



**CONESTOGA-ROVERS
& ASSOCIATES**

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Telephone: (510) 420-0700 Fax: (510) 420-9170
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TRANSMITTAL

DATE: March 27, 2012 REFERENCE NO.: 241513

PROJECT NAME: 500 40th Street, Oakland

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

RECEIVED

4:22 pm, Mar 29, 2012

Alameda County
Environmental Health

Please find enclosed: Draft Final
 Originals Other
 Prints

Sent via: Mail Same Day Courier
 Overnight Courier Other GeoTracker and Alameda County FTP

QUANTITY	DESCRIPTION
1	Subsurface Investigation Report

As Requested For Review and Comment
 For Your Use _____

COMMENTS:

If you have any questions regarding the contents of this document, please call Peter Schaefer at (510) 420-3319.

Copy to: Denis Brown, Shell Oil Products US (electronic copy)
Young Song and In Song, Trustees (property owners), 1015 Sanders Drive, Moraga, CA 94556

Completed by: Peter Schaefer Signed: *P. Schaefer*

Filing: **Correspondence File**



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

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

Re: Former Shell Service Station
500 40th Street
Oakland, California
SAP Code 129452
Incident No. 97093400
ACEH Case No. RO0000264

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.

As always, please feel free to contact me directly at (707) 865-0251 with any questions or concerns.

Sincerely,

A handwritten signature in black ink that reads "Denis L. Brown". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Denis L. Brown
Senior Program Manager



SUBSURFACE INVESTIGATION REPORT

**FORMER SHELL SERVICE STATION
500 40TH STREET
OAKLAND, CALIFORNIA**

**SAP CODE 129452
INCIDENT NO. 97093400
AGENCY NO. RO0000264**

MARCH 27, 2012

REF. NO. 241513 (11)

This report is printed on recycled paper.

**Prepared by:
Conestoga-Rovers
& Associates**

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

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EXECUTIVE SUMMARY

- Two nested soil vapor probes (SVP-1 and SVP-2) and two sub-slab soil vapor probes (SVP-3 and SVP-4) were installed.
- No COCs were detected above ESLs in soil vapor samples with the exception of TPHg in the nested soil vapor probes and ethylbenzene in the samples collected from nested soil vapor probes SVP-1 at 5 fbg on November 30, 2011 and SVP-2 at 5 fbg on January 18, 2012.
- The RWQCB ESL guidance advises that “TPH ESLs must be used in conjunction with ESLs for related chemicals (e.g. BTEX, polynuclear aromatic hydrocarbons, oxidizers, etc).” In this case, BTEX would be the appropriate related chemicals, and only ethylbenzene was detected at a concentration above ESLs.
- The ethylbenzene concentrations in nested probes SVP-1 and SVP-2 at 5 fbg decrease to below the ESL at 2.5 fbg, demonstrating that ethylbenzene impacts are unlikely to cause soil vapor intrusion at concentrations exceeding the ESL.
- CRA compared the maximum detections of toluene, ethylbenzene, and total xylenes in the sub-slab soil vapor probes multiplied by commercial soil gas-to-indoor air attenuation factor with commercial indoor air ESLs and demonstrates that sub-slab soil vapor impacts are unlikely to cause soil vapor intrusion at concentrations exceeding ESLs.
- Based on these soil vapor results and current soil and groundwater conditions, CRA recommends closure of this environmental case.

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 May 26, 2011 work plan, which was approved by Alameda County Environmental Health (ACEH) in their June 27, 2011 letter with the following exceptions. Due to underground utility interference, CRA was unable to install proposed nested soil vapor probes SVP-3 and SVP-4. As approved in ACEH's August 10, 2011 electronic correspondence, we installed sub-slab soil vapor probes within the on-site building adjacent to the originally proposed nested probe locations. ACEH's October 11, 2011 and January 10, 2012 electronic correspondence extended this report's due date to March 29, 2012.

The site is a former Shell Service Station located on the northwestern corner of 40th Street and Telegraph Avenue in Oakland, California (Figure 1). The site was an operating service station prior to 1987 and is occupied currently by a strip mall. The former site layout included four underground storage tanks and four dispenser islands (Figure 2). The area surrounding the site is of mixed commercial and residential use. The parking lot for the MacArthur Bay Area Rapid Transit station is located to the southwest across 40th Street.

A summary of previous work performed at the site and additional background information is presented in CRA's May 26, 2011 *Subsurface Investigation Work Plan* and is not repeated herein.

2.0 INVESTIGATION ACTIVITIES

2.1 PERMIT

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

2.2 FIELD DATES

October 25 and October 26, 2011 (soil vapor probe installation) and November 30, 2011 and January 18, 2012 (soil vapor probe sampling).

2.3 DRILLING COMPANY

Vapor Tech Services, Inc.

2.4 CRA PERSONNEL

Geologist Cristina Arganbright directed the probe installation working under the supervision of California Professional Geologist Peter Schaefer.

2.5 DRILLING METHODS

Air-knife (nested soil vapor probes) and hammer drill (sub-slab soil vapor probes).

2.6 NUMBER OF PROBES

CRA installed two nested soil vapor probes (SVP-1 and SVP-2) and two sub-slab soil vapor probes (SVP-3 and SVP-4). The nested probe specifications and soil types encountered are described on the boring logs contained in Appendix B. All probe locations are shown on Figure 2.

2.7 VAPOR PROBE MATERIALS

CRA constructed the nested soil vapor probes (SVP-1 and SVP-2) using ¼-inch diameter Teflon[®] tubing attached to 1-inch length plastic screen intervals and #2/12 Monterey sand filter pack. Probe diagrams are provided with boring logs in Appendix B.

To construct the sub-slab soil vapor probes (SVP-3 and SVP-4), CRA cut stainless steel tubing to lengths that allow the probes to float within the building slab thickness to avoid obstruction of the probes with base material. The tubing is approximately ¼-inch diameter with stainless steel compression fittings. The sub-slab soil vapor probes were placed in the boreholes so that the top of the probes are flush with the floor. The top of the probes have a recessed stainless steel plug.

2.8 SCREENED INTERVALS

Nested soil vapor probes: 2.25 to 2.75 feet below grade (fbg) and 4.75 to 5.25 fbg.
Sub-slab soil vapor probes: 0.5 fbg (SVP-3) and 0.3 fbg (SVP-4).

2.9 SOIL VAPOR SAMPLING PROCEDURES

2.9.1 NESTED SOIL VAPOR PROBES

Prior to sampling the nested soil vapor probes, 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. (Calscience) of Garden Grove, California for analysis within 72 hours.

2.9.2 SUB-SLAB SOIL VAPOR PROBES

Due to the negligible tubing volumes, CRA did not purge the sub-slab probes prior to sampling. CRA collected soil vapor samples using laboratory-supplied Tedlar[®] bags. 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 for analysis within 72 hours.

2.9.3 LEAK TESTING

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 or sampling, 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); for benzene, toluene, ethylbenzene, and total xylenes (BTEX) by modified EPA Method 8260B; for oxygen and argon, carbon dioxide, and methane by ASTM D-1946; and for helium by ASTM D-1946 (M).

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 reports are presented in Appendix C.

3.2 LEAK TESTING

CRA performed leak testing as described above, and up to 32.7 percent by volume (%v) helium was detected in the samples. As shown in the following table, most helium concentrations are less than 10% of the concentration detected in the shroud, and the samples are considered valid, with the exceptions of the sample collected from SVP-2 at 2.5 fbg on November 30, 2011 and the sample collected from SVP-4 on November 30, 2011.

<i>Probe ID</i>	<i>Depth (feet)</i>	<i>Date</i>	<i>Helium concentration in sample (%v)</i>	<i>Minimum Helium detected in shroud (%v)</i>	<i>Maximum acceptable helium concentration in sample (%v)</i>
SVP-1	2.5	11/30/11	<0.0100	40	4.0
SVP-1	2.5	1/18/12	0.123	51	5.1
SVP-1	5	11/30/11	<0.0100	40	4.0
SVP-1	5	1/18/12	0.0945	55	5.5
SVP-2	2.5	11/30/11	10.8	40	4.0
SVP-2	2.5	1/18/12	0.0710	59	5.9
SVP-2	5	11/30/11	0.0125	40	4.0
SVP-2	5	1/18/12	0.0710	61	6.1
SVP-3	0.5	11/30/11	2.19	40	4.0
SVP-3	0.5	1/18/12	0.686	55	5.5
SVP-4	0.3	11/30/11	32.7	40	4.0
SVP-4	0.3	1/18/12	1.29	65	6.5

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

4.0 CONCLUSIONS

No constituents of concern were detected at concentrations exceeding San Francisco Bay Regional Water Quality Control Board (RWQCB) environmental screening levels¹ (ESLs) for commercial land use in soil vapor samples, with the exception of TPHg in the nested soil vapor probes and ethylbenzene in the samples collected from nested soil vapor probes SVP-1 at 5 fbg on November 30, 2011 and SVP-2 at 5 fbg on January 18, 2012.

It should be noted that RWQCB ESL guidance advises that "TPH ESLs must be used in conjunction with ESLs for related chemicals (e.g. BTEX, polynuclear aromatic hydrocarbons, oxidizers, etc.)." In this case, BTEX would be the appropriate related chemicals, and only ethylbenzene was detected at a concentration above ESLs. The ethylbenzene concentrations in nested probes SVP-1 and SVP-2 at 5 fbg decrease to below the ESL at 2.5 fbg, demonstrating that ethylbenzene impacts are unlikely to cause soil vapor intrusion at concentrations exceeding the ESL.

TPHg and benzene were not detected in soil vapor samples from sub-slab soil vapor probes SVP-3 and SVP-4. In the above-referenced ESL document, the default commercial attenuation factor for chemicals migrating from soil vapor directly into a commercial building (AF) is calculated as:

$$AF = \frac{\text{vapor intrusion rate}}{(\text{vapor intrusion rate} + \text{indoor air flow rate})}$$

Where:

Indoor air flow rate = 8,000 liters per minute (L/min); and

Vapor intrusion rate = 4 L/min.

For commercial/industrial buildings, a soil gas-to-indoor air attenuation factor of approximately 0.0005 was calculated. In the following table, CRA compares the maximum concentrations of toluene, ethylbenzene, and total xylenes in the sub-slab soil vapor probes multiplied by the AF with commercial indoor air ESLs.

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]

COC	Maximum concentration in sub-slab soil vapor probe samples ($\mu\text{g}/\text{m}^3$)	AF x maximum concentration ($\mu\text{g}/\text{m}^3$)	Commercial indoor air ESL ($\mu\text{g}/\text{m}^3$)
Toluene	20	0.010	88
Ethylbenzene	82	0.041	1.6
Total xylenes	110	0.055	29

This comparison demonstrates that sub-slab soil vapor impacts are unlikely to cause soil vapor intrusion at concentrations exceeding ESLs.

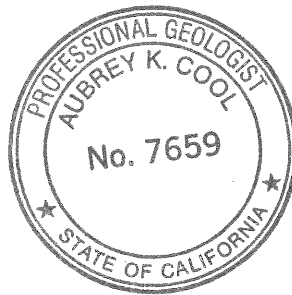
5.0 RECOMMENDATIONS

No further soil vapor investigation is warranted. Based on soil vapor results and current soil and groundwater conditions, CRA recommends closure of this environmental case.

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

Peter Schaefer
Peter Schaefer, CEG, CHG

Aubrey K. Cool
Aubrey K. Cool, PG



FIGURES



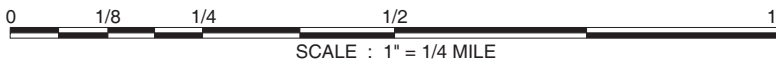
I:\Shell\6-chars\2415--\241513-Oakland 500 40th\241513-FIGURES\241513 VICINITY.A1

EXPLANATION

- 1 ⊖ Unknown well
- ★ Subject site
- Study area

FIGURE
1

SOURCE: TOPOI MAPS 05/16/07



Former Shell Service Station






500 40th Street
Oakland, California









**CONESTOGA-ROVERS
& ASSOCIATES**

Vicinity Map

EXPLANATION

- SVP-1  Soil vapor probe location
- MW-2  Monitoring well location
- MW-4  Destroyed monitoring well location
- B-1  Monitoring wells paved over or built upon
- CSB-1  Soil boring location

-  Electrical line (E)
-  Telecommunication line (T)
-  Unknown utility line (?)
-  Gas line (G)
-  Storm drain line (STM)
-  Water line (W)

Sample ID	Sample Date	Sample Depth	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes
SVP-1	11/30/2011	2.5	1,100,000	<64	<75	210	<170
SVP-1	01/18/2012	2.5	28,000	NA	NA	NA	NA
SVP-1	11/30/2011	5.0	51,000,000	<4,000	<4,700	14,000	<11,000
SVP-1	01/18/2012	5.0	150,000	<32	<38	120	120

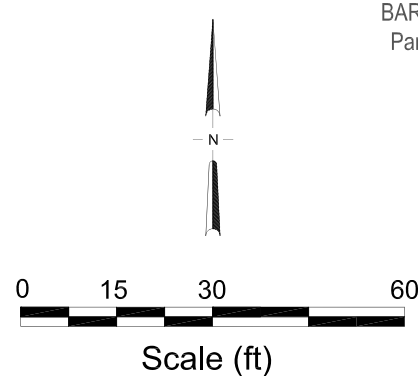
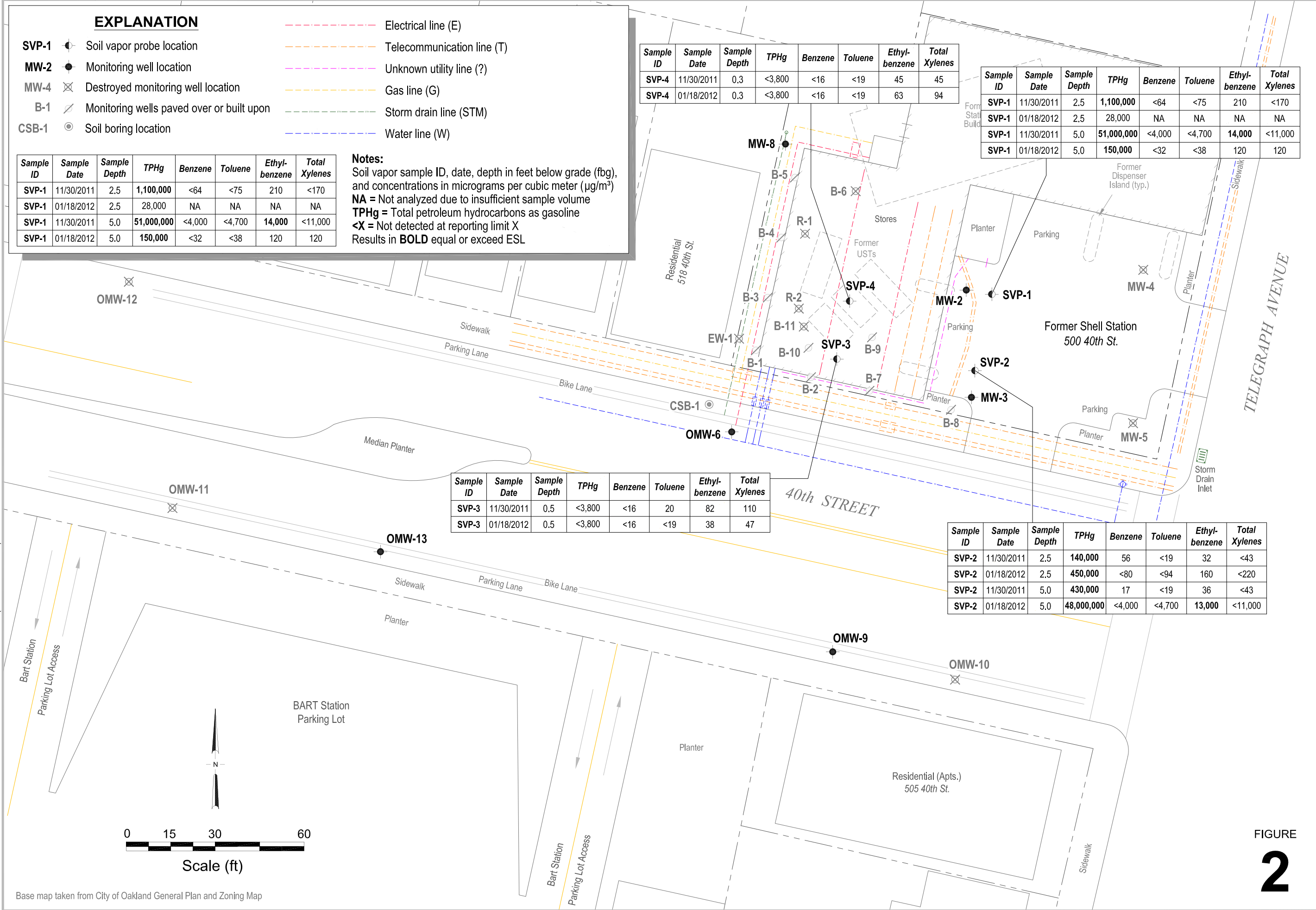
Notes:
Soil vapor sample ID, date, depth in feet below grade (fbg), and concentrations in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)
NA = Not analyzed due to insufficient sample volume
TPHg = Total petroleum hydrocarbons as gasoline
<X = Not detected at reporting limit X
 Results in **BOLD** equal or exceed ESL

Sample ID	Sample Date	Sample Depth	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes
SVP-4	11/30/2011	0.3	<3,800	<16	<19	45	45
SVP-4	01/18/2012	0.3	<3,800	<16	<19	63	94

Sample ID	Sample Date	Sample Depth	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes
SVP-1	11/30/2011	2.5	1,100,000	<64	<75	210	<170
SVP-1	01/18/2012	2.5	28,000	NA	NA	NA	NA
SVP-1	11/30/2011	5.0	51,000,000	<4,000	<4,700	14,000	<11,000
SVP-1	01/18/2012	5.0	150,000	<32	<38	120	120

Sample ID	Sample Date	Sample Depth	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes
SVP-3	11/30/2011	0.5	<3,800	<16	20	82	110
SVP-3	01/18/2012	0.5	<3,800	<16	<19	38	47

Sample ID	Sample Date	Sample Depth	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes
SVP-2	11/30/2011	2.5	140,000	56	<19	32	<43
SVP-2	01/18/2012	2.5	450,000	<80	<94	160	<220
SVP-2	11/30/2011	5.0	430,000	17	<19	36	<43
SVP-2	01/18/2012	5.0	48,000,000	<4,000	<4,700	13,000	<11,000



FIGURE

2

Base map taken from City of Oakland General Plan and Zoning Map

I:\Shell\6-chars\2415-1-241513-Oakland 500 40th\241513-FIGURES\241513 SITE PLAN (SOIL VAPOR DATA).DWG

TABLE

SOIL VAPOR ANALYTICAL DATA
FORMER SHELL SERVICE STATION
500 40TH STREET, OAKLAND, CALIFORNIA

Sample ID	Date	Depth (fbg)	TPHg ($\mu\text{g}/\text{m}^3$)	B ($\mu\text{g}/\text{m}^3$)	T ($\mu\text{g}/\text{m}^3$)	E ($\mu\text{g}/\text{m}^3$)	X ($\mu\text{g}/\text{m}^3$)	Methane (%v)	Carbon Dioxide (%v)	Oxygen + Argon (%v)	Helium (%v)
SVP-1	11/30/2011	2.5	1,100,000	<64	<75	210	<170	0.559	4.78	2.52	<0.0100
SVP-1	1/18/2012	2.5	28,000	-- a	-- a	-- a	-- a	2.61	10.7	11.3	0.123
SVP-1	11/30/2011	5.0	51,000,000	<4,000	<4,700	14,000	<11,000	7.38	37.4	1.42	<0.0100
SVP-1	1/18/2012	5.0	150,000	<32	<38	120	120	3.28	28.2	2.80	0.0945
SVP-2	11/30/2011	2.5	140,000	56	<19	32	<43	2.29	17.2	10.5	10.8
SVP-2	1/18/2012	2.5	450,000	<80	<94	160	<220	<0.500	5.14	3.00	0.0710
SVP-2	11/30/2011	5.0	430,000	17	<19	36	<43	3.25	32.8	2.04	0.0125
SVP-2	1/18/2012	5.0	48,000,000	<4,000	<4,700	13,000	<11,000	5.04	30.6	3.25	0.0710
SVP-3	11/30/2011	0.5	<3,800	<16	20	82	110	<0.500	5.43	16.3	2.19
SVP-3	1/18/2012	0.5	<3,800	<16	<19	38	47	<0.500	5.38	18.0	0.686
SVP-4	11/30/2011	0.3	<3,800	<16	<19	45	45	<0.500	<0.500	22.9	32.7
SVP-4	1/18/2012	0.3	<3,800	<16	<19	63	94	<0.500	1.01	22.1	1.29
ESLs - Commercial ^b :			29,000	280	180,000	3,300	58,000	NA	NA	NA	NA
ESLs - Residential ^b :			10,000	84	63,000	980	21,000	NA	NA	NA	NA

Notes:

fbg = Feet below grade

 $\mu\text{g}/\text{m}^3$ = Micrograms per cubic meter

%v = Percent by volume

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

BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B (M)

Methane, carbon disulfide, and oxygen + argon analyzed by ASTM-D1946 (M)

Helium analyzed by ASTM-D1946 (M)

<x = Not detected at reporting limit x

-- = Not analyzed

ESL = Environmental screening level

NA = No applicable ESL

Results in bold equal or exceed ESL

Shading indicates invalid sample due to helium in sample

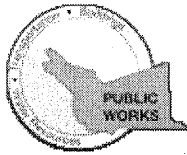
a = Not analyzed due to insufficient sample volume

b = San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) shallow soil gas screening level for evaluation of potential vapor intrusion concerns from Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater, SFBRWQCB, 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: 07/14/2011 By jamesy

Permit Numbers: W2011-0469
Permits Valid from 10/26/2011 to 10/26/2011

Application Id: 1310510535945
Site Location: 500 40th Street

City of Project Site:Oakland

Project Start Date: 08/03/2011

Completion Date:08/03/2011

Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

Extension Start Date: 10/26/2011

Extension End Date: 10/26/2011

Extension Count: 3

Extended By: vickyh1

Applicant: Conestoga Rovers & Associates - Erin Swan
5900 Hollis Street Suite A, Emeryville, CA 94608

Phone: 510-420-3372

Property Owner: Trustees Young Song & In Song, Trustees
1015 Sanders Drive, Oakland, CA 94556

Phone: --

Client: US Shell Oil Products
20945 S. Wilmington Ave, Carson, CA 90810

Phone: --

	Total Due:	\$265.00
Receipt Number: WR2011-0214	Total Amount Paid:	\$265.00
Payer Name : Conestoga Rovers & Associates		PAID IN FULL
Associates		

Works Requesting Permits:

Well Construction-Vapor monitoring well-Vapor monitoring well - 4 Wells

Driller: Vapor Tech Services - Lic #: 916085 - Method: other

Work Total: \$265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2011-0469	07/14/2011	11/01/2011	SVP-1	4.00 in.	0.25 in.	2.50 ft	5.00 ft
W2011-0469	07/14/2011	11/01/2011	SVP-2	4.00 in.	0.25 in.	2.50 ft	5.00 ft
W2011-0469	07/14/2011	11/01/2011	SVP-3	4.00 in.	0.25 in.	2.50 ft	5.00 ft
W2011-0469	07/14/2011	11/01/2011	SVP-4	4.00 in.	0.25 in.	2.50 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

Alameda County Public Works Agency - Water Resources Well Permit

all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

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

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

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

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

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

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

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

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

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

APPENDIX B
BORING LOGS

Boring/Well Log Legend

KEY TO SYMBOLS/ABBREVIATIONS

- First encountered groundwater
- Static groundwater
- Soils logged by hand-auger or air-knife cuttings
- Soils logged by drill cuttings or disturbed sample
- Undisturbed soil sample interval
- Soil sample retained for submittal to analytical laboratory
- No recovery within interval
- Hydropunch or vapor sample screen interval

- PID = Photo-ionization detector or organic vapor meter reading in parts per million (ppm)
- fbg = Feet below grade
- Blow Counts = Number of blows required to drive a California-modified split-spoon sampler using a 140-pound hammer falling freely 30 inches, recorded per 6-inch interval of a total 18-inch sample interval
- (10YR 4/4) = Soil color according to Munsell Soil Color Charts
- msl = Mean sea level
- Soils logged according to the USCS.

UNIFIED SOILS CLASSIFICATION SYSTEM (USCS) SUMMARY

Major Divisions		Graphic	Group Symbol	Typical Description	
Coarse-Grained Soils (>50% Sands and/or Gravels)	Gravel and Gravelly Soils		GW	Well-graded gravels, gravel-sand mixtures, little or no fines	
			GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines	
		GM	Silty gravels, gravel-sand-silt mixtures		
	Sand and Sandy Soils	Gravels with Fines (≥15% fines)		GC	Clayey gravels, gravel-sand-clay mixtures
				SW	Well-graded sands, gravelly sands, little or no fines
			SP	Poorly-graded sands, gravelly sand, little or no fines	
Fine-Grained Soils (>50% Silts and/or Clays)	Silts and Clays		SM	Silty sands, sand-silt mixtures	
			SC	Clayey sands, sand-clay mixtures	
			ML	Inorganic silts, very fine sands, silty or clayey fine sands, clayey silts with slight plasticity	
	Silts and Clays		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
			OL	Organic silts and organic silty clays of low plasticity	
			MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils	
Highly Organic Soils		CH	Inorganic clays of high plasticity		
		OH	Organic clays of medium to high plasticity, organic silts		
Highly Organic Soils			PT	Peat, humus, swamp soils with high organic contents	

M:\Templates & Forms\Boring Logs\Boring Log Legend





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-1
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	26-Oct-11
LOCATION	500 40th Street, Oakland, California	DRILLING COMPLETED	26-Oct-11
PROJECT NUMBER	241513	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vapor Tech Services	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	3.5	SCREENED INTERVALS	NA
LOGGED BY	C. Arganbright	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	P. Schaefer PG 5612	DEPTH TO WATER (Static)	NA
REMARKS	Vapor point screened from 2 to 2.5 ft and 4.5 to 5ft		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						<u>ASPHALT</u>		
						<u>GRAVEL with Silt (GP-GM)</u> ; dark reddish brown (2.5YR 2.5/3); dry; 10% silt, 90% fine to coarse gravel.	0.5	
				GW-GM				
						<u>Gravelly CLAY (CL)</u> ; black (2.5Y 2.5/1); moist; 80% clay, 20% coarse gravel; medium to high plasticity.	2.5	
				CL				
			5					
							5.5	

WELL LOG (PID) I:\SHELL\6-CHARS\2415-1241513-GINT.GPJ DEFAULT.GDT 12/12



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

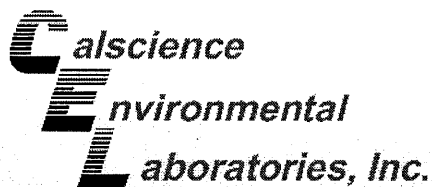
BORING / WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SVP-2
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	25-Oct-11
LOCATION	500 40th Street, Oakland, California	DRILLING COMPLETED	25-Oct-11
PROJECT NUMBER	241513	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vapor Tech Services	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	3.5	SCREENED INTERVALS	NA
LOGGED BY	C. Arganbright	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	P. Schaefer PG 5612	DEPTH TO WATER (Static)	NA
REMARKS	Vapor point screened from 1.8 to 2.3 ft and 4.4 to 4.9ft		

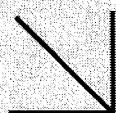
PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT		
					GP-GM		GRAVEL with Silt (GP-GM) ; dark brown (7.5YR 3/4); dry; 10% silt, 90% coarse gravel.	0.5	
					CL		Gravelly CLAY (CL) ; black (2.5Y 2.5/1); moist; 80% clay, 20% coarse gravel; medium plasticity.	1.0	<ul style="list-style-type: none"> Bentonite Slurry with Pellet Base Monterey Sand #2/12 6" Length of Stainless Steel Screen Bentonite Slurry with Pellet Base Monterey Sand #2/12 6" Length of Stainless Steel Screen
				5				5.3	Bottom of Boring @ 5.3 fbg

WELL LOG (PID) I:\SHELLS-CHARS\2415-1241513-GINT.GPJ DEFAULT.GDT 1/2/12

APPENDIX C
CERTIFIED ANALYTICAL REPORTS



Supplemental Report 1



CALSCIENCE

WORK ORDER NUMBER: 11-12-0013

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Conestoga-Rovers & Associates

Client Project Name: 500 40th Street, Oakland, CA

Attention: Peter Schaefer
19449 Riverside Drive, Suite 230
Sonoma, CA 95476-6955

Approved for release on 03/26/2012 by:
Xuan Dang
Project Manager

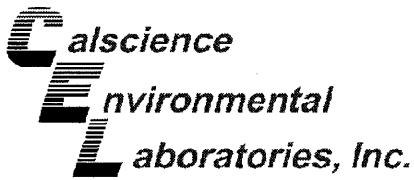
ResultLink ▶

Email your PM ▶



Calscience Environmental Laboratories, Inc. (Calscience) 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 analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.





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Work Order Number: 11-12-0013

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Client: Conestoga-Rovers & Associates
 19449 Riverside Drive, Suite 230
 Sonoma, CA 95476-6955
 Attn: Peter Schaefer

Work Order: 11-12-0013
 Project Name: 500 40th Street, Oakland, CA
 Received: 12/01/11 10:00

DETECTIONS SUMMARY

Client Sample ID

Analyte	Result	Qualifiers	Reporting Limit	Units	Method	Extraction
SVP-1-2.5						
Methane	0.559		0.500	%v	ASTM D-1946	N/A
Carbon Dioxide	4.78		0.500	%v	ASTM D-1946	N/A
Oxygen + Argon	2.52		0.500	%v	ASTM D-1946	N/A
Ethylbenzene	0.21		0.087	ug/L	EPA 8260B (M)	N/A
Gasoline Range Organics (C6-C12)	1100		3.8	ug/L	EPA TO-3M	N/A
SVP-1-5.0						
Methane	7.38		0.500	%v	ASTM D-1946	N/A
Carbon Dioxide	37.4		0.500	%v	ASTM D-1946	N/A
Oxygen + Argon	1.42		0.500	%v	ASTM D-1946	N/A
Ethylbenzene	14		5.4	ug/L	EPA 8260B (M)	N/A
Gasoline Range Organics (C6-C12)	51000		150	ug/L	EPA TO-3M	N/A
SVP-2-2.5						
Methane	2.29		0.500	%v	ASTM D-1946	N/A
Carbon Dioxide	17.2		0.500	%v	ASTM D-1946	N/A
Oxygen + Argon	10.5		0.500	%v	ASTM D-1946	N/A
Helium	10.8		0.100	%v	ASTM D-1946 (M)	N/A
Benzene	0.056		0.016	ug/L	EPA 8260B (M)	N/A
Ethylbenzene	0.032		0.022	ug/L	EPA 8260B (M)	N/A
Gasoline Range Organics (C6-C12)	140		3.8	ug/L	EPA TO-3M	N/A
SVP-2-5.0						
Methane	3.25		0.500	%v	ASTM D-1946	N/A
Carbon Dioxide	32.8		0.500	%v	ASTM D-1946	N/A
Oxygen + Argon	2.04		0.500	%v	ASTM D-1946	N/A
Helium	0.0125		0.0100	%v	ASTM D-1946 (M)	N/A
Benzene	0.017		0.016	ug/L	EPA 8260B (M)	N/A
Ethylbenzene	0.036		0.022	ug/L	EPA 8260B (M)	N/A
Gasoline Range Organics (C6-C12)	430		3.8	ug/L	EPA TO-3M	N/A
SVP-4						
Oxygen + Argon	22.9		0.500	%v	ASTM D-1946	N/A
Helium	32.7		0.200	%v	ASTM D-1946 (M)	N/A
Ethylbenzene	0.045		0.022	ug/L	EPA 8260B (M)	N/A
Xylenes (total)	0.045		0.043	ug/L	EPA 8260B (M)	N/A

*MDL is shown.



Client: Conestoga-Rovers & Associates
 19449 Riverside Drive, Suite 230
 Sonoma, CA 95476-6955
 Attn: Peter Schaefer

Work Order: 11-12-0013
 Project Name: 500 40th Street, Oakland, CA
 Received: 12/01/11 10:00

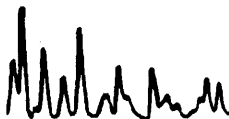
DETECTIONS SUMMARY

Client Sample ID

Analyte	Result	Qualifiers	Reporting Limit	Units	Method	Extraction
SVP-3						
Carbon Dioxide	5.43		0.500	%v	ASTM D-1946	N/A
Oxygen + Argon	16.3		0.500	%v	ASTM D-1946	N/A
Helium	2.19		0.0200	%v	ASTM D-1946 (M)	N/A
Toluene	0.020		0.019	ug/L	EPA 8260B (M)	N/A
Ethylbenzene	0.082		0.022	ug/L	EPA 8260B (M)	N/A
Xylenes (total)	0.11		0.043	ug/L	EPA 8260B (M)	N/A

Subcontracted analyses, if any, are not included in this summary.

*MDL is shown.





Conestoga-Rovers & Associates
 19449 Riverside Drive, Suite 230
 Sonoma, CA 95476-6955

Date Received: 12/01/11
 Work Order No: 11-12-0013
 Preparation: N/A
 Method: ASTM D-1946
 Units: %v

Project: 500 40th Street, Oakland, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1-2.5	11-12-0013-1-B	11/30/11 06:30	Air	GC 36	N/A	12/01/11 13:58	111201L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	0.559	0.500	1		Oxygen + Argon	2.52	0.500	1	
Carbon Dioxide	4.78	0.500	1						

SVP-1-5.0	11-12-0013-2-B	11/30/11 06:33	Air	GC 36	N/A	12/01/11 14:15	111201L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	7.38	0.500	1		Oxygen + Argon	1.42	0.500	1	
Carbon Dioxide	37.4	0.500	1						

SVP-2-2.5	11-12-0013-3-B	11/30/11 06:55	Air	GC 36	N/A	12/01/11 14:37	111201L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	2.29	0.500	1		Oxygen + Argon	10.5	0.500	1	
Carbon Dioxide	17.2	0.500	1						

SVP-2-5.0	11-12-0013-4-B	11/30/11 07:03	Air	GC 36	N/A	12/01/11 14:57	111201L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	3.25	0.500	1		Oxygen + Argon	2.04	0.500	1	
Carbon Dioxide	32.8	0.500	1						

SVP-4	11-12-0013-5-B	11/30/11 07:25	Air	GC 36	N/A	12/01/11 15:24	111201L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	22.9	0.500	1	
Carbon Dioxide	ND	0.500	1						

SVP-3	11-12-0013-6-B	11/30/11 07:42	Air	GC 36	N/A	12/01/11 15:41	111201L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	16.3	0.500	1	
Carbon Dioxide	5.43	0.500	1						

Method Blank	099-03-002-1,440	N/A	Air	GC 36	N/A	12/01/11 11:29	111201L01
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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		Nitrogen	ND	0.500	1	
Carbon Monoxide	ND	0.500	1						

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

Analytical Report



Conestoga-Rovers & Associates
 19449 Riverside Drive, Suite 230
 Sonoma, CA 95476-6955

Date Received: 12/01/11
 Work Order No: 11-12-0013
 Preparation: N/A
 Method: ASTM D-1946 (M)

Project: 500 40th Street, Oakland, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1-2.5	11-12-0013-1-B	11/30/11 06:30	Air	GC 55	N/A	12/01/11 15:26	111201L01

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

SVP-1-5.0	11-12-0013-2-B	11/30/11 06:33	Air	GC 55	N/A	12/01/11 15:52	111201L01
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Parameter	Result	RL	DF	Qual	Units
Helium	ND	0.0100	1		%v

SVP-2-2.5	11-12-0013-3-B	11/30/11 06:55	Air	GC 55	N/A	12/01/11 18:08	111201L01
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Parameter	Result	RL	DF	Qual	Units
Helium	10.8	0.100	10		%v

SVP-2-5.0	11-12-0013-4-B	11/30/11 07:03	Air	GC 55	N/A	12/01/11 16:38	111201L01
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Parameter	Result	RL	DF	Qual	Units
Helium	0.0125	0.0100	1		%v

SVP-4	11-12-0013-5-B	11/30/11 07:25	Air	GC 55	N/A	12/01/11 19:12	111201L01
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Parameter	Result	RL	DF	Qual	Units
Helium	32.7	0.200	20		%v

SVP-3	11-12-0013-6-B	11/30/11 07:42	Air	GC 55	N/A	12/01/11 17:45	111201L01
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Parameter	Result	RL	DF	Qual	Units
Helium	2.19	0.0200	2		%v

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

Analytical Report



Conestoga-Rovers & Associates
 19449 Riverside Drive, Suite 230
 Sonoma, CA 95476-6955

Date Received: 12/01/11
 Work Order No: 11-12-0013
 Preparation: N/A
 Method: ASTM D-1946 (M)

Project: 500 40th Street, Oakland, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-872-192	N/A	Air	GC 55	N/A	12/01/11 13:34	111201L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Helium	ND	0.0100	1		%v
Hydrogen	ND	0.0100	1		%v

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

Analytical Report



Conestoga-Rovers & Associates
19449 Riverside Drive, Suite 230
Sonoma, CA 95476-6955

Date Received: 12/01/11
Work Order No: 11-12-0013
Preparation: N/A
Method: EPA 8260B (M)
Units: ug/L

Project: 500 40th Street, Oakland, CA

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1-2.5	11-12-0013-1-A	11/30/11 06:30	Air	GC/MS HH	N/A	12/02/11 14:59	111202L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.064	4		Ethylbenzene	0.21	0.087	4	
Toluene	ND	0.075	4		Xylenes (total)	ND	0.17	4	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
1,4-Bromofluorobenzene	201	47-156		2,7	1,2-Dichloroethane-d4	102	47-156		
Toluene-d8	87	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1-5.0	11-12-0013-2-A	11/30/11 06:33	Air	GC/MS HH	N/A	12/02/11 23:12	111202L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	4.0	250		Ethylbenzene	14	5.4	250	
Toluene	ND	4.7	250		Xylenes (total)	ND	11	250	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
1,4-Bromofluorobenzene	120	47-156			1,2-Dichloroethane-d4	94	47-156		
Toluene-d8	70	47-156							

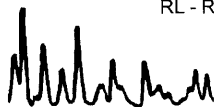
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2-2.5	11-12-0013-3-A	11/30/11 06:55	Air	GC/MS HH	N/A	12/03/11 00:04	111202L01

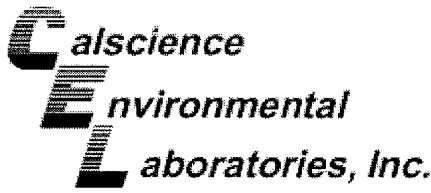
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.056	0.016	1		Ethylbenzene	0.032	0.022	1	
Toluene	ND	0.019	1		Xylenes (total)	ND	0.043	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
1,4-Bromofluorobenzene	106	47-156			1,2-Dichloroethane-d4	98	47-156		
Toluene-d8	74	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2-5.0	11-12-0013-4-A	11/30/11 07:03	Air	GC/MS HH	N/A	12/03/11 18:05	111203L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.017	0.016	1		Ethylbenzene	0.036	0.022	1	
Toluene	ND	0.019	1		Xylenes (total)	ND	0.043	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
1,4-Bromofluorobenzene	121	47-156			1,2-Dichloroethane-d4	97	47-156		
Toluene-d8	64	47-156							

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





Analytical Report



Conestoga-Rovers & Associates
 19449 Riverside Drive, Suite 230
 Sonoma, CA 95476-6955

Date Received: 12/01/11
 Work Order No: 11-12-0013
 Preparation: N/A
 Method: EPA 8260B (M)
 Units: ug/L

Project: 500 40th Street, Oakland, CA

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-4	11-12-0013-5-A	11/30/11 07:25	Air	GC/MS HH	N/A	12/02/11 04:31	111201L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.016	1		Ethylbenzene	0.045	0.022	1	
Toluene	ND	0.019	1		Xylenes (total)	0.045	0.043	1	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	104	47-156			1,2-Dichloroethane-d4	100	47-156		
Toluene-d8	100	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-3	11-12-0013-6-A	11/30/11 07:42	Air	GC/MS HH	N/A	12/02/11 05:26	111201L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.016	1		Ethylbenzene	0.082	0.022	1	
Toluene	0.020	0.019	1		Xylenes (total)	0.11	0.043	1	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	104	47-156			1,2-Dichloroethane-d4	100	47-156		
Toluene-d8	99	47-156							

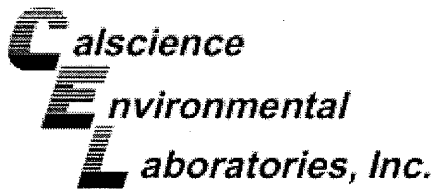
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-13-041-688	N/A	Air	GC/MS HH	N/A	12/01/11 15:00	111201L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.016	1		Ethylbenzene	ND	0.022	1	
Toluene	ND	0.019	1		Xylenes (total)	ND	0.043	1	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	99	47-156			1,2-Dichloroethane-d4	101	47-156		
Toluene-d8	99	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-13-041-690	N/A	Air	GC/MS HH	N/A	12/02/11 14:09	111202L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.016	1		Ethylbenzene	ND	0.022	1	
Toluene	ND	0.019	1		Xylenes (total)	ND	0.043	1	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	98	47-156			1,2-Dichloroethane-d4	100	47-156		
Toluene-d8	97	47-156							

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



Analytical Report



Conestoga-Rovers & Associates
 19449 Riverside Drive, Suite 230
 Sonoma, CA 95476-6955

Date Received: 12/01/11
 Work Order No: 11-12-0013
 Preparation: N/A
 Method: EPA 8260B (M)
 Units: ug/L

Project: 500 40th Street, Oakland, CA

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-13-041-693	N/A	Air	GC/MS HH	N/A	12/03/11 13:35	111203L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.016	1		Ethylbenzene	ND	0.022	1	
Toluene	ND	0.019	1		Xylenes (total)	ND	0.043	1	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
1,4-Bromofluorobenzene	102	47-156			1,2-Dichloroethane-d4	97	47-156		
Toluene-d8	97	47-156							

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

Analytical Report



Conestoga-Rovers & Associates
 19449 Riverside Drive, Suite 230
 Sonoma, CA 95476-6955

Date Received: 12/01/11
 Work Order No: 11-12-0013
 Preparation: N/A
 Method: EPA TO-3M

Project: 500 40th Street, Oakland, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1-2.5	11-12-0013-1-A	11/30/11 06:30	Air	GC 19	N/A	12/01/11 18:14	111201L01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	1100	3.8	1		ug/L

SVP-1-5.0	11-12-0013-2-A	11/30/11 06:33	Air	GC 19	N/A	12/02/11 00:17	111201L01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	51000	150	40		ug/L

SVP-2-2.5	11-12-0013-3-A	11/30/11 06:55	Air	GC 19	N/A	12/01/11 19:33	111201L01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	140	3.8	1		ug/L

SVP-2-5.0	11-12-0013-4-A	11/30/11 07:03	Air	GC 19	N/A	12/01/11 20:09	111201L01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	430	3.8	1		ug/L

SVP-4	11-12-0013-5-A	11/30/11 07:25	Air	GC 19	N/A	12/01/11 21:12	111201L01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	3.8	1		ug/L

SVP-3	11-12-0013-6-A	11/30/11 07:42	Air	GC 19	N/A	12/01/11 21:53	111201L01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	3.8	1		ug/L

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

Analytical Report



Conestoga-Rovers & Associates
 19449 Riverside Drive, Suite 230
 Sonoma, CA 95476-6955

Date Received: 12/01/11
 Work Order No: 11-12-0013
 Preparation: N/A
 Method: EPA TO-3M

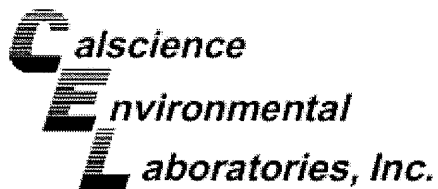
Project: 500 40th Street, Oakland, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-431-24	N/A	Air	GC 19	N/A	12/01/11 14:56	111201L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Gasoline Range Organics (C6-C12)	ND	3.8	1		ug/L

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



Quality Control - Duplicate



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 Sonoma, CA 95476-6955

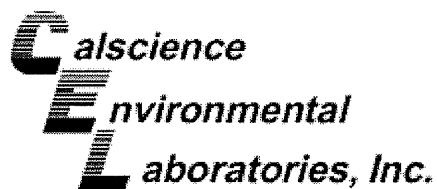
Date Received: 12/01/11
 Work Order No: 11-12-0013
 Preparation: N/A
 Method: EPA TO-3M

Project: 500 40th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
SVP-1-2.5	Air	GC 19	N/A	12/01/11	111201D01

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	1078	926.3	15	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



Conestoga-Rovers & Associates
19449 Riverside Drive, Suite 230
Sonoma, CA 95476-6955

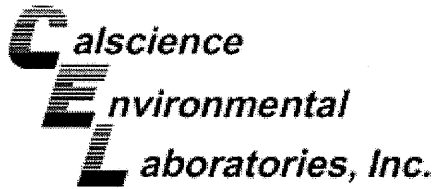
Date Received: N/A
Work Order No: 11-12-0013
Preparation: N/A
Method: ASTM D-1946

Project: 500 40th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-03-002-1,440	Air	GC 36	N/A	12/01/11	111201L01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Methane	10.12	101	102	80-120	0	0-30	
Carbon Dioxide	10.07	112	112	80-120	0	0-30	
Carbon Monoxide	9.930	107	107	80-120	0	0-30	
Oxygen + Argon	3.500	100	100	80-120	0	0-30	
Nitrogen	10.02	97	97	80-120	0	0-30	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate



Conestoga-Rovers & Associates
 19449 Riverside Drive, Suite 230
 Sonoma, CA 95476-6955

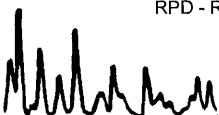
Date Received: N/A
 Work Order No: 11-12-0013
 Preparation: N/A
 Method: ASTM D-1946 (M)

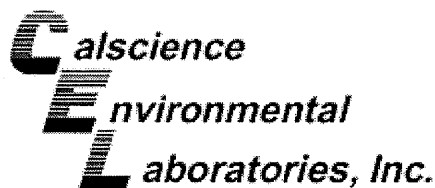
Project: 500 40th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-872-192	Air	GC 55	N/A	12/01/11	111201L01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Helium	1.000	101	102	80-120	0	0-30	
Hydrogen	1.000	105	105	80-120	0	0-30	

RPD - Relative Percent Difference , CL - Control Limit





Quality Control - LCS/LCS Duplicate



Conestoga-Rovers & Associates
19449 Riverside Drive, Suite 230
Sonoma, CA 95476-6955

Date Received: N/A
Work Order No: 11-12-0013
Preparation: N/A
Method: EPA 8260B (M)

Project: 500 40th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-13-041-688	Air	GC/MS HH	N/A	12/01/11	111201L01			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.07987	117	113	60-156	44-172	4	0-40	
Toluene	0.09421	115	111	56-146	41-161	4	0-43	
Ethylbenzene	0.1086	115	111	52-154	35-171	4	0-38	
Xylenes (total)	0.3257	117	112	42-156	23-175	4	0-41	
Methyl-t-Butyl Ether (MTBE)	0.09013	115	112	45-147	28-164	3	0-25	
Tert-Butyl Alcohol (TBA)	0.1516	104	95	60-140	47-153	8	0-35	
Diisopropyl Ether (DIPE)	0.1045	114	110	60-140	47-153	3	0-35	
Ethyl-t-Butyl Ether (ETBE)	0.1045	113	110	60-140	47-153	3	0-35	
Tert-Amyl-Methyl Ether (TAME)	0.1045	111	107	60-140	47-153	4	0-35	
Naphthalene	0.1311	124	118	60-140	47-153	4	0-30	
Ethanol	0.1884	106	95	47-137	32-152	11	0-35	
1,1-Difluoroethane	0.06754	117	113	78-156	65-169	4	0-35	
Isopropanol	0.06145	102	93	78-156	65-169	9	0-35	

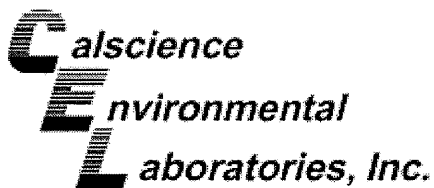
Total number of LCS compounds : 13

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



Conestoga-Rovers & Associates
 19449 Riverside Drive, Suite 230
 Sonoma, CA 95476-6955

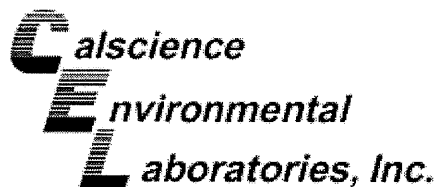
Date Received: N/A
 Work Order No: 11-12-0013
 Preparation: N/A
 Method: EPA 8260B (M)

Project: 500 40th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			Qualifiers
099-13-041-690	Air	GC/MS HH	N/A	12/02/11	111202L01			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.07987	108	108	60-156	44-172	0	0-40	
Toluene	0.09421	104	106	56-146	41-161	2	0-43	
Ethylbenzene	0.1086	104	103	52-154	35-171	1	0-38	
Xylenes (total)	0.3257	105	104	42-156	23-175	1	0-41	
Methyl-t-Butyl Ether (MTBE)	0.09013	104	105	45-147	28-164	0	0-25	
Tert-Butyl Alcohol (TBA)	0.1516	94	91	60-140	47-153	3	0-35	
Diisopropyl Ether (DIPE)	0.1045	99	100	60-140	47-153	0	0-35	
Ethyl-t-Butyl Ether (ETBE)	0.1045	102	102	60-140	47-153	0	0-35	
Tert-Amyl-Methyl Ether (TAME)	0.1045	102	103	60-140	47-153	0	0-35	
Naphthalene	0.1311	104	108	60-140	47-153	4	0-30	
Ethanol	0.1884	78	77	47-137	32-152	0	0-35	
1,1-Difluoroethane	0.06754	101	100	78-156	65-169	1	0-35	
Isopropanol	0.06145	95	92	78-156	65-169	2	0-35	

Total number of LCS compounds : 13
 Total number of ME compounds : 0
 Total number of ME compounds allowed : 1
 LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



Conestoga-Rovers & Associates
19449 Riverside Drive, Suite 230
Sonoma, CA 95476-6955

Date Received: N/A
Work Order No: 11-12-0013
Preparation: N/A
Method: EPA 8260B (M)

Project: 500 40th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-13-041-693	Air	GC/MS HH	N/A	12/03/11	111203L01			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.07987	106	106	60-156	44-172	0	0-40	
Toluene	0.09421	105	104	56-146	41-161	1	0-43	
Ethylbenzene	0.1086	104	102	52-154	35-171	2	0-38	
Xylenes (total)	0.3257	104	102	42-156	23-175	2	0-41	
Methyl-t-Butyl Ether (MTBE)	0.09013	103	103	45-147	28-164	1	0-25	
Tert-Butyl Alcohol (TBA)	0.1516	91	90	60-140	47-153	2	0-35	
Diisopropyl Ether (DIPE)	0.1045	93	93	60-140	47-153	0	0-35	
Ethyl-t-Butyl Ether (ETBE)	0.1045	100	100	60-140	47-153	0	0-35	
Tert-Amyl-Methyl Ether (TAME)	0.1045	102	102	60-140	47-153	0	0-35	
Naphthalene	0.1311	103	101	60-140	47-153	2	0-30	
Ethanol	0.1884	67	66	47-137	32-152	1	0-35	
1,1-Difluoroethane	0.06754	95	96	78-156	65-169	1	0-35	
Isopropanol	0.06145	93	91	78-156	65-169	2	0-35	

Total number of LCS compounds : 13

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 11-12-0013

<u>Qualifier</u>	<u>Definition</u>
*	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.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (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.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
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. All QC results are reported on a wet weight basis.
 MPN - Most Probable Number

LAB (LOCATION)

- CALSCIENCE ()
- SPL ()
- XENCO ()
- WEST AMERICA ()
- OTHER ()



Shell Oil Products Chain Of Custody Record

11-12-0013

Please Check Appropriate Box:

<input type="checkbox"/> ENV. SERVICES	<input type="checkbox"/> MOTIVA RETAIL	<input type="checkbox"/> SHELL RETAIL
<input type="checkbox"/> MOTIVA SDBCM	<input checked="" type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> SHELL PIPELINE	<input type="checkbox"/> OTHER _____	

Print Bill To Contact Name: Peter Schafer 241531

INCIDENT # (ENV. SERVICES)

DATE: 2/12/2010

PAGE: 6 of 1

SAMPLING COMPANY: Conestoga-Rovers & Associates

LOG CODE: CRAW

ADDRESS: 19449 Riverside Drive, Suite 230, Sonoma, California 95476

PROJECT CONTACT (Hardcopy or PDF Report to): Peter Schaefer

TELEPHONE: 510-420-3319 FAX: 707-935-6649 E-MAIL: pschaefer@croworld.com

SITE ADDRESS: Street and City: 500 40th Street, Oakland

State: CA

GLOBAL ID NO.: T0600101265

EDF DELIVERABLE TO (Name, Company, Office Location): Felicia Ballard, CRA, Sonoma

PHONE NO.: 707-935-4850

E-MAIL: sonomaedf@croworld.com

CONSULTANT PROJECT NO.: 241513-95-11.05

SAMPLER NAME(S) (Print): Cristina Arganbright

TURNAROUND TIME (CALENDAR DAYS):

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 :

Copy final report to Shell.Lab.Billing@croworld.com

Report results in $\mu\text{g}/\text{m}^3$

SHELL CONTRACT RATE APPLIES

STATE REIMBURSEMENT RATE APPLIES

EDD NOT NEEDED

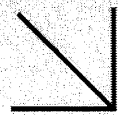
RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification		SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	TEMPERATURE ON RECEIPT °C											Container PID Readings or Laboratory Notes						
	DATE	TIME	HCL	HNO3		H2SO4	NONE	OTHER	TPH - GRO, Burgeable (8015M)	TPH - DRO, Extractable (8015M)		TPHg (8015M)	BTEX (8260B)	BTEX + MTBE (8260B)	BTEX + MTBE + TBA (TO-15)	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)		Naphthalene					
1	SVP-1-3'	11/30/09									X																		Container ID: LC134
2	SVP-2-5'	11/30/09									X																		Container ID: LC108
3	SVP-2-3'	11/30/09									X																		Container ID: LC265
4	SVP-2-5'	11/30/09									X																		Container ID:
5	SVP-4	11/30/09									X																		Container ID: LC272
6	SVP-3	11/30/09									X																		Container ID: LC287
																													Container ID: LC321

Relinquished by: (Signature) [Signature]	Received by: (Signature) [Signature]	Date: 11/30/2011	Time: 1100
Relinquished by: (Signature) [Signature]	Received by: (Signature) [Signature]	Date: 11/30/11	Time: 1300
Relinquished by: (Signature) [Signature]	Received by: (Signature) [Signature]	Date: 12/01/11	Time: 10:00

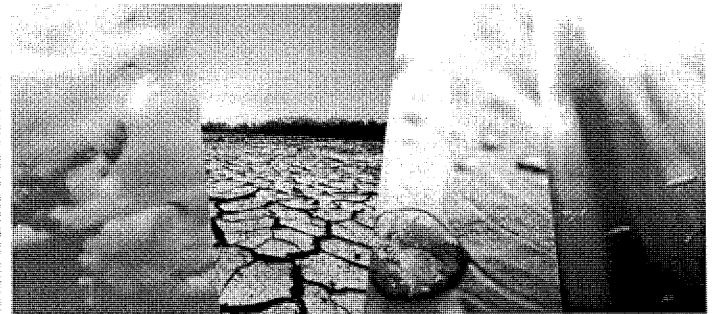
05/2006 Revision



CALSCIENCE

WORK ORDER NUMBER: 12-01-1080

The difference is service



AIR · SOIL · WATER · MARINE CHEMISTRY

Analytical Report For

Client: Conestoga-Rovers & Associates

Client Project Name: 500 40th Street, Oakland, CA

Attention: Peter Schaefer
 5900 Hollis Street, Suite A
 Emeryville, CA 94608-2008

Approved for release on 03/26/2012 by:
 Xuan Dang
 Project Manager

ResultLink ▶

Email your PM ▶



Calscience Environmental Laboratories, Inc. (Calscience) 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 analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



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Work Order Number: 12-01-1080

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

Work Order: 12-01-1080
 Project Name: 500 40th Street, Oakland, CA
 Received: 01/19/12 07:45

DETECTIONS SUMMARY

Client Sample ID

Analyte	Result	Qualifiers	Reporting Limit	Units	Method	Extraction
SVP-1-2.5						
Methane	2.61		0.500	%v	ASTM D-1946	N/A
Carbon Dioxide	10.7		0.500	%v	ASTM D-1946	N/A
Oxygen + Argon	11.3		0.500	%v	ASTM D-1946	N/A
Helium	0.123		0.0100	%v	ASTM D-1946 (M)	N/A
Gasoline Range Organics (C6-C12)	28		3.8	ug/L	EPA TO-3M	N/A
SVP-1-5.0						
Methane	3.28		0.500	%v	ASTM D-1946	N/A
Carbon Dioxide	28.2		0.500	%v	ASTM D-1946	N/A
Oxygen + Argon	2.80		0.500	%v	ASTM D-1946	N/A
Helium	0.0945		0.0100	%v	ASTM D-1946 (M)	N/A
Ethylbenzene	0.12		0.043	ug/L	EPA 8260B (M)	N/A
Xylenes (total)	0.12		0.087	ug/L	EPA 8260B (M)	N/A
Gasoline Range Organics (C6-C12)	150		3.8	ug/L	EPA TO-3M	N/A
SVP-2-2.5						
Carbon Dioxide	5.14		0.500	%v	ASTM D-1946	N/A
Oxygen + Argon	3.00		0.500	%v	ASTM D-1946	N/A
Helium	0.0710		0.0100	%v	ASTM D-1946 (M)	N/A
Ethylbenzene	0.16		0.11	ug/L	EPA 8260B (M)	N/A
Gasoline Range Organics (C6-C12)	450		3.8	ug/L	EPA TO-3M	N/A
SVP-2-5.0						
Methane	5.04		0.500	%v	ASTM D-1946	N/A
Carbon Dioxide	30.6		0.500	%v	ASTM D-1946	N/A
Oxygen + Argon	3.25		0.500	%v	ASTM D-1946	N/A
Helium	0.0710		0.0100	%v	ASTM D-1946 (M)	N/A
Ethylbenzene	13		5.4	ug/L	EPA 8260B (M)	N/A
Gasoline Range Organics (C6-C12)	48000		380	ug/L	EPA TO-3M	N/A
SVP-3						
Carbon Dioxide	5.38		0.500	%v	ASTM D-1946	N/A
Oxygen + Argon	18.0		0.500	%v	ASTM D-1946	N/A
Helium	0.686		0.0100	%v	ASTM D-1946 (M)	N/A
Ethylbenzene	0.038		0.022	ug/L	EPA 8260B (M)	N/A
Xylenes (total)	0.047		0.043	ug/L	EPA 8260B (M)	N/A

*MDL is shown.



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

Work Order: 12-01-1080
 Project Name: 500 40th Street, Oakland, CA
 Received: 01/19/12 07:45

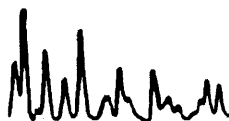
DETECTIONS SUMMARY

Client Sample ID

Analyte	Result	Qualifiers	Reporting Limit	Units	Method	Extraction
SVP-4						
Carbon Dioxide	1.01		0.500	%v	ASTM D-1946	N/A
Oxygen + Argon	22.1		0.500	%v	ASTM D-1946	N/A
Helium	1.29		0.0100	%v	ASTM D-1946 (M)	N/A
Ethylbenzene	0.063		0.022	ug/L	EPA 8260B (M)	N/A
Xylenes (total)	0.094		0.043	ug/L	EPA 8260B (M)	N/A

Subcontracted analyses, if any, are not included in this summary.

*MDL is shown.





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

Date Received: 01/19/12
 Work Order No: 12-01-1080
 Preparation: N/A
 Method: ASTM D-1946
 Units: %v

Project: 500 40th Street, Oakland, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1-2.5	12-01-1080-1-A	01/18/12 07:50	Air	GC 36	N/A	01/19/12 11:24	120119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	2.61	0.500	1		Oxygen + Argon	11.3	0.500	1	
Carbon Dioxide	10.7	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1-5.0	12-01-1080-2-A	01/18/12 08:01	Air	GC 36	N/A	01/19/12 11:43	120119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	3.28	0.500	1		Oxygen + Argon	2.80	0.500	1	
Carbon Dioxide	28.2	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2-2.5	12-01-1080-3-A	01/18/12 06:46	Air	GC 36	N/A	01/19/12 12:02	120119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	3.00	0.500	1	
Carbon Dioxide	5.14	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2-5.0	12-01-1080-4-A	01/18/12 07:15	Air	GC 36	N/A	01/19/12 12:23	120119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	5.04	0.500	1		Oxygen + Argon	3.25	0.500	1	
Carbon Dioxide	30.6	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-3	12-01-1080-5-A	01/18/12 09:00	Air	GC 36	N/A	01/19/12 12:40	120119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	18.0	0.500	1	
Carbon Dioxide	5.38	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-4	12-01-1080-6-A	01/18/12 08:41	Air	GC 36	N/A	01/19/12 13:01	120119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	22.1	0.500	1	
Carbon Dioxide	1.01	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-03-002-1,476	N/A	Air	GC 36	N/A	01/19/12 10:17	120119L01

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		Nitrogen	ND	0.500	1	
Carbon Monoxide	ND	0.500	1						

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

Analytical Report



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

Date Received: 01/19/12
 Work Order No: 12-01-1080
 Preparation: N/A
 Method: ASTM D-1946 (M)

Project: 500 40th Street, Oakland, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1-2.5	12-01-1080-1-A	01/18/12 07:50	Air	GC 55	N/A	01/19/12 12:12	120119L01

Parameter	Result	RL	DF	Qual	Units
Helium	0.123	0.0100	1		%v

SVP-1-5.0	12-01-1080-2-A	01/18/12 08:01	Air	GC 55	N/A	01/19/12 12:34	120119L01
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Parameter	Result	RL	DF	Qual	Units
Helium	0.0945	0.0100	1		%v

SVP-2-2.5	12-01-1080-3-A	01/18/12 06:46	Air	GC 55	N/A	01/19/12 13:12	120119L01
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Parameter	Result	RL	DF	Qual	Units
Helium	0.0710	0.0100	1		%v

SVP-2-5.0	12-01-1080-4-A	01/18/12 07:15	Air	GC 55	N/A	01/19/12 13:00	120119L01
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Parameter	Result	RL	DF	Qual	Units
Helium	0.0710	0.0100	1		%v

SVP-3	12-01-1080-5-A	01/18/12 09:00	Air	GC 55	N/A	01/19/12 13:50	120119L01
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Parameter	Result	RL	DF	Qual	Units
Helium	0.686	0.0100	1		%v

SVP-4	12-01-1080-6-A	01/18/12 08:41	Air	GC 55	N/A	01/19/12 14:11	120119L01
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Parameter	Result	RL	DF	Qual	Units
Helium	1.29	0.0100	1		%v

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

Analytical Report



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

Date Received: 01/19/12
 Work Order No: 12-01-1080
 Preparation: N/A
 Method: ASTM D-1946 (M)

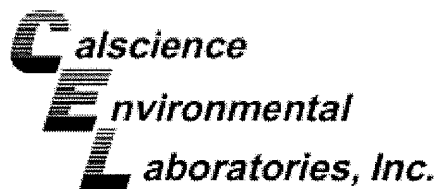
Project: 500 40th Street, Oakland, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-872-216	N/A	Air	GC 55	N/A	01/19/12 11:04	120119L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Helium	ND	0.0100	1		%v
Hydrogen	ND	0.0100	1		%v

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



Analytical Report



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

Date Received: 01/19/12
Work Order No: 12-01-1080
Preparation: N/A
Method: EPA 8260B (M)
Units: ug/L

Project: 500 40th Street, Oakland, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1-5.0	12-01-1080-2-A	01/18/12 08:01	Air	GC/MS II	N/A	01/20/12 01:25	120119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.032	2		Ethylbenzene	0.12	0.043	2	
Toluene	ND	0.038	2		Xylenes (total)	0.12	0.087	2	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	133	47-156			1,2-Dichloroethane-d4	98	47-156		
Toluene-d8	36	47-156	1,2,6						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2-2.5	12-01-1080-3-A	01/18/12 06:46	Air	GC/MS II	N/A	01/20/12 15:06	120120L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.080	5		Ethylbenzene	0.16	0.11	5	
Toluene	ND	0.094	5		Xylenes (total)	ND	0.22	5	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	182	47-156	1,2,7		1,2-Dichloroethane-d4	94	47-156		
Toluene-d8	38	47-156	1,2,6						

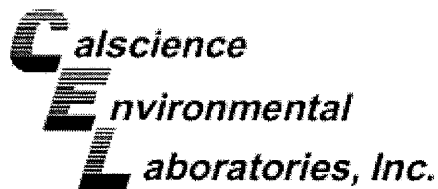
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2-5.0	12-01-1080-4-A	01/18/12 07:15	Air	GC/MS II	N/A	01/20/12 15:57	120120L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	4.0	250		Ethylbenzene	13	5.4	250	
Toluene	ND	4.7	250		Xylenes (total)	ND	11	250	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	175	47-156	1,2,7		1,2-Dichloroethane-d4	93	47-156		
Toluene-d8	34	47-156	1,2,6						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-3	12-01-1080-5-A	01/18/12 09:00	Air	GC/MS II	N/A	01/19/12 22:44	120119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.016	1		Ethylbenzene	0.038	0.022	1	
Toluene	ND	0.019	1		Xylenes (total)	0.047	0.043	1	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	94	47-156			1,2-Dichloroethane-d4	95	47-156		
Toluene-d8	90	47-156							

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



Analytical Report



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

Date Received: 01/19/12
Work Order No: 12-01-1080
Preparation: N/A
Method: EPA 8260B (M)
Units: ug/L

Project: 500 40th Street, Oakland, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-4	12-01-1080-6-A	01/18/12 08:41	Air	GC/MS II	N/A	01/19/12 23:35	120119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.016	1		Ethylbenzene	0.063	0.022	1	
Toluene	ND	0.019	1		Xylenes (total)	0.094	0.043	1	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	101	47-156			1,2-Dichloroethane-d4	95	47-156		
Toluene-d8	92	47-156							

Method Blank	099-13-041-763	N/A	Air	GC/MS II	N/A	01/19/12 13:02	120119L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.016	1		Ethylbenzene	ND	0.022	1	
Toluene	ND	0.019	1		Xylenes (total)	ND	0.043	1	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	102	47-156			1,2-Dichloroethane-d4	99	47-156		
Toluene-d8	96	47-156							

Method Blank	099-13-041-764	N/A	Air	GC/MS II	N/A	01/20/12 13:29	120120L01
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Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.016	1		Ethylbenzene	ND	0.022	1	
Toluene	ND	0.019	1		Xylenes (total)	ND	0.043	1	
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	96	47-156			1,2-Dichloroethane-d4	99	47-156		
Toluene-d8	97	47-156							

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

Analytical Report



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

Date Received: 01/19/12
 Work Order No: 12-01-1080
 Preparation: N/A
 Method: EPA TO-3M

Project: 500 40th Street, Oakland, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1-2.5	12-01-1080-1-A	01/18/12 07:50	Air	GC 19	N/A	01/19/12 14:05	120119L01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	28	3.8	1		ug/L

SVP-1-5.0	12-01-1080-2-A	01/18/12 08:01	Air	GC 19	N/A	01/19/12 14:47	120119L01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	150	3.8	1		ug/L

SVP-2-2.5	12-01-1080-3-A	01/18/12 06:46	Air	GC 19	N/A	01/19/12 15:24	120119L01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	450	3.8	1		ug/L

SVP-2-5.0	12-01-1080-4-A	01/18/12 07:15	Air	GC 19	N/A	01/19/12 17:14	120119L01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	48000	380	100		ug/L

SVP-3	12-01-1080-5-A	01/18/12 09:00	Air	GC 19	N/A	01/19/12 16:00	120119L01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	3.8	1		ug/L

SVP-4	12-01-1080-6-A	01/18/12 08:41	Air	GC 19	N/A	01/19/12 16:37	120119L01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	3.8	1		ug/L

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

Analytical Report



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

Date Received: 01/19/12
 Work Order No: 12-01-1080
 Preparation: N/A
 Method: EPA TO-3M

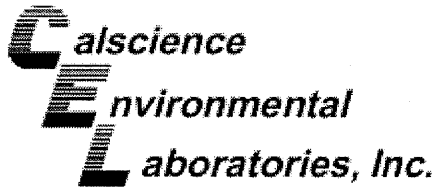
Project: 500 40th Street, Oakland, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-431-36	N/A	Air	GC 19	N/A	01/19/12 12:46	120119L01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	3.8	1		ug/L

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



Quality Control - Duplicate



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

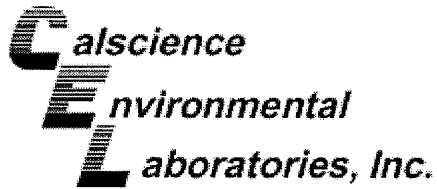
Date Received: 01/19/12
 Work Order No: 12-01-1080
 Preparation: N/A
 Method: EPA TO-3M

Project: 500 40th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
SVP-2-5.0	Air	GC 19	N/A	01/19/12	120119D01

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	47720	46370	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

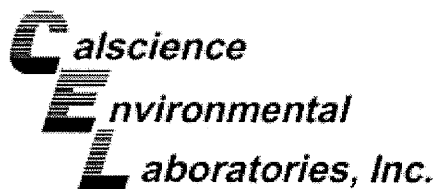
Date Received: N/A
Work Order No: 12-01-1080
Preparation: N/A
Method: ASTM D-1946

Project: 500 40th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-03-002-1,476	Air	GC 36	N/A	01/19/12	120119L01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Methane	10.12	96	96	80-120	0	0-30	
Carbon Dioxide	10.07	103	102	80-120	1	0-30	
Carbon Monoxide	9.930	102	101	80-120	0	0-30	
Oxygen + Argon	3.500	92	91	80-120	0	0-30	
Nitrogen	10.02	88	88	80-120	0	0-30	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

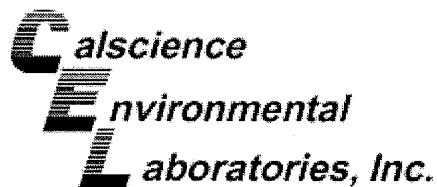
Date Received: N/A
Work Order No: 12-01-1080
Preparation: N/A
Method: ASTM D-1946 (M)

Project: 500 40th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-872-216	Air	GC 55	N/A	01/19/12	120119L01

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Helium	1.000	92	90	80-120	3	0-30	
Hydrogen	1.000	88	86	80-120	3	0-30	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

Date Received: N/A
Work Order No: 12-01-1080
Preparation: N/A
Method: EPA 8260B (M)

Project: 500 40th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-13-041-763	Air	GC/MS II	N/A	01/19/12	120119L01			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.07987	99	99	60-156	44-172	1	0-40	
Toluene	0.09421	99	100	56-146	41-161	1	0-43	
Ethylbenzene	0.1086	103	103	52-154	35-171	0	0-38	
Xylenes (total)	0.3257	100	101	42-156	23-175	0	0-41	
Methyl-t-Butyl Ether (MTBE)	0.09013	101	104	45-147	28-164	2	0-25	
Tert-Butyl Alcohol (TBA)	0.1516	102	105	60-140	47-153	3	0-35	
Diisopropyl Ether (DIPE)	0.1045	90	91	60-140	47-153	2	0-35	
Ethyl-t-Butyl Ether (ETBE)	0.1045	102	105	60-140	47-153	3	0-35	
Tert-Amyl-Methyl Ether (TAME)	0.1045	102	104	60-140	47-153	1	0-35	
Naphthalene	0.1311	121	121	60-140	47-153	0	0-30	
Ethanol	0.1884	105	106	47-137	32-152	1	0-35	
1,1-Difluoroethane	0.06754	101	101	78-156	65-169	0	0-35	
Isopropanol	0.06145	101	102	78-156	65-169	2	0-35	

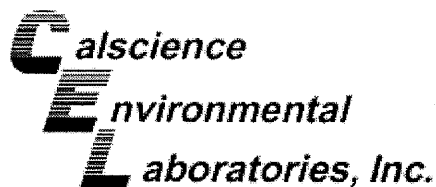
Total number of LCS compounds : 13

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



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

Date Received: N/A
Work Order No: 12-01-1080
Preparation: N/A
Method: EPA 8260B (M)

Project: 500 40th Street, Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-13-041-764	Air	GC/MS II	N/A	01/20/12	120120L01			
Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	0.07987	96	99	60-156	44-172	3	0-40	
Toluene	0.09421	95	98	56-146	41-161	3	0-43	
Ethylbenzene	0.1086	100	102	52-154	35-171	2	0-38	
Xylenes (total)	0.3257	97	98	42-156	23-175	2	0-41	
Methyl-t-Butyl Ether (MTBE)	0.09013	105	104	45-147	28-164	0	0-25	
Tert-Butyl Alcohol (TBA)	0.1516	105	104	60-140	47-153	1	0-35	
Diisopropyl Ether (DIPE)	0.1045	89	90	60-140	47-153	2	0-35	
Ethyl-t-Butyl Ether (ETBE)	0.1045	105	104	60-140	47-153	1	0-35	
Tert-Amyl-Methyl Ether (TAME)	0.1045	105	105	60-140	47-153	0	0-35	
Naphthalene	0.1311	118	122	60-140	47-153	3	0-30	
Ethanol	0.1884	99	102	47-137	32-152	3	0-35	
1,1-Difluoroethane	0.06754	96	100	78-156	65-169	4	0-35	
Isopropanol	0.06145	98	99	78-156	65-169	1	0-35	

Total number of LCS compounds : 13

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit



Work Order Number: 12-01-1080

<u>Qualifier</u>	<u>Definition</u>
*	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.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (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.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
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. All QC results are reported on a wet weight basis.
 MPN - Most Probable Number

A handwritten signature in black ink, appearing to be "M. J. ...".

LAB (LOCATION)

- CALSCIENCE ()
- SPL ()
- XENCO ()
- TEST AMERICA ()
- OTHER ()



Shell Oil Products Chain Of Custody Record

Please Check Appropriate Box:

<input type="checkbox"/> ENV. SERVICES	<input type="checkbox"/> MOTIVA RETAIL	<input type="checkbox"/> SHELL RETAIL
<input type="checkbox"/> MOTIVA SD&CM	<input type="checkbox"/> CONSULTANT	<input type="checkbox"/> LUBES
<input type="checkbox"/> SHELL PIPELINE	<input type="checkbox"/> OTHER _____	

Print Bill To Contact Name: **Peter Schaefer 241513**

INCIDENT # (ENV SERVICES) _____

PO # _____ SAP # _____

DATE: 2/12/2010

PAGE: 1 of 1

SAMPLING COMPANY: **Conestoga-Rovers & Associates**

LOG CODE: **CRAW**

ADDRESS: **5900 Hollis Street, Suite A, Emeryville, CA 94608**

SITE ADDRESS: Street and City: **500 40TH Street, Oakland**

State: **CA** GLOBAL ID NO.: **T0600101285**

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

PHONE NO.: **510-420-3343** E-MAIL: **shell.em.edf@croworld.com** CONSULTANT PROJECT NO.: **241513-95-11.05**

PROJECT CONTACT (Hardcopy or PDF Report to): **Peter Schaefer**

TELEPHONE: **510-420-3319** FAX: **510-420-9170** E-MAIL: **pschaefer@croworld.com**

SAMPLER NAME(S) (Print): **Cristina Arganbright**

LAB USE ONLY: **12-01-1080**

TURNAROUND TIME (CALENDAR DAYS):

STANDARD (14 DAY) 5 DAYS 3 DAYS 2 DAYS 24 HOURS RESULTS NEEDED ON WEEKEND

LA - RWQCB REPORT FORMAT UST AGENCY:

REQUESTED ANALYSIS

SPECIAL INSTRUCTIONS OR NOTES:

Copy final report to Shell.Lab.Billing@croworld.com

Report results in $\mu\text{g}/\text{m}^3$

SHELL CONTRACT RATE APPLIES

STATE REIMBURSEMENT RATE APPLIES

EDD NOT NEEDED

RECEIPT VERIFICATION REQUESTED

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	PRESERVATIVE					TPH -GRO, Purgeable C6-C12 (8260B)	TPH -DRO, Extractable (8015M)	TPH9 (8015M)	BTEX (8260B)	BTEX + MTBE (8260B)	BTEX + MTBE + TBA (10-15)	BTEX + 5 OXYs (MTBE, TBA, DIPE, TAME, ETBE) (8260B)	Full VOC list (8260B)	Single Compound: _____ (8260B)	1,2-DCA (8260B)	EDB (8260B)	Ethanol (8260B)	CH4 ASTM D 1946	Argon ASTM D 1946	O2 ASTM D 1946	Helium ASTM D 1946 (H)	CO2 ASTM D 1946	TEMPERATURE ON RECEIPT C°	Container PID Readings or Laboratory Notes
		DATE	TIME			HCL	HNO3	H2SO4	NONE	OTHER																			
1	SVP-1-3'	1/18	0730	Vapor	1						X			X									X	X	X	X	X		
2	SVP-1-5'	1/18	0801	Vapor	1						X			X									X	X	X	X	X		
3	SVP-2-3'	1/18	0646	Vapor	1						X			X									X	X	X	X	X		
4	SVP-2-5'	1/18	0715	Vapor	4						X			X									X	X	X	X	X		
5	SVP-3	1/18	0800	Vapor	1						X			X									X	X	X	X	X		
6	SVP-4	1/18	0841	Vapor	1						X			X									X	X	X	X	X		

Relinquished by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Date: 1/18/12	Time: 1400
Relinquished by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Date: 1/18/12	Time: 1730
Relinquished by (Signature): <i>[Signature]</i>	Received by (Signature): <i>[Signature]</i>	Date: 1/19/12	Time: 0745

		< WebShip > > > > 800-322-5555 www.gso.com	
Ship From: ALAN KEMP CAL SCIENCE- CONCORD 5063 COMMERCIAL CIRCLE #H CONCORD, CA 94520		Tracking #: 518264311 	NPS 1080
Ship To: SAMPLE RECEIVING CEL 7440 LINCOLN WAY GARDEN GROVE, CA 92841		<h1>ORC</h1> <h1>A</h1> <h2>GARDEN GROVE</h2>	
COD: \$0.00		<h1>D92841A</h1>	
Reference: CRA		 97836173	
Delivery Instructions:		Print Date : 01/18/12 14:07 PM	
Signature Type: SIGNATURE REQUIRED			

Package 1 of 1

Send Label To Printer	<input checked="" type="checkbox"/> 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.

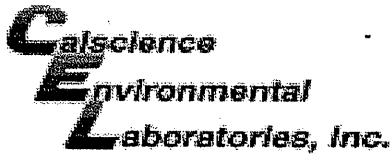
ADDITIONAL OPTIONS:

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.



WORK ORDER #: 12-01-1080

SAMPLE RECEIPT FORM

Box 1 of 1

CLIENT: CRA

DATE: 01/19/12

TEMPERATURE: Thermometer ID: SC3 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature _____ °C - 0.3 °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 Initial: WB

CUSTODY SEALS INTACT:

Box _____ No (Not Intact) Not Present N/A Initial: WB

Sample _____ No (Not Intact) Not Present Initial: N

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

CONTAINER TYPE:

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

Water: VOA VOAh VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

250PB 250PBn 125PB 125PBz_{na} 100PJ 100PJna₂ _____ _____ _____

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

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

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered **Scanned by:** WB

From: Schaefer, Peter
To: Xuan Dang;
Subject: RE: 500 40th Street, Oakland, CA / CEL 11-12-0013 & CEL 12-01-1080
Date: Friday, March 23, 2012 7:03:10 AM

Xuan,

I would like to have these reports reissued with the sample IDs for SVP-1 and SVP-2 modified as follows:

- Change SVP-1-3' to SVP-1-2.5,
- Change SVP-1-5' to SVP-1-5.0,
- Change SVP-2-3' to SVP-2-2.5, and
- Change SVP-2-5' to SVP-2-5.0.

Do I need to send you revised COCs? Thank you for your help.

Regards,

Peter Schaefer
(510) 420-3319

From: Xuan Dang [mailto:xdang@calscience.com]
Sent: Monday, January 30, 2012 6:02 PM
To: Schaefer, Peter
Cc: Carter, Brenda; Shell Lab Billing
Subject: 500 40th Street, Oakland, CA / CEL 12-01-1080

Please call if you have questions or need further information.

Best Regards,

Xuan Dang
Project Manager
Calscience Environmental Laboratories, Inc.
7440 Lincoln Way
Garden Grove, CA 92841-1427
Phone: 714-895-5494 x229
Fax: 714-894-7501
xdang@calscience.com