CONESTOGA-ROVERS & ASSOCIATES

5900 Hollis Street, Suite A
Emeryville, California 94608
Telephone: (510) 420-0700 Fax: (510) 420-9170
www.CRAworld.com

TRANSMITTAL

DATE: September 14, 2010

REFERENCE NO.: 240472

PROJECT NAME: 105 Fifth Street, Oakland

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

RECEIVED
9:16 am, Sep 17, 2010
Alameda County
Environmental Health

Please find enclosed:
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- ☐ Originals
- ☐ Prints
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QUANTITY	DESCRIPTION
1	Soil Vapor Probe Installation and Soil Vapor Sampling Report

- ☐ As Requested
- ☐ For Your Use
- ☒ For Review and Comment
- ☐
- ☐

COMMENTS:
If you have any questions regarding the content of this document, please contact Peter Schaefer at (510) 420-3319.

Copy to: Denis Brown, Shell Oil Products US *(electronic copy)*
Arthur R. and Mary A. Hansen, 820 Loyola Drive, Los Altos, CA 94024
SF Data Room *(electronic copy)*

Completed by: Peter Schaefer Signed: Peter Schaefer

Filing: **Correspondence File**

Denis L. Brown
Shell Oil Products US
HSE – Environmental Services
20945 S. Wilmington Ave.
Carson, CA 90810-1039
Tel (707) 865 0251
Fax (707) 865 2542
Email denis.l.brown@shell.com

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

Re: Shell-branded Service Station
105 Fifth Street
Oakland, California
SAP Code 135700
Incident No. 98995757
ACHCSA Case No. RO0000487

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

Denis L. Brown
Project Manager

SOIL VAPOR PROBE INSTALLATION AND SAMPLING REPORT

SHELL-BRANDED SERVICE STATION
105 FIFTH STREET
OAKLAND, CALIFORNIA

SAP CODE 135700
INCIDENT NO. 98995757
AGENCY NO. RO0000487

Prepared by:
Conestoga-Rovers & Associates

5900 Hollis Street, Suite A
Emeryville, California
U.S.A. 94608

Office: (510) 420-0700
Fax: (510) 420-9170

web: http://www.CRAworld.com

SEPTEMBER 14, 2010
REF. NO. 240472 (9)
This report is printed on recycled paper.

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EXECUTIVE SUMMARY

- One nested soil vapor probe (SVP-6) was installed with screens at 3 and 5 fbg.
- Soil vapor samples collected from 3 and 5 fbg in SVP-6 and at 5 fbg in SVP-1 and SVP-3 contained up to 49,000,000 µg/m^3 TPHg (SVP-1), 13,000 µg/m^3 benzene (SVP-3), and 44,000 µg/m^3 ethylbenzene (SVP-3).
- TPHg concentrations exceeded ESLs in SVP-1, SVP-3, and SVP-6; and benzene and ethylbenzene concentrations exceeded ESLs in SVP-3 and SVP-6.
- The laboratory reporting limits were above ESLs for benzene, ethylbenzene, and naphthalene in SVP-1 due to the presence of other hydrocarbons in the soil vapor samples.
- CRA recommends resampling soil vapor probes SVP-1, SVP-3, and SVP-6 to confirm the results from this sampling event. In addition, CRA recommends installing three near sub-slab soil vapor probes (SVP-7 through SVP-9) adjacent to the kiosk.

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to document the recent soil vapor probe installation and sampling. The purpose of the investigation was to assess the potential for soil gas migration to indoor air. CRA followed the scope of work and procedures presented in our April 22, 2010 work plan, which was approved by Alameda County Environmental Health (ACEH) in their May 24, 2010 letter.

The site is an active Shell-branded service station located on the western corner of Fifth Street and Oak Street in Oakland, California (Figure 1). Currently, the site layout consists of a kiosk, four underground storage tanks (USTs), and two dispenser islands (Figure 2). The area surrounding the site is of mixed commercial and residential use.

A summary of previous work performed at the site and additional background information is contained in CRA's April 22, 2010 *Soil Vapor Probe Installation and Soil Vapor Sampling Work Plan* and is not repeated herein.

2.0 SOIL VAPOR PROBE INSTALLATION AND SAMPLING

2.1 PERMIT

CRA obtained a drilling permit from Alameda County Public Works Agency (Appendix A).

2.2 FIELD DATES

July 26, 2010 (soil vapor probe installation) and August 9, 2010 (soil vapor probe sampling).

2.3 DRILING COMPANY

Gregg Drilling & Testing, Inc.

2.4 PERSONNEL PRESENT

Geologist Erin Swan directed the probe installation working under the supervision of California Professional Geologist Peter Schaefer.

2.5 DRILLING METHOD

Air-knife.

2.6 NUMBER OF PROBES

CRA installed one nested soil vapor probe (SVP-6) with screens at 3 and 5 feet below grade (fbg). The probe specifications and soil types encountered are described on the boring log contained in Appendix B. The probe location is shown on Figure 2.

2.7 VAPOR PROBE MATERIALS

CRA constructed the vapor probes using ¼-inch diameter Teflon® tubing attached to 1-inch length plastic screen intervals, and #2/12 Monterey sand filter pack. A probe diagram is provided with the boring log in Appendix B.

2.8 SCREENED INTERVALS

2.91 to 3.00 fbg and to 4.91 to 5.00 fbg.

2.9 SOIL VAPOR SAMPLING PROCEDURE

On August 9, 2010, CRA sampled soil vapor probes SVP-1, SVP-3, and SVP-6. All soil vapor samples were collected using a lung box and Tedlar® bag.

Prior to sampling, CRA purged at least three tubing volumes of air from each vapor probe using a vacuum pump. Immediately after purging, CRA collected a soil vapor sample using a laboratory-supplied Tedlar® bag. During sampling, CRA connected the Teflon® tubing for each vapor probe to a lung box containing the Tedlar® bag, and the lung box chamber was connected to the vacuum pump. CRA then drew the sample into the Tedlar® bag by reducing the pressure in the lung box with the vacuum pump. Each

sample was labeled, documented on a chain-of-custody, and submitted to Calscience Environmental Laboratories, Inc. of Garden Grove, California for analysis within 72 hours.

To check the system for leaks, CRA placed a containment unit (or shroud) over the soil vapor probe surface casing and sampling manifold. Prior to soil vapor probe purging, CRA introduced helium into the containment unit to obtain a minimum 50 percent helium content level. CRA confirmed the helium content within the containment unit using a helium meter. The helium meter readings are presented in Section 3.2. All samples were analyzed by the laboratory for helium, and CRA presents the results in Section 3.2 and on Table 1.

2.10 SOIL VAPOR SAMPLING ANALYSES

Soil vapor samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by EPA Method TO-3 (modified); benzene, toluene, ethylbenzene, xylenes (BTEX), and naphthalene by modified EPA Method 8260B; oxygen and argon, carbon dioxide, and methane by ASTM D-1946; and for helium by ASTM D-1946 (M).

2.11 WASTE DISPOSAL

Water-knife sludge generated during field activities was stored on site in a 55-gallon drum, tested, and profiled for disposal. Waste disposal confirmation documentation is pending and will be provided by CRA upon request.

3.0 FINDINGS

3.1 SOIL VAPOR

The soil vapor chemical analytical data are summarized in Table 1, and TPHg and BTEX analytical results are presented on Figure 2. The laboratory analytical report is presented in Appendix C.

3.2 LEAK TESTING

CRA performed leak testing as described above, and helium was not detected in any of the samples. As shown in the following table, the reporting limit for helium

(0.0100 percent by volume [%v]) is less than 10 percent of the concentration detected in the shroud, and the samples are considered valid.

Probe ID	*Helium concentration in sample (%v)*	*Helium detected in shroud (%v)*	*Maximum acceptable helium concentration in sample (%v)*
SVP-1	<0.0100	69.0	6.90
SVP-3	<0.0100	73.7	7.37
SVP-6-3	<0.0100	67.0	6.70
SVP-6-5	<0.0100	68.0	6.80

The laboratory analytical report for helium is presented in Appendix C, and CRA includes the results on Table 1.

4.0 CONCLUSIONS

TPHg concentrations exceeded San Francisco Bay Regional Water Quality Control Board's environmental screening levels (ESLs) for commercial land use[1] in SVP-1, SVP-3, and SVP-6; and benzene and ethylbenzene exceeded ESLs in SVP-3 and SVP-6. The laboratory reporting limits were above ESLs for benzene, ethylbenzene, and naphthalene in SVP-1 due to the presence of other hydrocarbons in the soil vapor samples.

5.0 RECOMMENDATIONS

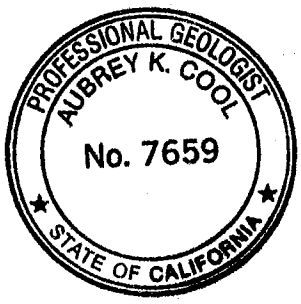
CRA recommends resampling soil vapor probes SVP-1, SVP-3, and SVP-6 to confirm the results from this sampling event. In addition, CRA recommends installing three near sub-slab soil vapor probes (SVP-7 through SVP-9) adjacent to the kiosk (Figure 2). A work plan for installing the near sub-slab soil vapor probes is included in Appendix D.

1 *Screening for Environmental Concerns at Site With Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]

All of which is Respectfully Submitted,
CONESTOGA-ROVERS & ASSOCIATES

Peter Schaefer, CEG, CHG

Aubrey K. Cool, PG



FIGURES

11/03/08

I:\Shell\6-chars\2404-\240472-Oakland 105 Fifth\240472-FIGURES\240472 VICINITY.AI

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

FIGURE 1

Shell-branded Service Station
105 Fifth Street
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map

09/14/10

Soil Vapor Data Map

August 9, 2010

Location of Sensitive Receptor Relative to Site
(Oakland Inner Harbor - 1,800 ft. S 29° W)

Sample ID	Sample Depth (fbg)	TPHg (µg/m³)	Benzene (µg/m³)	Toluene (µg/m³)	Ethyl-benzene (µg/m³)	Total Xylenes (µg/m³)
SVP-6	3	9,200,000	5,400	<1,900	8,200	14,000
SVP-6	5	8,400,000	3,900	<1,900	6,400	4,500

Sample ID	Sample Depth (fbg)	TPHg (µg/m³)	Benzene (µg/m³)	Toluene (µg/m³)	Ethyl-benzene (µg/m³)	Total Xylenes (µg/m³)
SVP-3	5	13,000,000	13,000	<9,400	44,000	<22,000

Sample ID	Sample Depth (fbg)	TPHg (µg/m³)	Benzene (µg/m³)	Toluene (µg/m³)	Ethyl-benzene (µg/m³)	Total Xylenes (µg/m³)
SVP-1	5	49,000,000	<16,000[a]	<19,000[a]	<22,000[a]	<43,000[a]

EXPLANATION

- SVP-7 — Proposed near sub-slab soil vapor probe location
- SVP-6 — Soil vapor probe location (07/10)
- SVP-1 — Soil vapor probe location (8/09)
- MW-1 — Monitoring well location
- T-1 — Tank backfill well location
- SB-8 — Soil boring location (3/02)
- SB-6 — Soil boring location (2/01)
- SB-1 — Soil boring location (7/98)
- D-1 — Soil sample location
- Overhead electrical line (OE)
- Electrical line (E)
- Telecommunication line (T)
- Unknown utility line
- Water line (W)
- Storm drain line (STM)
- Sanitary sewer line (SAN)
- Flow direction
- MH — Manhole
- VB — Vault Box
- Storm drain inlet
- fbg — Feet below grade

Note: All utility locations are approximate

Notes:
Soil vapor sample ID, depth in feet below grade (fbg), and concentrations in micrograms per cubic meter (µg/m³)
a = Reporting limit is elevated due to high levels of non-target hydrocarbons
TPHg = Total petroleum hydrocarbons as gasoline
<X = Not detected at reporting limit X

Lakeside Recycling
Oakland Inner Harbor (1,800 ft.)
FOURTH STREET
FIFTH STREET
Planter
Shell Station
105 Fifth St.
Approach
Kiosk
Dispenser Islands
Sidewalk
USTs
Conley Consulting Group
Cho Kwan, CPA
Sierra Salon
Vacant Office
Residential Use, Second Floor & Above
OAK STREET
Cash & Carry
Smart Food Service
W&H Wholesale Produce & Food LLC.
Juice Appeal
HWY. 880 ON-RAMP
HIGHWAY 880 (ELEVATED)
FL = 4.32 fbg
FL = 8.06 fbg
FL = 9.14 fbg
12"Ø SS
24"Ø SD
MH
0 20 40 80
Scale (ft)

FIGURE
2

Shell-branded Service Station
105 Fifth Street
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

I:\Shell\6-chars\2404--\240472-Oakland 105 Fifth\240472-FIGURES\240472 SITE PLAN (F2, SOIL DATA).DWG

TABLE

TABLE 1

HISTORICAL SOIL VAPOR ANALYTICAL DATA
SHELL-BRANDED SERVICE STATION
105 5TH STREET
OAKLAND, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*Naphthalene*	*Methane (%v)*	*Carbon Dioxide (%v)*	*Oxygen + Argon (%v)*	*Helium (%v)*
SVP-1	8/25/2009	5	---	**7,200**	<1,500	**15,000**	<6,900	---	---	---	---	<0.0100
SVP-1	10/1/2009	5	---	**3,600**	<19,000	**7,800**	<8,700	---	---	---	---	<0.0100
SVP-1	8/9/2010	5	**49,000,000**	<16,000[a,b]	<19,000[a,b]	<22,000[a,b]	<43,000[a,b]	<52,000[a]	4.11	14.1	2.18	<0.0100
SVP-2	8/25/2009	5	---	<3.2	24	<4.3	<17	---	---	---	---	<0.0100
SVP-3	8/25/2009	5	---	**20,000**	1,200	**61,000**	<5,200	---	---	---	---	<0.0100
SVP-3	10/1/2009	5	---	**22,000**	<19,000	**66,000**	<8,700	---	---	---	---	<0.0100
SVP-3	8/9/2010	5	**13,000,000**	**13,000[b]**	<9,400[b]	**44,000[b]**	<22,000[b]	<26,000	0.528	15.9	2.22	<0.0100
SVP-4	8/25/2009	5	---	9.0	24	50	<17	---	---	---	---	<0.0100
SVP-5	8/25/2009	5	---	280	21	1,100	35	---	---	---	---	<0.0100
SVP-6	8/9/2010	3	**9,200,000**	**5,400[b]**	<1,900[b]	**8,200[b]**	14,000[b]	<5,200	0.548	15.8	2.13	<0.0100
SVP-6	8/9/2010	5	**8,400,000**	**3,900[b]**	<1,900[b]	**6,400[b]**	4,500[b]	<5,200	0.558	16.8	1.80	<0.0100
ESLs [c]			***29,000***	***280***	***180,000***	***3,300***	***58,000***	***240***	***NA***	***NA***	***NA***	***NA***

Notes:

All results in micrograms per cubic meter ($\mu g/m^3$) unless otherwise indicated.

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method TO-3M

Benzene, toluene, ethylbenzene, and xylenes (BTEX) by Modified EPA Method TO-15M unless otherwise noted

HISTORICAL SOIL VAPOR ANALYTICAL DATA
SHELL-BRANDED SERVICE STATION
105 5TH STREET
OAKLAND, CALIFORNIA

Naphthalene analyzed by Modified EPA Method 8260B

Methane, carbon dioxide, and oxygen + argon analyzed by ASTM D-1946

Helium analyzed by ASTM D-1946 (M)

fbg = Feet below grade

%v = Percentage by volume

<x = Not detected at reporting limit x

ESL = Environmental screening level

--- = Not analyzed

NA = No applicable ESL

Results in ***bold*** *exceed environmental screening level*

a = Reporting limit is elevated due to high levels of non-target hydrocarbons

b = BTEX by Modified EPA Method 8260B

c = San Francisco Bay Regional Water Quality Control Board (RWQCB) shallow soil gas screening level for evaluation of potential vapor intrusion concerns - commercial/industrial land use from RWQCB's *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, Interim Final - November 2007 (Revised May 2008).

APPENDIX A

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: 07/20/2010 By jamesy

Permit Numbers: W2010-0531
Permits Valid from 07/26/2010 to 07/27/2010

Application Id:	1278547269016	**City of Project Site:** Oakland
Site Location:	105 5th Street, Oakland, CA	
Project Start Date:	07/26/2010	**Completion Date:** 07/27/2010
Assigned Inspector:	Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org	
Applicant:	Conestoga Rovers & Associates - Erin Swan 5900 Hollis St, Suite A, Emeryville, CA 94608	**Phone:** 510-420-3372
Property Owner:	Shell Oil Products US Shell 20945 S. Wilmington Ave, Carson, CA 90810	**Phone:** --
Client:	Erin Swan 5900 Hollis St Suite A, Emeryville, CA 94608	**Phone:** 510-420-3372
Contact:	Erin Swan	**Phone:** 510-420-3372 **Cell:** 510-385-0074

Total Due: $265.00
Receipt Number: WR2010-0251 **Total Amount Paid:** $265.00
Payer Name : Conestoga Rovers & Paid By: CHECK **PAID IN FULL**
Associates

Works Requesting Permits:

Well Construction-Vapor monitoring well-Vapor monitoring well - 2 Wells
Driller: Gregg Drilling and Testing - Lic #: 485165 - Method: other **Work Total: $265.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2010-0531	07/20/2010	10/24/2010	SVP-6	6.00 in.	0.25 in.	2.00 ft	5.00 ft
W2010-0531	07/20/2010	10/24/2010	SVP-7	6.00 in.	0.25 in.	2.00 ft	5.00 ft

Specific Work Permit Conditions

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

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

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters

generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

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

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

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

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

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

10. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

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

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

APPENDIX B

BORING LOG

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	SVP-6
JOB/SITE NAME	Shell-Branded Service Station	**DRILLING STARTED**	26-Jul-10
LOCATION	105 Fifth Street, Oakland, California	**DRILLING COMPLETED**	26-Jul-10
PROJECT NUMBER	240472	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Airknife	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	6"	**SCREENED INTERVALS**	NA
LOGGED BY	E. Swan	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	P. Schaefer	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							CONCRETE	0.6	Flush-grade 6" well box
					SM		**Silty SAND (SM)** ; very dark brown (10YR 2/2); dry; 45% silt, 55% fine to medium grained sand.		Portland Type I/II Bentonite Seal Monterey Sand #2/12 1" vapor well screen Bentonite Seal
				5				5.0	Monterey Sand #2/12 1" vapor well screen Bottom of Boring @ 5 fbg

WELL LOG (PID) I:\SHELL\6-CHARS\2404--\240472--\12437FE--\1240472-GINT.GPJ DEFAULT.GDT 8/26/10

APPENDIX C

CERTIFIED ANALYTICAL REPORT

Calscience
Environmental
Laboratories, Inc.

August 16, 2010

Peter Schaefer
Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Subject: **Calscience Work Order No.: 10-08-0756**
Client Reference: 105 5th St., Oakland, CA

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 8/10/2010 and analyzed in accordance with the attached chain-of-custody.

Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Xuan H. Dang
Project Manager

Case Narrative

Work Order # 10-08-0756

Modified EPA 8260 in Air

This method is used to determine the concentration of BTEX/Oxygenates/Naphthalene having a vapor pressure greater than 10^{-1} torr at 25°C at standard pressure in an air matrix. The method is similar to EPA TO-15 and uses air standards for calibration. Method specifics are listed in the table below. A known volume of sample is directed from the container (Summa® canister or Tedlar™ bag) through a solid multi-module (glass beads, tenex, cryofocuser) concentrator. Following concentration, the VOCs are thermally desorbed onto a gas chromatographic column for separation and then detected on a mass selective detector.

Comparison of CalscienceTO-15(Modified) versus EPA 8260 (Modified) in Air

Requirement	Calscience TO-15(M)	Calscience EPA 8260(M) in Air
BFB Acceptance Criteria	SW846 Protocol	SW846 Protocol
Initial Calibration	Allowable % RSD for each Target Analyte <= 30%, 10% of analytes allowed <=40%	Allowable % RSD for each Target Analyte <= 30%, 10% of analytes allowed <= 40%
Initial Calibration Verification (ICV) - Second Source Standard (LCS)	Analytes contained in the LCS standard evaluated against historical control limits for the LCS	BTEX and MTBE only - <= 30%D
Daily Calibration Verification (CCV)	**Full List Analysis:** Allowable % Difference for each CCC analyte is <= 30% **Target List Analysis:** Allowable % Difference for each target analytes is <= 30%	BTEX and MTBE only - <= 30%D
Daily Calibration Verification (CCV) - Internal Standard Area Response	Allowable +/- 50% (Range: 50% to 150%)	Allowable +/- 50% (Range: 50% to 150%)
Method Blank, Laboratory Control Sample and Sample - Internal Standard Area Response	Allowable +/- 50% of the mean area response of most recent Calibration Verification (Range: 50% to 150%)	Allowable +/- 50% of the mean area response of the most recent Calibration Verification (Range: 50% to 150%)
Surrogates	1,4-Bromoflurobenzene, 1,2-Dichloroethane-d4 and Toluene-d8 - % Recoveries based upon historical control limits +/-3S	1,4-Bromoflurobenzene, 1,2-Dichloroethane-d4 and Toluene-d8 - % Recoveries based upon historical control limits +/-3S

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 08/10/10
Work Order No: 10-08-0756
Preparation: N/A
Method: ASTM D-1946
Units: %v

Project: 105 5th St., Oakland, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6-3	10-08-0756-1-A	08/09/10 10:06	Air	GC 36	N/A	08/10/10 13:33	100810L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	0.548	0.500	1		Oxygen + Argon	2.13	0.500	1	
Carbon Dioxide	15.8	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6-5	10-08-0756-2-A	08/09/10 10:17	Air	GC 36	N/A	08/10/10 13:51	100810L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	0.558	0.500	1		Oxygen + Argon	1.80	0.500	1	
Carbon Dioxide	16.8	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-3	10-08-0756-3-A	08/09/10 11:29	Air	GC 36	N/A	08/10/10 14:09	100810L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	0.528	0.500	1		Oxygen + Argon	2.22	0.500	1	
Carbon Dioxide	15.9	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	10-08-0756-4-A	08/09/10 10:45	Air	GC 36	N/A	08/10/10 14:25	100810L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	4.11	0.500	1		Oxygen + Argon	2.18	0.500	1	
Carbon Dioxide	14.1	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-03-002-1,109	N/A	Air	GC 36	N/A	08/10/10 08:50	100810L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	ND	0.500	1	
Carbon Dioxide	ND	0.500	1						

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	08/10/10
5900 Hollis Street, Suite A		Work Order No:	10-08-0756
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA TO-3M

Project: 105 5th St., Oakland, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6-3'	10-08-0756-1-A	08/09/10 10:06	Air	GC 13	N/A	08/10/10 13:28	100810L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	9200000	57000	10		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6-5'	10-08-0756-2-A	08/09/10 10:17	Air	GC 13	N/A	08/10/10 13:41	100810L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	8400000	57000	10		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-3	10-08-0756-3-A	08/09/10 11:29	Air	GC 13	N/A	08/10/10 13:08	100810L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	13000000	57000	10		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	10-08-0756-4-A	08/09/10 10:45	Air	GC 13	N/A	08/10/10 13:52	100810L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	49000000	290000	50		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	098-01-005-2,505	N/A	Air	GC 13	N/A	08/10/10 08:45	100810L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	5700	1		ug/m3

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 08/10/10
Work Order No: 10-08-0756
Preparation: N/A
Method: ASTM D-1946 (M)

Project: 105 5th St., Oakland, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6-3'	10-08-0756-1-A	08/09/10 10:06	Air	GC 55	N/A	08/10/10 00:00	100810L01

Parameter	Result	RL	DF	Qual	Units
Helium	ND	0.0100	1		%v

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6-5'	10-08-0756-2-A	08/09/10 10:17	Air	GC 55	N/A	08/10/10 00:00	100810L01

Parameter	Result	RL	DF	Qual	Units
Helium	ND	0.0100	1		%v

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-3	10-08-0756-3-A	08/09/10 11:29	Air	GC 55	N/A	08/10/10 00:00	100810L01

Parameter	Result	RL	DF	Qual	Units
Helium	ND	0.0100	1		%v

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	10-08-0756-4-A	08/09/10 10:45	Air	GC 55	N/A	08/10/10 00:00	100810L01

Parameter	Result	RL	DF	Qual	Units
Helium	ND	0.0100	1		%v

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-872-40	N/A	Air	GC 55	N/A	08/10/10 00:00	100810L01

Parameter	Result	RL	DF	Qual	Units
Helium	ND	0.0100	1		%v

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates	Date Received:	08/10/10
5900 Hollis Street, Suite A	Work Order No:	10-08-0756
Emeryville, CA 94608-2008	Preparation:	N/A
	Method:	EPA 8260B (M)
	Units:	ug/m3

Project: 105 5th St., Oakland, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6-3'	10-08-0756-1-A	08/09/10 10:06	Air	GC/MS HH	N/A	08/10/10 20:05	100810L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	5400	1600	100		Xylenes (total)	14000	4300	100	
Toluene	ND	1900	100		Naphthalene	ND	5200	100	
Ethylbenzene	8200	2200	100						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	168	47-156		2	1,2-Dichloroethane-d4	89	47-156		
Toluene-d8	81	47-156							

SVP-6-5'	10-08-0756-2-A	08/09/10 10:17	Air	GC/MS HH	N/A	08/10/10 20:55	100810L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	3900	1600	100		Xylenes (total)	4500	4300	100	
Toluene	ND	1900	100		Naphthalene	ND	5200	100	
Ethylbenzene	6400	2200	100						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	161	47-156		2	1,2-Dichloroethane-d4	83	47-156		
Toluene-d8	84	47-156							

SVP-3	10-08-0756-3-A	08/09/10 11:29	Air	GC/MS HH	N/A	08/10/10 18:23	100810L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	13000	8000	500		Xylenes (total)	ND	22000	500	
Toluene	ND	9400	500		Naphthalene	ND	26000	500	
Ethylbenzene	44000	11000	500						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	128	47-156			1,2-Dichloroethane-d4	95	47-156		
Toluene-d8	103	47-156							

SVP-1	10-08-0756-4-A	08/09/10 10:45	Air	GC/MS HH	N/A	08/10/10 19:13	100810L01

Comment(s): -Reporting limit is elevated due to high levels of non-target hydrocarbons.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	16000	1000		Xylenes (total)	ND	43000	1000	
Toluene	ND	19000	1000		Naphthalene	ND	52000	1000	
Ethylbenzene	ND	22000	1000						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	120	47-156			1,2-Dichloroethane-d4	90	47-156		
Toluene-d8	103	47-156							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates	Date Received:	08/10/10
5900 Hollis Street, Suite A	Work Order No:	10-08-0756
Emeryville, CA 94608-2008	Preparation:	N/A
	Method:	EPA 8260B (M)
	Units:	ug/m3

Project: 105 5th St., Oakland, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-13-041-128	N/A	Air	GC/MS HH	N/A	08/10/10 12:20	100810L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	16	1		Xylenes (total)	ND	43	1	
Toluene	ND	19	1		Naphthalene	ND	52	1	
Ethylbenzene	ND	22	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	104	47-156			1,2-Dichloroethane-d4	108	47-156		
Toluene-d8	99	47-156							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Conestoga-Rovers & Associates	Date Received:	08/10/10
5900 Hollis Street, Suite A	Work Order No:	10-08-0756
Emeryville, CA 94608-2008	Preparation:	N/A
	Method:	EPA TO-3M

Project: 105 5th St., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
10-08-0726-1	Air	GC 13	N/A	08/10/10	100810D01

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
TPH as Gasoline	23000	25000	7	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates	Date Received: N/A
5900 Hollis Street, Suite A	Work Order No: 10-08-0756
Emeryville, CA 94608-2008	Preparation: N/A
	Method: ASTM D-1946

Project: 105 5th St., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-03-002-1,109	Air	GC 36	N/A	08/10/10	100810L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Carbon Dioxide	92	92	80-120	1	0-30	
Oxygen + Argon	88	88	80-120	1	0-30	
Nitrogen	88	89	80-120	1	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates	Date Received: N/A
5900 Hollis Street, Suite A	Work Order No: 10-08-0756
Emeryville, CA 94608-2008	Preparation: N/A
	Method: ASTM D-1946 (M)

Project: 105 5th St., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-872-40	Air	GC 55	N/A	08/10/10	100810L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Helium	100	97	80-120	3	0-30	
Hydrogen	104	102	80-120	2	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates		Date Received:	N/A
5900 Hollis Street, Suite A		Work Order No:	10-08-0756
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA 8260B (M)

Project: 105 5th St., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-041-128	Air	GC/MS HH	N/A	08/10/10	100810L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	99	97	60-156	1	0-40	
Toluene	105	100	56-146	4	0-43	
Ethylbenzene	111	107	52-154	4	0-38	
p/m-Xylene	115	110	42-156	4	0-41	
o-Xylene	115	110	52-148	4	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 10-08-0756

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
E	Concentration exceeds the calibration range.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- [x] CALSCIENCE (_____)
- [ ] SPL (_____)
- [ ] XENCO (_____)
- [ ] TEST AMERICA (_____)
- [x] OTHER (_____)

Please Check Appropriate Box:
- [x] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [x] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER _____

Print Bill To Contact Name: ~~Marvin Katz~~ PETER SCHAEFER

INCIDENT # (ENV SERVICES): 0 8 9 9 5 7 5 7 — [ ] CHECK IF NO INCIDENT # APPLIES

DATE: 8/9/10

PO #:

SAP #: 1 3 5 7 0 0

PAGE: 1 of 1

SAMPLING COMPANY: Conestoga-Rovers & Associates

LOG CODE: CRAW

SITE ADDRESS: Street and City: 105 5TH ST. OAKLAND

State: CA

GLOBAL ID NO.: T0600102116

ADDRESS: ~~17B Technology, Suite 150, Irvine CA 92618~~ 5900 HOLLIS ST. #A EMERYVILLE, CA 94608

EDF DELIVERABLE TO (Name, Company, Office Location): Brenda Carter, CRA, Emeryville

PHONE NO: 510-420-3343

E-MAIL: shelledf@craworld.com

CONSULTANT PROJECT NO.: 240472-95-100:

PROJECT CONTACT (Hardcopy or PDF Report to): PETER SCHAEFER (pschaefer@CRAWORLD.COM)

TELEPHONE: 510 420-3319

FAX: ~~949-648-5299~~ 510-420-9170

E-MAIL: PSCHAEFER@CRAWORLD.COM

SAMPLER NAME(S) (Print): PETER SCHAEFER

LAB USE ONLY: 08- 0756

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

- [ ] LA - RWQCB REPORT FORMAT
- [ ] UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES:
Please provide receipt verification. Report results in ~~ug/L~~ µg/m³.
MUST BE ANALYZED WITHIN 72 HRS.

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] EDD NOT NEEDED
- [x] RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	TPH-GRO, Purgeable (8260B)	TPH-DRO, Extractable (8015M)	TPHg (8015M)	BTEX (5260B)	BTEX + MTBE (8260B)	BTEX + MTBE + TBA (8260B)	BTEX + 5 OXYs (MTBE, TBA, DIPE, TAME, ETBE) 8260B	Full VOC list (8260B)	Single Compound: _____ (8260B)	1,2-DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	Isopropyl alcohol by T0-15	TPHg by T0-3	Oxygen and Carbon Dioxide ASTM D1946-90	BTEX, Oxygenates, Napthalene by T0-15	Helium ASTM1946-90	TEMPERATURE ON RECEIPT C° / Container PID Readings or Laboratory Notes
1	SVP-6 3'	8/9/10	1000	VAPOR						1	X			X	X														
2	SVP-6 5'		1017								X			X	X														
3	SVP-3		1129								X			X	X														
4	SVP-1	↓	1045	↓							X			X	X														

Relinquished by: (Signature) — Received by: (Signature) — Date: 8/9/10 — Time: 1335

Relinquished by: (Signature) 8-9-10 1730 — Received by: (Signature) — Date: 8/10/10 — Time: 10:00

Relinquished by: (Signature) — Received by: (Signature) — Date: — Time:

05/2/08 Revision

0756

GSO

WebShip > > > > >

800-322-5555 www.gso.com

Ship From:
ALAN KEMP
CAL SCIENCE- CONCORD
5063 COMMERCIAL CIRCLE #H
CONCORD, CA 94520

Ship To:
SAMPLE RECEIVING
CEL
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD:
$0.00

Reference:
CRA, STANTEC

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 514711529

NPS

ORC

D

GARDEN GROVE

D92843A

83763113

Print Date : 08/09/10 15:46 PM

Package 1 of 1

Send Label To Printer | ☑ Print All | Edit Shipment | Finish

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.

STEP 2 - Fold this page in half.

STEP 3 - Securely attach this label to your package, do not cover the barcode.

STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section.
Our liability for loss or damage to any package is limited to your actual damages or $100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is $500. For other shipments the highest declared value is $10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is $500. Items of "extraordinary value" include, but or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 10-08-0756

SAMPLE RECEIPT FORM

BOX ~~Cooler~~ 1 of 1

CLIENT: CRA DATE: 08/10/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature ____.____ °C + 0.5 °C (CF) = ____.____ °C ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☑ Air ☐ Filter ☐ Metals Only ☐ PCBs Only Initial: PS

CUSTODY SEALS INTACT:

☐ Cooler ☑ BOX ☐ No (Not Intact) ☐ Not Present ☐ N/A Initial: PS

☐ Sample ☐ _____ ☐ No (Not Intact) ☑ Not Present Initial: PS

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☑ Collection date/time, matrix, and/or # of containers (2-4) logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
pH / Residual Chlorine / Dissolved Sulfide received within 24 hours	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☑	☐	☐

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☑Tedlar® ☐Summa® **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** PS

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** _____

Preservative: h: HCL n: HNO_3 na$_2$: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** _____

APPENDIX D

SOIL VAPOR PROBE INSTALLATION AND SOIL VAPOR SAMPLING WORK PLAN

SOIL VAPOR PROBE INSTALLATION AND SOIL VAPOR SAMPLING WORK PLAN

1.0 SOIL VAPOR PROBE INSTALLATION

CRA proposes to install and sample three near sub-slab soil vapor probes (SVP-7 through SVP-9) adjacent to the current station kiosk building as shown on Figure 2. Specific tasks are described below.

1.1 PERMITS

CRA will obtain boring permits to install the soil vapor probes from the Alameda County Public Works Agency (ACPWA).

1.2 HEALTH AND SAFETY PLAN (HASP)

CRA will prepare a HASP to protect site workers. The plan will be kept on site during field activities and will be reviewed and signed by each site worker.

1.3 UTILITY CLEARANCE

CRA will mark the proposed probe locations, and the locations will be cleared by Underground Service Alert and a private utility locator service prior to drilling.

1.4 PROBE INSTALLATION

A rotary hammer drill will be used to drill a "shallow" (approximately 1-inch deep) outer borehole (approximately 7/8-inch diameter) that partially penetrates the sidewalk slab. Cuttings will be removed using a towel moistened with distilled water or a portable vacuum cleaner.

The rotary hammer drill will then be used to drill a smaller diameter inner borehole, within the center of the outer borehole, approximately 3/8-inch diameter through the sidewalk material and approximately 3 inches into the base material to create an open cavity. The outer borehole will be cleaned a second time with a moistened towel or a portable vacuum cleaner.

Stainless steel tubing will be cut to a length that allows the probe to float within the sidewalk thickness to avoid obstruction of the probe with base material. The tubing will be approximately 1/4-inch diameter. Where necessary, the compression fittings will be stainless steel (approximately 1/4-inch outside diameter and 1/8-inch National Pipe Thread) Swagelok® female thread connectors. The probes will be constructed prior to drilling to minimize exposure time, or venting, of the base material through the open borehole.

Each near sub-slab soil vapor probe will be placed in the borehole so that the top of the probe is flush with the top of the sidewalk. The top of the probe will have a recessed stainless steel plug. A quick-drying, Portland cement slurry will be injected or pushed into the annular space between the probe and the outer borehole. The cement will be allowed to dry for at least 24 hours prior to sampling.

The scope of work described in this work plan will be performed under the supervision of a California Professional Geologist or Engineer.

2.0 SOIL VAPOR PROBE SAMPLING

At least 2 weeks following the soil vapor probe installation, CRA will sample the three proposed near sub-slab probes (SVP-7 through SVP-9) and three existing soil vapor probes (SVP-1, SVP-3, and SVP-6).

2.1 PROBE SAMPLING

Sampling is affected by rain. CRA's standard procedure is to allow 2 days or more after a heavy rain event prior to collecting soil vapor samples. CRA will collect the soil vapor samples using a vacuum pump and Tedlar® bags. Prior to sampling, CRA will purge at least three tubing volumes of air from the probes with a vacuum pump. Then CRA will attach a sealed "lung sampler" containing a 1-liter Tedlar® bag to the probe and attach the vacuum pump to the box. The vacuum pump will lower the pressure in the "lung sampler" and draw air from the probe into the Tedlar® bag. To avoid breakage, CRA will fill the bags no more than two-thirds full. Each sample will be labeled, documented on a chain-of-custody, and placed in a protective box at room temperature for transport to a State of California-certified laboratory for analysis within 72 hours.

2.2 LEAK TESTING

To check the system for leaks, CRA will cover the soil gas probe surface casing and sampling equipment with a containment unit (or shroud). Prior to soil vapor probe purging, CRA will introduce helium into the containment unit to obtain a minimum 50 percent helium content level. CRA will confirm the helium content within the containment unit using a helium meter and will record the helium meter readings in our field notes. Helium will continue to be introduced to the containment unit during soil vapor probe purging and sampling.

All samples will be analyzed in a laboratory for helium. In the event that the soil vapor samples contain a helium content of greater than 10 percent of the source concentration (i.e., 10 percent of the helium content measured within the containment unit), the soil vapor sample will be considered invalid.

2.3 CHEMICAL ANALYSIS

Soil vapor samples will be analyzed for total petroleum hydrocarbons as gasoline, benzene, toluene, ethylbenzene, xylenes and naphthalene by EPA Method 8260B and for oxygen plus argon, carbon dioxide, methane, and helium by ASTM D Method 1946 (M).

3.0 REPORT PREPARATION

Following receipt of the analytical results from the laboratory, CRA will prepare a written report, which will include field procedures, tabulated analytical data, boring logs, and analytical laboratory reports.

4.0 SCHEDULE

CRA will implement the near sub-slab soil vapor probe installation activities upon approval of this work plan by the Alameda County Environmental Health and receipt of a drilling permit from ACPWA.