Xylene	0.82	1.8	3.6	7.9
Styrene	0.82	0.85	3.5	3.6



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-1

Lab ID#: 0811379A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112610	Date of Collection:	11/14/08
Dil. Factor:	1.68	Date of Analysis:	11/26/08 03:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.84	Not Detected	4.2	Not Detected
Freon 114	0.84	Not Detected	5.9	Not Detected
Chloromethane	3.4	Not Detected	6.9	Not Detected
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
1,3-Butadiene	0.84	2.4	1.8	5.3
Bromomethane	0.84	Not Detected	3.3	Not Detected
Chloroethane	0.84	Not Detected	2.2	Not Detected
Freon 11	0.84	Not Detected	4.7	Not Detected
Ethanol	3.4	6.8	6.3	13
Freon 113	0.84	Not Detected	6.4	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Acetone	3.4	52	8.0	120
2-Propanol	3.4	15	8.2	36
Carbon Disulfide	0.84	Not Detected	2.6	Not Detected
3-Chloropropene	3.4	Not Detected	10	Not Detected
Methylene Chloride	0.84	Not Detected	2.9	Not Detected
Methyl tert-butyl ether	0.84	Not Detected	3.0	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Hexane	0.84	3.2	3.0	11
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	22	2.5	64
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Tetrahydrofuran	0.84	Not Detected	2.5	Not Detected
Chloroform	0.84	Not Detected	4.1	Not Detected
1,1,1-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Cyclohexane	0.84	3.3	2.9	11
Carbon Tetrachloride	0.84	Not Detected	5.3	Not Detected
2,2,4-Trimethylpentane	0.84	2.1	3.9	10
Benzene	0.84	1.2	2.7	4.0
1,2-Dichloroethane	0.84	Not Detected	3.4	Not Detected
Heptane	0.84	2.1	3.4	8.4
Trichloroethene	0.84	Not Detected	4.5	Not Detected
1,2-Dichloropropane	0.84	Not Detected	3.9	Not Detected
1,4-Dioxane	3.4	Not Detected	12	Not Detected
Bromodichloromethane	0.84	Not Detected	5.6	Not Detected
cis-1,3-Dichloropropene	0.84	Not Detected	3.8	Not Detected
4-Methyl-2-pentanone	0.84	Not Detected	3.4	Not Detected
Toluene	0.84	2.3	3.2	8.6
trans-1,3-Dichloropropene	0.84	Not Detected	3.8	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-1

Lab ID#: 0811379A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112610	Date of Collection: 11/14/08
Dil. Factor:	1.68	Date of Analysis: 11/26/08 03:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
2-Hexanone	3.4	Not Detected	14	Not Detected
Dibromochloromethane	0.84	Not Detected	7.2	Not Detected
1,2-Dibromoethane (EDB)	0.84	Not Detected	6.4	Not Detected
Chlorobenzene	0.84	Not Detected	3.9	Not Detected
Ethyl Benzene	0.84	1.0	3.6	4.5
m,p-Xylene	0.84	1.3	3.6	5.8
o-Xylene	0.84	Not Detected	3.6	Not Detected
Styrene	0.84	1.7	3.6	7.1
Bromoform	0.84	Not Detected	8.7	Not Detected
Cumene	0.84	Not Detected	4.1	Not Detected
1,1,2,2-Tetrachloroethane	0.84	Not Detected	5.8	Not Detected
Propylbenzene	0.84	Not Detected	4.1	Not Detected
4-Ethyltoluene	0.84	Not Detected	4.1	Not Detected
1,3,5-Trimethylbenzene	0.84	Not Detected	4.1	Not Detected
1,2,4-Trimethylbenzene	0.84	Not Detected	4.1	Not Detected
1,3-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
1,4-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
alpha-Chlorotoluene	0.84	Not Detected	4.3	Not Detected
1,2-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
1,2,4-Trichlorobenzene	3.4	Not Detected	25	Not Detected
Hexachlorobutadiene	3.4	Not Detected	36	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-1 Lab Duplicate

Lab ID#: 0811379A-01AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112611	Date of Collection:	11/14/08
Dil. Factor:	1.68	Date of Analysis:	11/26/08 03:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.84	Not Detected	4.2	Not Detected
Freon 114	0.84	Not Detected	5.9	Not Detected
Chloromethane	3.4	Not Detected	6.9	Not Detected
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
1,3-Butadiene	0.84	2.2	1.8	4.9
Bromomethane	0.84	Not Detected	3.3	Not Detected
Chloroethane	0.84	Not Detected	2.2	Not Detected
Freon 11	0.84	Not Detected	4.7	Not Detected
Ethanol	3.4	6.6	6.3	12
Freon 113	0.84	Not Detected	6.4	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Acetone	3.4	53	8.0	130
2-Propanol	3.4	15	8.2	37
Carbon Disulfide	0.84	Not Detected	2.6	Not Detected
3-Chloropropene	3.4	Not Detected	10	Not Detected
Methylene Chloride	0.84	Not Detected	2.9	Not Detected
Methyl tert-butyl ether	0.84	Not Detected	3.0	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Hexane	0.84	3.3	3.0	12
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.84	23	2.5	68
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Tetrahydrofuran	0.84	Not Detected	2.5	Not Detected
Chloroform	0.84	Not Detected	4.1	Not Detected
1,1,1-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Cyclohexane	0.84	3.3	2.9	11
Carbon Tetrachloride	0.84	Not Detected	5.3	Not Detected
2,2,4-Trimethylpentane	0.84	2.1	3.9	9.9
Benzene	0.84	1.2	2.7	3.9
1,2-Dichloroethane	0.84	Not Detected	3.4	Not Detected
Heptane	0.84	2.2	3.4	9.0
Trichloroethene	0.84	Not Detected	4.5	Not Detected
1,2-Dichloropropane	0.84	Not Detected	3.9	Not Detected
1,4-Dioxane	3.4	Not Detected	12	Not Detected
Bromodichloromethane	0.84	Not Detected	5.6	Not Detected
cis-1,3-Dichloropropene	0.84	Not Detected	3.8	Not Detected
4-Methyl-2-pentanone	0.84	Not Detected	3.4	Not Detected
Toluene	0.84	2.2	3.2	8.2
trans-1,3-Dichloropropene	0.84	Not Detected	3.8	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-1 Lab Duplicate

Lab ID#: 0811379A-01AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112611	Date of Collection:	11/14/08
Dil. Factor:	1.68	Date of Analysis:	11/26/08 03:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
2-Hexanone	3.4	Not Detected	14	Not Detected
Dibromochloromethane	0.84	Not Detected	7.2	Not Detected
1,2-Dibromoethane (EDB)	0.84	Not Detected	6.4	Not Detected
Chlorobenzene	0.84	Not Detected	3.9	Not Detected
Ethyl Benzene	0.84	1.0	3.6	4.3
m,p-Xylene	0.84	1.3	3.6	5.8
o-Xylene	0.84	Not Detected	3.6	Not Detected
Styrene	0.84	1.7	3.6	7.1
Bromoform	0.84	Not Detected	8.7	Not Detected
Cumene	0.84	Not Detected	4.1	Not Detected
1,1,2,2-Tetrachloroethane	0.84	Not Detected	5.8	Not Detected
Propylbenzene	0.84	Not Detected	4.1	Not Detected
4-Ethyltoluene	0.84	Not Detected	4.1	Not Detected
1,3,5-Trimethylbenzene	0.84	Not Detected	4.1	Not Detected
1,2,4-Trimethylbenzene	0.84	Not Detected	4.1	Not Detected
1,3-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
1,4-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
alpha-Chlorotoluene	0.84	Not Detected	4.3	Not Detected
1,2-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
1,2,4-Trichlorobenzene	3.4	Not Detected	25	Not Detected
Hexachlorobutadiene	3.4	Not Detected	36	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	93	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-2

Lab ID#: 0811379A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112612	Date of Collection:	11/14/08
Dil. Factor:	1.75	Date of Analysis:	11/26/08 05:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.88	Not Detected	4.3	Not Detected
Freon 114	0.88	Not Detected	6.1	Not Detected
Chloromethane	3.5	Not Detected	7.2	Not Detected
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
1,3-Butadiene	0.88	40	1.9	88
Bromomethane	0.88	Not Detected	3.4	Not Detected
Chloroethane	0.88	Not Detected	2.3	Not Detected
Freon 11	0.88	Not Detected	4.9	Not Detected
Ethanol	3.5	3.9	6.6	7.4
Freon 113	0.88	Not Detected	6.7	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Acetone	3.5	140	8.3	330
2-Propanol	3.5	30	8.6	73
Carbon Disulfide	0.88	5.2	2.7	16
3-Chloropropene	3.5	Not Detected	11	Not Detected
Methylene Chloride	0.88	Not Detected	3.0	Not Detected
Methyl tert-butyl ether	0.88	16	3.2	58
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Hexane	0.88	18	3.1	64
1,1-Dichloroethane	0.88	Not Detected	3.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.88	28	2.6	84
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Tetrahydrofuran	0.88	Not Detected	2.6	Not Detected
Chloroform	0.88	Not Detected	4.3	Not Detected
1,1,1-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Cyclohexane	0.88	7.5	3.0	26
Carbon Tetrachloride	0.88	Not Detected	5.5	Not Detected
2,2,4-Trimethylpentane	0.88	1.7	4.1	8.2
Benzene	0.88	15	2.8	47
1,2-Dichloroethane	0.88	Not Detected	3.5	Not Detected
Heptane	0.88	4.4	3.6	18
Trichloroethene	0.88	Not Detected	4.7	Not Detected
1,2-Dichloropropane	0.88	Not Detected	4.0	Not Detected
1,4-Dioxane	3.5	Not Detected	13	Not Detected
Bromodichloromethane	0.88	Not Detected	5.9	Not Detected
cis-1,3-Dichloropropene	0.88	Not Detected	4.0	Not Detected
4-Methyl-2-pentanone	0.88	Not Detected	3.6	Not Detected
Toluene	0.88	9.5	3.3	36
trans-1,3-Dichloropropene	0.88	Not Detected	4.0	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-2

Lab ID#: 0811379A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112612	Date of Collection: 11/14/08
Dil. Factor:	1.75	Date of Analysis: 11/26/08 05:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Tetrachloroethene	0.88	Not Detected	5.9	Not Detected
2-Hexanone	3.5	Not Detected	14	Not Detected
Dibromochloromethane	0.88	Not Detected	7.4	Not Detected
1,2-Dibromoethane (EDB)	0.88	Not Detected	6.7	Not Detected
Chlorobenzene	0.88	Not Detected	4.0	Not Detected
Ethyl Benzene	0.88	2.0	3.8	8.5
m,p-Xylene	0.88	6.4	3.8	28
o-Xylene	0.88	3.0	3.8	13
Styrene	0.88	0.99	3.7	4.2
Bromoform	0.88	Not Detected	9.0	Not Detected
Cumene	0.88	Not Detected	4.3	Not Detected
1,1,2,2-Tetrachloroethane	0.88	Not Detected	6.0	Not Detected
Propylbenzene	0.88	1.4	4.3	7.1
4-Ethyltoluene	0.88	4.0	4.3	20
1,3,5-Trimethylbenzene	0.88	1.1	4.3	5.6
1,2,4-Trimethylbenzene	0.88	1.2	4.3	5.8
1,3-Dichlorobenzene	0.88	Not Detected	5.3	Not Detected
1,4-Dichlorobenzene	0.88	Not Detected	5.3	Not Detected
alpha-Chlorotoluene	0.88	Not Detected	4.5	Not Detected
1,2-Dichlorobenzene	0.88	Not Detected	5.3	Not Detected
1,2,4-Trichlorobenzene	3.5	Not Detected	26	Not Detected
Hexachlorobutadiene	3.5	Not Detected	37	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-3

Lab ID#: 0811379A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112613	Date of Collection:	11/14/08
Dil. Factor:	1.91	Date of Analysis:	11/26/08 06:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.96	Not Detected	4.7	Not Detected
Freon 114	0.96	Not Detected	6.7	Not Detected
Chloromethane	3.8	Not Detected	7.9	Not Detected
Vinyl Chloride	0.96	Not Detected	2.4	Not Detected
1,3-Butadiene	0.96	19	2.1	42
Bromomethane	0.96	Not Detected	3.7	Not Detected
Chloroethane	0.96	Not Detected	2.5	Not Detected
Freon 11	0.96	Not Detected	5.4	Not Detected
Ethanol	3.8	7.6	7.2	14
Freon 113	0.96	Not Detected	7.3	Not Detected
1,1-Dichloroethene	0.96	Not Detected	3.8	Not Detected
Acetone	3.8	81	9.1	190
2-Propanol	3.8	11	9.4	27
Carbon Disulfide	0.96	Not Detected	3.0	Not Detected
3-Chloropropene	3.8	Not Detected	12	Not Detected
Methylene Chloride	0.96	Not Detected	3.3	Not Detected
Methyl tert-butyl ether	0.96	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.96	Not Detected	3.8	Not Detected
Hexane	0.96	3.1	3.4	11
1,1-Dichloroethane	0.96	Not Detected	3.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.96	18	2.8	54
cis-1,2-Dichloroethene	0.96	Not Detected	3.8	Not Detected
Tetrahydrofuran	0.96	Not Detected	2.8	Not Detected
Chloroform	0.96	Not Detected	4.7	Not Detected
1,1,1-Trichloroethane	0.96	Not Detected	5.2	Not Detected
Cyclohexane	0.96	1.2	3.3	4.3
Carbon Tetrachloride	0.96	Not Detected	6.0	Not Detected
2,2,4-Trimethylpentane	0.96	7.3	4.5	34
Benzene	0.96	3.9	3.0	12
1,2-Dichloroethane	0.96	Not Detected	3.9	Not Detected
Heptane	0.96	1.7	3.9	6.9
Trichloroethene	0.96	Not Detected	5.1	Not Detected
1,2-Dichloropropane	0.96	Not Detected	4.4	Not Detected
1,4-Dioxane	3.8	Not Detected	14	Not Detected
Bromodichloromethane	0.96	Not Detected	6.4	Not Detected
cis-1,3-Dichloropropene	0.96	Not Detected	4.3	Not Detected
4-Methyl-2-pentanone	0.96	Not Detected	3.9	Not Detected
Toluene	0.96	4.0	3.6	15
trans-1,3-Dichloropropene	0.96	Not Detected	4.3	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-3

Lab ID#: 0811379A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112613	Date of Collection: 11/14/08
Dil. Factor:	1.91	Date of Analysis: 11/26/08 06:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.96	Not Detected	5.2	Not Detected
Tetrachloroethene	0.96	Not Detected	6.5	Not Detected
2-Hexanone	3.8	Not Detected	16	Not Detected
Dibromochloromethane	0.96	Not Detected	8.1	Not Detected
1,2-Dibromoethane (EDB)	0.96	Not Detected	7.3	Not Detected
Chlorobenzene	0.96	Not Detected	4.4	Not Detected
Ethyl Benzene	0.96	1.0	4.1	4.4
m,p-Xylene	0.96	2.0	4.1	8.7
o-Xylene	0.96	Not Detected	4.1	Not Detected
Styrene	0.96	1.6	4.1	6.8
Bromoform	0.96	Not Detected	9.9	Not Detected
Cumene	0.96	Not Detected	4.7	Not Detected
1,1,2,2-Tetrachloroethane	0.96	Not Detected	6.6	Not Detected
Propylbenzene	0.96	Not Detected	4.7	Not Detected
4-Ethyltoluene	0.96	Not Detected	4.7	Not Detected
1,3,5-Trimethylbenzene	0.96	Not Detected	4.7	Not Detected
1,2,4-Trimethylbenzene	0.96	Not Detected	4.7	Not Detected
1,3-Dichlorobenzene	0.96	Not Detected	5.7	Not Detected
1,4-Dichlorobenzene	0.96	Not Detected	5.7	Not Detected
alpha-Chlorotoluene	0.96	Not Detected	4.9	Not Detected
1,2-Dichlorobenzene	0.96	Not Detected	5.7	Not Detected
1,2,4-Trichlorobenzene	3.8	Not Detected	28	Not Detected
Hexachlorobutadiene	3.8	Not Detected	41	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	93	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-4-1

Lab ID#: 0811379A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112614	Date of Collection:	11/14/08
Dil. Factor:	1.87	Date of Analysis:	11/26/08 06:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.94	Not Detected	4.6	Not Detected
Freon 114	0.94	Not Detected	6.5	Not Detected
Chloromethane	3.7	Not Detected	7.7	Not Detected
Vinyl Chloride	0.94	Not Detected	2.4	Not Detected
1,3-Butadiene	0.94	22	2.1	50
Bromomethane	0.94	Not Detected	3.6	Not Detected
Chloroethane	0.94	Not Detected	2.5	Not Detected
Freon 11	0.94	Not Detected	5.2	Not Detected
Ethanol	3.7	4.4	7.0	8.3
Freon 113	0.94	Not Detected	7.2	Not Detected
1,1-Dichloroethene	0.94	Not Detected	3.7	Not Detected
Acetone	3.7	83	8.9	200
2-Propanol	3.7	37	9.2	91
Carbon Disulfide	0.94	1.7	2.9	5.2
3-Chloropropene	3.7	Not Detected	12	Not Detected
Methylene Chloride	0.94	Not Detected	3.2	Not Detected
Methyl tert-butyl ether	0.94	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.94	Not Detected	3.7	Not Detected
Hexane	0.94	13	3.3	46
1,1-Dichloroethane	0.94	Not Detected	3.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.94	21	2.8	63
cis-1,2-Dichloroethene	0.94	Not Detected	3.7	Not Detected
Tetrahydrofuran	0.94	Not Detected	2.8	Not Detected
Chloroform	0.94	Not Detected	4.6	Not Detected
1,1,1-Trichloroethane	0.94	Not Detected	5.1	Not Detected
Cyclohexane	0.94	2.5	3.2	8.6
Carbon Tetrachloride	0.94	Not Detected	5.9	Not Detected
2,2,4-Trimethylpentane	0.94	Not Detected	4.4	Not Detected
Benzene	0.94	8.8	3.0	28
1,2-Dichloroethane	0.94	Not Detected	3.8	Not Detected
Heptane	0.94	3.3	3.8	14
Trichloroethene	0.94	Not Detected	5.0	Not Detected
1,2-Dichloropropane	0.94	Not Detected	4.3	Not Detected
1,4-Dioxane	3.7	Not Detected	13	Not Detected
Bromodichloromethane	0.94	Not Detected	6.3	Not Detected
cis-1,3-Dichloropropene	0.94	Not Detected	4.2	Not Detected
4-Methyl-2-pentanone	0.94	Not Detected	3.8	Not Detected
Toluene	0.94	6.7	3.5	25
trans-1,3-Dichloropropene	0.94	Not Detected	4.2	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-4-1

Lab ID#: 0811379A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112614	Date of Collection:	11/14/08
Dil. Factor:	1.87	Date of Analysis:	11/26/08 06:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.94	Not Detected	5.1	Not Detected
Tetrachloroethene	0.94	Not Detected	6.3	Not Detected
2-Hexanone	3.7	Not Detected	15	Not Detected
Dibromochloromethane	0.94	Not Detected	8.0	Not Detected
1,2-Dibromoethane (EDB)	0.94	Not Detected	7.2	Not Detected
Chlorobenzene	0.94	Not Detected	4.3	Not Detected
Ethyl Benzene	0.94	1.3	4.0	5.6
m,p-Xylene	0.94	1.8	4.1	8.0
o-Xylene	0.94	Not Detected	4.1	Not Detected
Styrene	0.94	1.5	4.0	6.5
Bromoform	0.94	Not Detected	9.7	Not Detected
Cumene	0.94	Not Detected	4.6	Not Detected
1,1,1,2-Tetrachloroethane	0.94	Not Detected	6.4	Not Detected
Propylbenzene	0.94	Not Detected	4.6	Not Detected
4-Ethyltoluene	0.94	Not Detected	4.6	Not Detected
1,3,5-Trimethylbenzene	0.94	Not Detected	4.6	Not Detected
1,2,4-Trimethylbenzene	0.94	Not Detected	4.6	Not Detected
1,3-Dichlorobenzene	0.94	Not Detected	5.6	Not Detected
1,4-Dichlorobenzene	0.94	Not Detected	5.6	Not Detected
alpha-Chlorotoluene	0.94	Not Detected	4.8	Not Detected
1,2-Dichlorobenzene	0.94	Not Detected	5.6	Not Detected
1,2,4-Trichlorobenzene	3.7	Not Detected	28	Not Detected
Hexachlorobutadiene	3.7	Not Detected	40	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-4-2

Lab ID#: 0811379A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112616	Date of Collection:	11/14/08
Dil. Factor:	1.87	Date of Analysis:	11/26/08 10:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.94	Not Detected	4.6	Not Detected
Freon 114	0.94	Not Detected	6.5	Not Detected
Chloromethane	3.7	Not Detected	7.7	Not Detected
Vinyl Chloride	0.94	Not Detected	2.4	Not Detected
1,3-Butadiene	0.94	24	2.1	53
Bromomethane	0.94	Not Detected	3.6	Not Detected
Chloroethane	0.94	Not Detected	2.5	Not Detected
Freon 11	0.94	Not Detected	5.2	Not Detected
Ethanol	3.7	4.6	7.0	8.6
Freon 113	0.94	Not Detected	7.2	Not Detected
1,1-Dichloroethene	0.94	Not Detected	3.7	Not Detected
Acetone	3.7	88	8.9	210
2-Propanol	3.7	32	9.2	79
Carbon Disulfide	0.94	1.7	2.9	5.2
3-Chloropropene	3.7	Not Detected	12	Not Detected
Methylene Chloride	0.94	Not Detected	3.2	Not Detected
Methyl tert-butyl ether	0.94	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.94	Not Detected	3.7	Not Detected
Hexane	0.94	17	3.3	60
1,1-Dichloroethane	0.94	Not Detected	3.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.94	23	2.8	67
cis-1,2-Dichloroethene	0.94	Not Detected	3.7	Not Detected
Tetrahydrofuran	0.94	Not Detected	2.8	Not Detected
Chloroform	0.94	Not Detected	4.6	Not Detected
1,1,1-Trichloroethane	0.94	Not Detected	5.1	Not Detected
Cyclohexane	0.94	2.6	3.2	8.8
Carbon Tetrachloride	0.94	Not Detected	5.9	Not Detected
2,2,4-Trimethylpentane	0.94	Not Detected	4.4	Not Detected
Benzene	0.94	8.8	3.0	28
1,2-Dichloroethane	0.94	Not Detected	3.8	Not Detected
Heptane	0.94	3.4	3.8	14
Trichloroethene	0.94	Not Detected	5.0	Not Detected
1,2-Dichloropropane	0.94	Not Detected	4.3	Not Detected
1,4-Dioxane	3.7	Not Detected	13	Not Detected
Bromodichloromethane	0.94	Not Detected	6.3	Not Detected
cis-1,3-Dichloropropene	0.94	Not Detected	4.2	Not Detected
4-Methyl-2-pentanone	0.94	Not Detected	3.8	Not Detected
Toluene	0.94	7.0	3.5	26
trans-1,3-Dichloropropene	0.94	Not Detected	4.2	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-4-2

Lab ID#: 0811379A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112616	Date of Collection: 11/14/08
Dil. Factor:	1.87	Date of Analysis: 11/26/08 10:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.94	Not Detected	5.1	Not Detected
Tetrachloroethene	0.94	Not Detected	6.3	Not Detected
2-Hexanone	3.7	Not Detected	15	Not Detected
Dibromochloromethane	0.94	Not Detected	8.0	Not Detected
1,2-Dibromoethane (EDB)	0.94	Not Detected	7.2	Not Detected
Chlorobenzene	0.94	Not Detected	4.3	Not Detected
Ethyl Benzene	0.94	1.3	4.0	5.7
m,p-Xylene	0.94	1.7	4.1	7.4
o-Xylene	0.94	Not Detected	4.1	Not Detected
Styrene	0.94	1.6	4.0	6.9
Bromoform	0.94	Not Detected	9.7	Not Detected
Cumene	0.94	Not Detected	4.6	Not Detected
1,1,2,2-Tetrachloroethane	0.94	Not Detected	6.4	Not Detected
Propylbenzene	0.94	Not Detected	4.6	Not Detected
4-Ethyltoluene	0.94	Not Detected	4.6	Not Detected
1,3,5-Trimethylbenzene	0.94	Not Detected	4.6	Not Detected
1,2,4-Trimethylbenzene	0.94	Not Detected	4.6	Not Detected
1,3-Dichlorobenzene	0.94	Not Detected	5.6	Not Detected
1,4-Dichlorobenzene	0.94	Not Detected	5.6	Not Detected
alpha-Chlorotoluene	0.94	Not Detected	4.8	Not Detected
1,2-Dichlorobenzene	0.94	Not Detected	5.6	Not Detected
1,2,4-Trichlorobenzene	3.7	Not Detected	28	Not Detected
Hexachlorobutadiene	3.7	Not Detected	40	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	95	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-5

Lab ID#: 0811379A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112617	Date of Collection:	11/14/08
Dil. Factor:	22.4	Date of Analysis:	11/26/08 10:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	11	Not Detected	55	Not Detected
Freon 114	11	Not Detected	78	Not Detected
Chloromethane	45	Not Detected	92	Not Detected
Vinyl Chloride	11	Not Detected	29	Not Detected
1,3-Butadiene	11	79	25	170
Bromomethane	11	Not Detected	43	Not Detected
Chloroethane	11	Not Detected	30	Not Detected
Freon 11	11	Not Detected	63	Not Detected
Ethanol	45	Not Detected	84	Not Detected
Freon 113	11	Not Detected	86	Not Detected
1,1-Dichloroethene	11	Not Detected	44	Not Detected
Acetone	45	98	110	230
2-Propanol	45	Not Detected	110	Not Detected
Carbon Disulfide	11	Not Detected	35	Not Detected
3-Chloropropene	45	Not Detected	140	Not Detected
Methylene Chloride	11	Not Detected	39	Not Detected
Methyl tert-butyl ether	11	Not Detected	40	Not Detected
trans-1,2-Dichloroethene	11	Not Detected	44	Not Detected
Hexane	11	4300	39	15000
1,1-Dichloroethane	11	Not Detected	45	Not Detected
2-Butanone (Methyl Ethyl Ketone)	11	29	33	86
cis-1,2-Dichloroethene	11	Not Detected	44	Not Detected
Tetrahydrofuran	11	Not Detected	33	Not Detected
Chloroform	11	Not Detected	55	Not Detected
1,1,1-Trichloroethane	11	Not Detected	61	Not Detected
Cyclohexane	11	21	38	72
Carbon Tetrachloride	11	Not Detected	70	Not Detected
2,2,4-Trimethylpentane	11	Not Detected	52	Not Detected
Benzene	11	24	36	78
1,2-Dichloroethane	11	Not Detected	45	Not Detected
Heptane	11	26	46	110
Trichloroethene	11	Not Detected	60	Not Detected
1,2-Dichloropropane	11	Not Detected	52	Not Detected
1,4-Dioxane	45	Not Detected	160	Not Detected
Bromodichloromethane	11	Not Detected	75	Not Detected
cis-1,3-Dichloropropene	11	Not Detected	51	Not Detected
4-Methyl-2-pentanone	11	Not Detected	46	Not Detected
Toluene	11	Not Detected	42	Not Detected
trans-1,3-Dichloropropene	11	Not Detected	51	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-5

Lab ID#: 0811379A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112617	Date of Collection:	11/14/08
Dil. Factor:	22.4	Date of Analysis:	11/26/08 10:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	11	Not Detected	61	Not Detected
Tetrachloroethene	11	Not Detected	76	Not Detected
2-Hexanone	45	Not Detected	180	Not Detected
Dibromochloromethane	11	Not Detected	95	Not Detected
1,2-Dibromoethane (EDB)	11	Not Detected	86	Not Detected
Chlorobenzene	11	Not Detected	52	Not Detected
Ethyl Benzene	11	Not Detected	49	Not Detected
m,p-Xylene	11	Not Detected	49	Not Detected
o-Xylene	11	Not Detected	49	Not Detected
Styrene	11	Not Detected	48	Not Detected
Bromoform	11	Not Detected	120	Not Detected
Cumene	11	Not Detected	55	Not Detected
1,1,2,2-Tetrachloroethane	11	Not Detected	77	Not Detected
Propylbenzene	11	Not Detected	55	Not Detected
4-Ethyltoluene	11	Not Detected	55	Not Detected
1,3,5-Trimethylbenzene	11	Not Detected	55	Not Detected
1,2,4-Trimethylbenzene	11	Not Detected	55	Not Detected
1,3-Dichlorobenzene	11	Not Detected	67	Not Detected
1,4-Dichlorobenzene	11	Not Detected	67	Not Detected
alpha-Chlorotoluene	11	Not Detected	58	Not Detected
1,2-Dichlorobenzene	11	Not Detected	67	Not Detected
1,2,4-Trichlorobenzene	45	Not Detected	330	Not Detected
Hexachlorobutadiene	45	Not Detected	480	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	109	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-6

Lab ID#: 0811379A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112618	Date of Collection:	11/14/08
Dil. Factor:	1.58	Date of Analysis:	11/26/08 11:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.79	Not Detected	3.9	Not Detected
Freon 114	0.79	Not Detected	5.5	Not Detected
Chloromethane	3.2	Not Detected	6.5	Not Detected
Vinyl Chloride	0.79	Not Detected	2.0	Not Detected
1,3-Butadiene	0.79	0.78 J	1.7	1.7 J
Bromomethane	0.79	Not Detected	3.1	Not Detected
Chloroethane	0.79	Not Detected	2.1	Not Detected
Freon 11	0.79	Not Detected	4.4	Not Detected
Ethanol	3.2	3.9	6.0	7.4
Freon 113	0.79	Not Detected	6.0	Not Detected
1,1-Dichloroethene	0.79	Not Detected	3.1	Not Detected
Acetone	3.2	64	7.5	150
2-Propanol	3.2	7.0	7.8	17
Carbon Disulfide	0.79	Not Detected	2.5	Not Detected
3-Chloropropene	3.2	Not Detected	9.9	Not Detected
Methylene Chloride	0.79	Not Detected	2.7	Not Detected
Methyl tert-butyl ether	0.79	Not Detected	2.8	Not Detected
trans-1,2-Dichloroethene	0.79	Not Detected	3.1	Not Detected
Hexane	0.79	1.2	2.8	4.4
1,1-Dichloroethane	0.79	Not Detected	3.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.79	12	2.3	37
cis-1,2-Dichloroethene	0.79	Not Detected	3.1	Not Detected
Tetrahydrofuran	0.79	Not Detected	2.3	Not Detected
Chloroform	0.79	Not Detected	3.8	Not Detected
1,1,1-Trichloroethane	0.79	Not Detected	4.3	Not Detected
Cyclohexane	0.79	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.79	Not Detected	5.0	Not Detected
2,2,4-Trimethylpentane	0.79	Not Detected	3.7	Not Detected
Benzene	0.79	Not Detected	2.5	Not Detected
1,2-Dichloroethane	0.79	Not Detected	3.2	Not Detected
Heptane	0.79	1.7	3.2	6.8
Trichloroethene	0.79	Not Detected	4.2	Not Detected
1,2-Dichloropropane	0.79	Not Detected	3.6	Not Detected
1,4-Dioxane	3.2	Not Detected	11	Not Detected
Bromodichloromethane	0.79	Not Detected	5.3	Not Detected
cis-1,3-Dichloropropene	0.79	Not Detected	3.6	Not Detected
4-Methyl-2-pentanone	0.79	Not Detected	3.2	Not Detected
Toluene	0.79	1.7	3.0	6.4
trans-1,3-Dichloropropene	0.79	Not Detected	3.6	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-6

Lab ID#: 0811379A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112618	Date of Collection: 11/14/08
Dil. Factor:	1.58	Date of Analysis: 11/26/08 11:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.79	Not Detected	4.3	Not Detected
Tetrachloroethene	0.79	Not Detected	5.4	Not Detected
2-Hexanone	3.2	Not Detected	13	Not Detected
Dibromochloromethane	0.79	Not Detected	6.7	Not Detected
1,2-Dibromoethane (EDB)	0.79	Not Detected	6.1	Not Detected
Chlorobenzene	0.79	Not Detected	3.6	Not Detected
Ethyl Benzene	0.79	Not Detected	3.4	Not Detected
m,p-Xylene	0.79	0.81	3.4	3.5
o-Xylene	0.79	Not Detected	3.4	Not Detected
Styrene	0.79	1.0	3.4	4.4
Bromoform	0.79	Not Detected	8.2	Not Detected
Cumene	0.79	Not Detected	3.9	Not Detected
1,1,2,2-Tetrachloroethane	0.79	Not Detected	5.4	Not Detected
Propylbenzene	0.79	Not Detected	3.9	Not Detected
4-Ethyltoluene	0.79	Not Detected	3.9	Not Detected
1,3,5-Trimethylbenzene	0.79	Not Detected	3.9	Not Detected
1,2,4-Trimethylbenzene	0.79	Not Detected	3.9	Not Detected
1,3-Dichlorobenzene	0.79	Not Detected	4.8	Not Detected
1,4-Dichlorobenzene	0.79	Not Detected	4.8	Not Detected
alpha-Chlorotoluene	0.79	Not Detected	4.1	Not Detected
1,2-Dichlorobenzene	0.79	Not Detected	4.7	Not Detected
1,2,4-Trichlorobenzene	3.2	Not Detected	23	Not Detected
Hexachlorobutadiene	3.2	Not Detected	34	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	94	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-7

Lab ID#: 0811379A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112619	Date of Collection:	11/14/08
Dil. Factor:	1.64	Date of Analysis:	11/27/08 12:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.82	Not Detected	4.0	Not Detected
Freon 114	0.82	Not Detected	5.7	Not Detected
Chloromethane	3.3	Not Detected	6.8	Not Detected
Vinyl Chloride	0.82	Not Detected	2.1	Not Detected
1,3-Butadiene	0.82	3.3	1.8	7.2
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.82	Not Detected	4.6	Not Detected
Ethanol	3.3	10	6.2	19
Freon 113	0.82	Not Detected	6.3	Not Detected
1,1-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Acetone	3.3	40	7.8	95
2-Propanol	3.3	Not Detected	8.1	Not Detected
Carbon Disulfide	0.82	0.86	2.6	2.7
3-Chloropropene	3.3	Not Detected	10	Not Detected
Methylene Chloride	0.82	Not Detected	2.8	Not Detected
Methyl tert-butyl ether	0.82	Not Detected	3.0	Not Detected
trans-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Hexane	0.82	34	2.9	120
1,1-Dichloroethane	0.82	Not Detected	3.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	16	2.4	49
cis-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.82	1.6	4.0	7.7
1,1,1-Trichloroethane	0.82	Not Detected	4.5	Not Detected
Cyclohexane	0.82	10	2.8	35
Carbon Tetrachloride	0.82	3.2	5.2	20
2,2,4-Trimethylpentane	0.82	34	3.8	160
Benzene	0.82	1.6	2.6	5.1
1,2-Dichloroethane	0.82	Not Detected	3.3	Not Detected
Heptane	0.82	44	3.4	180
Trichloroethene	0.82	Not Detected	4.4	Not Detected
1,2-Dichloropropane	0.82	Not Detected	3.8	Not Detected
1,4-Dioxane	3.3	Not Detected	12	Not Detected
Bromodichloromethane	0.82	Not Detected	5.5	Not Detected
cis-1,3-Dichloropropene	0.82	Not Detected	3.7	Not Detected
4-Methyl-2-pentanone	0.82	Not Detected	3.4	Not Detected
Toluene	0.82	6.2	3.1	23
trans-1,3-Dichloropropene	0.82	Not Detected	3.7	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-7

Lab ID#: 0811379A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112619	Date of Collection: 11/14/08
Dil. Factor:	1.64	Date of Analysis: 11/27/08 12:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.82	Not Detected	4.5	Not Detected
Tetrachloroethene	0.82	Not Detected	5.6	Not Detected
2-Hexanone	3.3	Not Detected	13	Not Detected
Dibromochloromethane	0.82	Not Detected	7.0	Not Detected
1,2-Dibromoethane (EDB)	0.82	Not Detected	6.3	Not Detected
Chlorobenzene	0.82	Not Detected	3.8	Not Detected
Ethyl Benzene	0.82	2.8	3.6	12
m,p-Xylene	0.82	6.0	3.6	26
o-Xylene	0.82	1.8	3.6	7.9
Styrene	0.82	0.85	3.5	3.6
Bromoform	0.82	Not Detected	8.5	Not Detected
Cumene	0.82	Not Detected	4.0	Not Detected
1,1,2,2-Tetrachloroethane	0.82	Not Detected	5.6	Not Detected
Propylbenzene	0.82	Not Detected	4.0	Not Detected
4-Ethyltoluene	0.82	Not Detected	4.0	Not Detected
1,3,5-Trimethylbenzene	0.82	Not Detected	4.0	Not Detected
1,2,4-Trimethylbenzene	0.82	Not Detected	4.0	Not Detected
1,3-Dichlorobenzene	0.82	Not Detected	4.9	Not Detected
1,4-Dichlorobenzene	0.82	Not Detected	4.9	Not Detected
alpha-Chlorotoluene	0.82	Not Detected	4.2	Not Detected
1,2-Dichlorobenzene	0.82	Not Detected	4.9	Not Detected
1,2,4-Trichlorobenzene	3.3	Not Detected	24	Not Detected
Hexachlorobutadiene	3.3	Not Detected	35	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	93	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0811379A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112604	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/26/08 09:58 AM

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0811379A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112604	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/26/08 09:58 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0811379A-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/26/08 08:21 AM

Compound	%Recovery
Freon 12	109
Freon 114	106
Chloromethane	112
Vinyl Chloride	105
1,3-Butadiene	98
Bromomethane	106
Chloroethane	120
Freon 11	112
Ethanol	102
Freon 113	99
1,1-Dichloroethene	105
Acetone	102
2-Propanol	99
Carbon Disulfide	101
3-Chloropropene	96
Methylene Chloride	113
Methyl tert-butyl ether	108
trans-1,2-Dichloroethene	98
Hexane	102
1,1-Dichloroethane	100
2-Butanone (Methyl Ethyl Ketone)	94
cis-1,2-Dichloroethene	102
Tetrahydrofuran	104
Chloroform	93
1,1,1-Trichloroethane	101
Cyclohexane	98
Carbon Tetrachloride	104
2,2,4-Trimethylpentane	102
Benzene	93
1,2-Dichloroethane	106
Heptane	103
Trichloroethene	103
1,2-Dichloropropane	104
1,4-Dioxane	93
Bromodichloromethane	105
cis-1,3-Dichloropropene	103
4-Methyl-2-pentanone	101
Toluene	102
trans-1,3-Dichloropropene	104



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0811379A-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/26/08 08:21 AM

Compound	%Recovery
1,1,2-Trichloroethane	100
Tetrachloroethene	104
2-Hexanone	96
Dibromochloromethane	106
1,2-Dibromoethane (EDB)	97
Chlorobenzene	102
Ethyl Benzene	103
m,p-Xylene	103
o-Xylene	102
Styrene	92
Bromoform	109
Cumene	98
1,1,1,2-Tetrachloroethane	104
Propylbenzene	109
4-Ethyltoluene	107
1,3,5-Trimethylbenzene	91
1,2,4-Trimethylbenzene	94
1,3-Dichlorobenzene	100
1,4-Dichlorobenzene	98
alpha-Chlorotoluene	102
1,2-Dichlorobenzene	95
1,2,4-Trichlorobenzene	95
Hexachlorobutadiene	92

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0811379A-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/26/08 09:02 AM

Compound	%Recovery
Freon 12	86
Freon 114	88
Chloromethane	87
Vinyl Chloride	84
1,3-Butadiene	80
Bromomethane	84
Chloroethane	95
Freon 11	94
Ethanol	80
Freon 113	95
1,1-Dichloroethene	102
Acetone	90
2-Propanol	89
Carbon Disulfide	88
3-Chloropropene	86
Methylene Chloride	106
Methyl tert-butyl ether	82
trans-1,2-Dichloroethene	88
Hexane	84
1,1-Dichloroethane	92
2-Butanone (Methyl Ethyl Ketone)	82
cis-1,2-Dichloroethene	91
Tetrahydrofuran	89
Chloroform	82
1,1,1-Trichloroethane	85
Cyclohexane	81
Carbon Tetrachloride	86
2,2,4-Trimethylpentane	84
Benzene	82
1,2-Dichloroethane	98
Heptane	89
Trichloroethene	99
1,2-Dichloropropane	90
1,4-Dioxane	81
Bromodichloromethane	93
cis-1,3-Dichloropropene	89
4-Methyl-2-pentanone	90
Toluene	94
trans-1,3-Dichloropropene	91



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0811379A-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5112603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/26/08 09:02 AM

Compound	%Recovery
1,1,2-Trichloroethane	86
Tetrachloroethene	91
2-Hexanone	85
Dibromochloromethane	92
1,2-Dibromoethane (EDB)	82
Chlorobenzene	89
Ethyl Benzene	88
m,p-Xylene	88
o-Xylene	89
Styrene	82
Bromoform	95
Cumene	86
1,1,1,2-Tetrachloroethane	84
Propylbenzene	96
4-Ethyltoluene	94
1,3,5-Trimethylbenzene	78
1,2,4-Trimethylbenzene	81
1,3-Dichlorobenzene	87
1,4-Dichlorobenzene	86
alpha-Chlorotoluene	90
1,2-Dichlorobenzene	82
1,2,4-Trichlorobenzene	89
Hexachlorobutadiene	81

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

12/1/2008

Ms. Joyce Bobek
SOMA Environmental
6620 Owens Drive
Suite A
Pleasanton CA 94588

Project Name: Tony's Express Auto 3609 International
Project #:

Dear Ms. Joyce Bobek

The following report includes the data for the above referenced project for sample(s) received on 11/18/2008 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-3 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

A handwritten signature in black ink that reads 'Kelly Buettner'.

Kelly Buettner
Project Manager




AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0811379B

Work Order Summary

CLIENT:	Ms. Joyce Bobek SOMA Environmental 6620 Owens Drive Suite A Pleasanton, CA 94588	BILL TO:	Ms. Joyce Bobek SOMA Environmental 6620 Owens Drive Suite A Pleasanton, CA 94588
PHONE:	925-734-6400	P.O. #	2332
FAX:	925-734-6401	PROJECT #	Tony's Express Auto 3609 International
DATE RECEIVED:	11/18/2008	CONTACT:	Kelly Buettner
DATE COMPLETED:	12/01/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SV-1	Modified TO-3	6.0 "Hg	5 psi
02A	SV-2	Modified TO-3	7.0 "Hg	5 psi
03A	SV-3	Modified TO-3	9.0 "Hg	5 psi
04A	SV-4-1	Modified TO-3	8.5 "Hg	5 psi
05A	SV-4-2	Modified TO-3	8.5 "Hg	5 psi
06A	SV-5	Modified TO-3	6.0 "Hg	5 psi
06AA	SV-5 Lab Duplicate	Modified TO-3	6.0 "Hg	5 psi
07A	SV-6	Modified TO-3	4.5 "Hg	5 psi
08A	SV-7	Modified TO-3	5.5 "Hg	5 psi
09A	Lab Blank	Modified TO-3	NA	NA
10A	LCS	Modified TO-3	NA	NA

CERTIFIED BY: 

DATE: 12/01/08

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09

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

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

LABORATORY NARRATIVE
Modified TO-3
SOMA Environmental
Workorder# 0811379B

Eight 6 Liter Summa Canister samples were received on November 18, 2008. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L.

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

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

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

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

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

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: SV-1

Lab ID#: 0811379B-01A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.042	0.17	2.8	11

Client Sample ID: SV-2

Lab ID#: 0811379B-02A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.044	0.18	3.8	16

Client Sample ID: SV-3

Lab ID#: 0811379B-03A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.048	0.20	3.8	16

Client Sample ID: SV-4-1

Lab ID#: 0811379B-04A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.047	0.19	2.0	8.4

Client Sample ID: SV-4-2

Lab ID#: 0811379B-05A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.047	0.19	2.2	8.9

Client Sample ID: SV-5

Lab ID#: 0811379B-06A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.042	0.17	18	75



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: SV-5 Lab Duplicate

Lab ID#: 0811379B-06AA

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.042	0.17	16	66

Client Sample ID: SV-6

Lab ID#: 0811379B-07A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.040	0.16	1.7	6.8

Client Sample ID: SV-7

Lab ID#: 0811379B-08A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.041	0.17	3.8	16



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-1

Lab ID#: 0811379B-01A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d112004	Date of Collection:	11/14/08	
Dil. Factor:	1.68	Date of Analysis:	11/20/08 10:22 AM	

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.042	0.17	2.8	11

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	79	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-2

Lab ID#: 0811379B-02A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d112005	Date of Collection:	11/14/08
Dil. Factor:	1.75	Date of Analysis:	11/20/08 10:57 AM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.044	0.18	3.8	16

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	85	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-3

Lab ID#: 0811379B-03A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d112006	Date of Collection:	11/14/08
Dil. Factor:	1.91	Date of Analysis:	11/20/08 12:41 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.048	0.20	3.8	16

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	84	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-4-1

Lab ID#: 0811379B-04A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d112007	Date of Collection:	11/14/08
Dil. Factor:	1.87	Date of Analysis:	11/20/08 01:14 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.047	0.19	2.0	8.4

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	82	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-4-2

Lab ID#: 0811379B-05A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d112008	Date of Collection:	11/14/08
Dil. Factor:	1.87	Date of Analysis:	11/20/08 01:59 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.047	0.19	2.2	8.9

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	84	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-5

Lab ID#: 0811379B-06A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d112009	Date of Collection:	11/14/08
Dil. Factor:	1.68	Date of Analysis:	11/20/08 02:32 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.042	0.17	18	75

Container Type: 6 Liter Summa Canister

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-5 Lab Duplicate

Lab ID#: 0811379B-06AA

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d112010	Date of Collection:	11/14/08
Dil. Factor:	1.68	Date of Analysis:	11/20/08 03:15 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.042	0.17	16	66

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	87	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-6

Lab ID#: 0811379B-07A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d112011	Date of Collection:	11/14/08
Dil. Factor:	1.58	Date of Analysis:	11/20/08 04:33 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.040	0.16	1.7	6.8

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	84	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-7

Lab ID#: 0811379B-08A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d112012	Date of Collection:	11/14/08
Dil. Factor:	1.64	Date of Analysis:	11/20/08 05:27 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.041	0.17	3.8	16

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	92	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0811379B-09A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d112003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/20/08 08:51 AM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.025	0.10	Not Detected	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	87	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0811379B-10A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d112013	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/20/08 06:08 PM

Compound	%Recovery
TPH (Gasoline Range)	91

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	108	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

12/3/2008

Ms. Joyce Bobek
SOMA Environmental
6620 Owens Drive
Suite A
Pleasanton CA 94588

Project Name: Tony's Express Auto 3609 International
Project #:

Dear Ms. Joyce Bobek

The following report includes the data for the above referenced project for sample(s) received on 11/18/2008 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1945 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

A handwritten signature in black ink that reads 'Kelly Buettner'.

Kelly Buettner
Project Manager



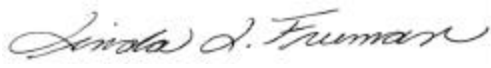
AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0811379C

Work Order Summary

CLIENT:	Ms. Joyce Bobek SOMA Environmental 6620 Owens Drive Suite A Pleasanton, CA 94588	BILL TO:	Ms. Joyce Bobek SOMA Environmental 6620 Owens Drive Suite A Pleasanton, CA 94588
PHONE:	925-734-6400	P.O. #	2332
FAX:	925-734-6401	PROJECT #	Tony's Express Auto 3609 International
DATE RECEIVED:	11/18/2008	CONTACT:	Kelly Buettner
DATE COMPLETED:	12/03/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SV-1	Modified ASTM D-1945	6.0 "Hg	5 psi
02A	SV-2	Modified ASTM D-1945	7.0 "Hg	5 psi
03A	SV-3	Modified ASTM D-1945	9.0 "Hg	5 psi
04A	SV-4-1	Modified ASTM D-1945	8.5 "Hg	5 psi
05A	SV-4-2	Modified ASTM D-1945	8.5 "Hg	5 psi
06A	SV-5	Modified ASTM D-1945	6.0 "Hg	5 psi
06AA	SV-5 Lab Duplicate	Modified ASTM D-1945	6.0 "Hg	5 psi
07A	SV-6	Modified ASTM D-1945	4.5 "Hg	5 psi
08A	SV-7	Modified ASTM D-1945	5.5 "Hg	5 psi
09A	Lab Blank	Modified ASTM D-1945	NA	NA
10A	LCS	Modified ASTM D-1945	NA	NA

CERTIFIED BY:  DATE: 12/03/08

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
 NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
 Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
 Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09
 Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards
 This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.
 180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified ASTM D-1945
SOMA Environmental
Workorder# 0811379C

Eight 6 Liter Summa Canister samples were received on November 18, 2008. The laboratory performed analysis via modified ASTM Method D-1945 for Methane and fixed gases in natural gas using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

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

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

<i>Requirement</i>	<i>ASTM D-1945</i>	<i>ATL Modifications</i>
Normalization	Sum of original values should not differ from 100.0% by more than 1.0%.	Sum of original values may range between 85-115%. Normalization of data not performed.
Sample analysis	Equilibrate samples to 20-50° F. above source temperature at field sampling	No heating of samples is performed.
Sample calculation	Response factor is calculated using peak height for C5 and lighter compounds.	Peak areas are used for all target analytes to quantitate concentrations.
Reference Standard	Concentration should not be < half of nor differ by more than 2 X the concentration of the sample. Run 2 consecutive checks; must agree within 1%.	A minimum 3-point linear calibration is performed. The acceptance criterion is %RSD <= 15%. All target analytes must be within the linear range of calibration (with the exception of O2, N2, and C6+ Hydrocarbons).
Sample Injection Volume	0.50 mL to achieve Methane linearity.	1.0 mL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

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

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

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

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

Client Sample ID: SV-1

Lab ID#: 0811379C-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	22
Methane	0.00017	0.00085
Carbon Dioxide	0.017	0.16

Client Sample ID: SV-2

Lab ID#: 0811379C-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.18	20
Methane	0.00018	0.0061
Carbon Dioxide	0.018	1.7

Client Sample ID: SV-3

Lab ID#: 0811379C-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.19	22
Methane	0.00019	0.0012
Carbon Dioxide	0.019	0.18

Client Sample ID: SV-4-1

Lab ID#: 0811379C-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.19	19
Methane	0.00019	0.0019
Carbon Dioxide	0.019	1.7

Client Sample ID: SV-4-2

Lab ID#: 0811379C-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.19	20
Methane	0.00019	0.0019



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

Client Sample ID: SV-4-2

Lab ID#: 0811379C-05A

Carbon Dioxide	0.019	1.6
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Client Sample ID: SV-5

Lab ID#: 0811379C-06A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	21
Methane	0.00017	0.0041
Carbon Dioxide	0.017	0.87

Client Sample ID: SV-5 Lab Duplicate

Lab ID#: 0811379C-06AA

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	20
Methane	0.00017	0.0040
Carbon Dioxide	0.017	0.84

Client Sample ID: SV-6

Lab ID#: 0811379C-07A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	22
Methane	0.00016	0.00020
Carbon Dioxide	0.016	0.069

Client Sample ID: SV-7

Lab ID#: 0811379C-08A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	21
Methane	0.00016	0.00063
Carbon Dioxide	0.016	0.12



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-1

Lab ID#: 0811379C-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	3112605	Date of Collection:	11/14/08
Dil. Factor:	1.68	Date of Analysis:	11/26/08 08:41 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	22
Methane	0.00017	0.00085
Carbon Dioxide	0.017	0.16

Container Type: 6 Liter Summa Canister



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-2

Lab ID#: 0811379C-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	3112606	Date of Collection:	11/14/08
Dil. Factor:	1.75	Date of Analysis:	11/26/08 09:03 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.18	20
Methane	0.00018	0.0061
Carbon Dioxide	0.018	1.7

Container Type: 6 Liter Summa Canister



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-3

Lab ID#: 0811379C-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	3112607	Date of Collection:	11/14/08
Dil. Factor:	1.91	Date of Analysis:	11/26/08 09:26 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.19	22
Methane	0.00019	0.0012
Carbon Dioxide	0.019	0.18

Container Type: 6 Liter Summa Canister



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-4-1

Lab ID#: 0811379C-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	3112608	Date of Collection:	11/14/08
Dil. Factor:	1.87	Date of Analysis:	11/26/08 09:50 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.19	19
Methane	0.00019	0.0019
Carbon Dioxide	0.019	1.7

Container Type: 6 Liter Summa Canister



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-4-2

Lab ID#: 0811379C-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	3112609	Date of Collection:	11/14/08
Dil. Factor:	1.87	Date of Analysis:	11/26/08 10:15 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.19	20
Methane	0.00019	0.0019
Carbon Dioxide	0.019	1.6

Container Type: 6 Liter Summa Canister



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-5

Lab ID#: 0811379C-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	3112610	Date of Collection:	11/14/08
Dil. Factor:	1.68	Date of Analysis:	11/26/08 10:51 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	21
Methane	0.00017	0.0041
Carbon Dioxide	0.017	0.87

Container Type: 6 Liter Summa Canister



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-5 Lab Duplicate

Lab ID#: 0811379C-06AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	3112611	Date of Collection:	11/14/08
Dil. Factor:	1.68	Date of Analysis:	11/26/08 11:11 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	20
Methane	0.00017	0.0040
Carbon Dioxide	0.017	0.84

Container Type: 6 Liter Summa Canister



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-6

Lab ID#: 0811379C-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	3112612	Date of Collection:	11/14/08
Dil. Factor:	1.58	Date of Analysis:	11/26/08 11:48 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	22
Methane	0.00016	0.00020
Carbon Dioxide	0.016	0.069

Container Type: 6 Liter Summa Canister



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SV-7

Lab ID#: 0811379C-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	3112613	Date of Collection:	11/14/08
Dil. Factor:	1.64	Date of Analysis:	11/26/08 12:17 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	21
Methane	0.00016	0.00063
Carbon Dioxide	0.016	0.12

Container Type: 6 Liter Summa Canister



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0811379C-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	3112604	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/26/08 07:57 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0811379C-10A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1945

File Name:	3112603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/26/08 07:29 AM

Compound	%Recovery
Oxygen	97
Methane	104
Carbon Dioxide	97

Container Type: NA - Not Applicable