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То:	Jerry V	Vickham					RECEIVED
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Completed	d by: _	Peter Scha	efer		Signed: _	Poli	Schol
Filing: C	orrespo	ndence File					



Mr. Jerry Wickham Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 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

Subject:

2301-2307 Lincoln Avenue

Alameda, California SAP Code 165255 Incident No. 97767044 Agency No. RO0002971

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,

Denis L. Brown Project Manager



## SUBSURFACE INVESTIGATION REPORT

FORMER SHELL SERVICE STATION 2301-2307 LINCOLN AVENUE ALAMEDA, CALIFORNIA

SAP CODE

165255

INCIDENT NO.

97767044

AGENCY NO.

RO0002971

1000027/1

APRIL 9, 2009
REF. NO. 060204 (3)
This report is printed on recycled paper.

Prepared by: Conestoga-Rovers & Associates

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#### 1.0 <u>INTRODUCTION</u>

Conestoga-Rovers & Associates (CRA) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to document the recent subsurface investigation at this site. The purpose of the investigation was to further assess the horizontal and vertical extent of petroleum hydrocarbons in soil and groundwater, and to assess the potential for soil gas migration to indoor air. CRA followed the scope of work and procedures presented in CRA's September 4, 2008 work plan which was approved by Alameda County Health Care Services Agency (ACHCSA) in their November 7, 2008 letter.

Due to interference with underground utilities, two of the proposed wells (MW-9 and MW-10) and one of the proposed soil borings (B-6) could not be safely installed. In addition, during the soil vapor sampling event, SVP-4 could not be sampled due to a blockage in the well construction.

The site is a former Shell service station located at the northeastern corner of Lincoln Avenue and Oak Street in Alameda, California (Figure 1). The area surrounding the site is mixed commercial and residential. The current site layout (Figure 2) includes a parking lot and commercial building housing a convenience store, a cleaners (not a dry cleaner), and a laundromat. The former service station layout included a station building, two dispenser islands, and seven fuel underground storage tanks (USTs). According to the Alameda Fire Department, the seven USTs were removed from the site in June 1982.

A summary of previous work performed at the site and additional background information is contained in Appendix A.

#### 2.0 EXECUTIVE SUMMARY

- Five groundwater monitoring wells (MW-4, MW-5, MW-6, MW-7, and MW-8) were installed. Proposed wells MW-9 and MW-10 could not be safely installed due to interference with underground utilities at the proposed locations.
- Three soil borings (B-5, B-7, and B-8) were drilled to collect shallow soil samples and shallow groundwater grab samples. Proposed boring B-6 could not be safely drilled due to interference with underground utilities at the proposed location.
- Five soil vapor probes (SVP-1 through SVP-5) were installed. Soil vapor probe SVP-4 could not be sampled due to an unknown blockage in the well construction.
- No benzene, toluene, or MTBE were detected in soil samples collected during this investigation. Only the TPHg (7,900 mg/kg), ethylbenzene (120 mg/kg), and total xylenes (150 mg/kg) detections in sample B-8-8.5' exceed the ESLs.
- TPHg, benzene, ethylbenzene, and xylenes were detected in grab groundwater samples collected from some of the borings. Only TPHg (up to 470 µg/l) exceeded the ESL in two samples; no other constituents of concern exceeded ESLs. MTBE was not detected in grab groundwater.
- Soil vapor samples from soil vapor probe SVP-5 contained concentrations of TPHg (up to  $11,000,000 \, \mu g/m^3$ ), benzene (up to  $12,000 \, \mu g/m^3$ ), and ethylbenzene (up to  $23,000 \, \mu g/m^3$ ), which exceed ESLs. TPHg and BTEX concentrations in soil vapor samples collected from the other three soil vapor probes (SVP-1, SVP-2, and SVP-3) were all below ESLs. MTBE was not detected in soil vapor.

#### 3.0 WELL INSTALLATION

#### 3.1 PERMIT

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

#### 3.2 FIELD DATES

February 17 through February 25, 2009.

#### 3.3 **DRILLING COMPANY**

Gregg Drilling & Testing, Inc.

#### 3.4 PERSONNEL PRESENT

Geologist Erin Reinhart-Koylu directed the drilling activities under the supervision of California Professional Geologist Peter Schaefer.

#### 3.5 <u>DRILLING METHOD</u>

Geoprobe®, hydropunch, and hollow-stem auger.

#### 3.6 <u>NUMBER OF BORINGS</u>

Five soil borings were drilled and converted to wells (MW-4, MW-5, MW-6, MW-7, and MW-8). Proposed wells MW-9 and MW-10 could not be safely installed due to interference with underground utilities at the proposed locations.

The well specifications and soil types encountered are described on the boring logs contained in Appendix C. The well locations are shown on Figure 2.

#### 3.7 BORING DEPTHS

34 feet below grade (fbg) with Geoprobe® and hydropunch. Each well boring was then backfilled with bentonite to 18 fbg and over-drilled with hollow-stem augers to 18 fbg.

#### 3.8 GROUNDWATER DEPTH

Groundwater was first-encountered at 9 to 10 fbg.

#### 3.9 WASTE DISPOSAL

Soil, asphalt, water-knife sludge, and rinsate generated during field activities were stored on site in 55-gallon drums, sampled, and profiled for disposal. Waste disposal confirmation documentation is pending and will be provided by CRA upon request.

#### 4.0 **SOIL BORINGS**

#### 4.1 PERMIT

CRA obtained a drilling permit from ACPWA (Appendix B).

#### 4.2 FIELD DATE

February 27, 2009.

#### 4.3 **DRILLING COMPANY**

Gregg Drilling & Testing, Inc.

#### 4.4 PERSONNEL PRESENT

Geologist Erin Reinhart-Koylu directed the drilling activities under the supervision of California Professional Geologist Peter Schaefer.

#### 4.5 **DRILLING METHOD**

Geoprobe® and hydropunch.

#### 4.6 <u>NUMBER OF BORINGS</u>

Three soil borings (B-5, B-7, and B-8) were drilled for shallow soil and grab-groundwater sampling. Proposed boring B-6 could not be safely drilled due to interference with underground utilities at the proposed locations.

The soil types encountered are described on the boring logs contained in Appendix C. The boring locations are shown on Figure 2.

#### 4.7 BORING DEPTHS

13 fbg.

#### 4.8 GROUNDWATER DEPTH

Groundwater was first-encountered at 9 fbg.

#### 4.9 <u>WASTE DISPOSAL</u>

Soil, asphalt, water-knife sludge, and rinsate generated during field activities were stored on site in 55-gallon drums, sampled, and profiled for disposal. Waste disposal confirmation documentation is pending and will be provided by CRA upon request.

#### 5.0 SOIL VAPOR PROBE INSTALLATION AND SAMPLING

#### 5.1 PERMIT

CRA obtained a drilling permit from ACPWA (Appendix B).

#### 5.2 FIELD DATES

February 18 and February 19, 2009.

#### 5.3 **DRILING COMPANY**

Gregg Drilling & Testing, Inc.

#### 5.4 PERSONNEL PRESENT

Geologist Erin Reinhart-Koylu directed the probe installation working under the supervision of California Professional Geologist Peter Schaefer.

#### 5.5 **DRILLING METHOD**

Air-knife.

#### 5.6 NUMBER OF PROBES

CRA installed five soil vapor probes (SVP-1 through SVP-5). The probe specifications and soil types encountered are described on the boring logs contained in Appendix C. The probe locations are shown on Figure 2.

#### 5.7 <u>VAPOR POINT MATERIALS</u>

The vapor probes were constructed using  $\frac{1}{4}$ -inch diameter Teflon tubing attached to 1-inch length plastic screen intervals, and  $\frac{42}{12}$  Monterey sand filter pack. Probe diagrams are provided with boring logs in Appendix C.

#### 5.8 <u>SCREENED INTERVALS</u>

4.9 to 5.0 fbg.

#### 5.9 SOIL VAPOR SAMPLING

Due to weather conditions, soil vapor sampling was postponed until March 11, 2009. Soil vapor probe SVP-4 could not be sampled due to an unknown blockage in the well construction.

#### 5.9.1 SOIL VAPOR SAMPLING PROCEDURE

Soil vapor sampling and leak testing were performed following Department of Toxic Substances Control's January 28, 2003 *Advisory-Active Soil Gas Investigation* guidelines. Paper towels with shaving cream were placed at sample system connections for the leak test.

Purging and sampling of the probes were conducted at a rate of approximately 200 milliliters per minute (ml/min). Vapor samples were collected in 1-liter Summa<sup>TM</sup> canisters after removing approximately three purge volumes from the screen interval. Each sample was labeled, documented on a chain-of-custody, and submitted to Calscience Environmental Laboratories, Inc. of Garden Grove, California for analysis.

#### 5.9.2 SOIL VAPOR SAMPLING ANALYSES

Soil vapor samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by EPA Method TO-3 (modified) and benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tertiary-butyl ether (MTBE), and tracer compounds isobutane, butane, and propane (as tentatively identified compounds) by modified EPA Method TO-15. These tracer compounds were identified by EPA Method TO-15 as the most abundant compounds of the specific shaving cream analyzed and indicated by distinctive peaks on the petroleum hydrocarbon chromatograph, separate from TPH in the gasoline range.

#### 5.10 WASTE DISPOSAL

Soil, asphalt, water-knife sludge, and rinsate generated during field activities were stored on site, in 55-gallon drums, sampled, and profiled for disposal. Waste disposal confirmation documentation is pending and will be provided by CRA upon request.

#### 6.0 **FINDINGS**

#### 6.1 SOIL

The soil chemical analytical data are summarized in Table 1, and TPHg and benzene analytical results are presented on Figure 3. Laboratory analytical reports are presented in Appendix D.

#### 6.2 **GROUNDWATER**

The groundwater grab sample chemical analytical data are summarized in Table 2, and TPHg and benzene analytical results are presented on Figure 4. Laboratory analytical reports are presented in Appendix D.

The new wells were developed on March 16, and site wells were sampled per the existing protocol on March 27, 2009. These results will be submitted to ACHCSA under separate cover.

#### 6.3 <u>SOIL VAPOR</u>

The soil vapor chemical analytical data are summarized in Table 3, and TPHg and benzene analytical results are presented on Figure 5. Laboratory analytical reports are presented in Appendix D.

#### 6.3.1 <u>LEAK TESTING</u>

Leak testing was performed during sampling using shaving cream to determine if ambient air was entering the Summa<sup>TM</sup> canisters during sampling. Isobutane was detected in the sample from SVP-1. The concentration reported was 110 micrograms per cubic meter ( $\mu g/m^3$ ), an amount considered negligible when compared with the amount in the tracer gas compound (approximately 350,000  $\mu g/m^3$  in shaving cream). No other tracer gas constituents were detected.

#### 7.0 <u>CONCLUSIONS</u>

No benzene, toluene, or MTBE were detected in soil samples collected during this investigation. Only the TPHg (7,900 milligrams per kilogram [mg/kg]), ethylbenzene (120 mg/kg), and total xylenes (150 mg/kg) detections in sampleB-8-8.5' exceed the San Francisco Bay Regional Water Quality Control Board's (RWQCB's) environmental screening levels (ESLs) for shallow soil where groundwater is not a source of drinking water. Based on the grab groundwater data from the same boring, discussed below, these soil concentrations do not appear to be affecting groundwater.

Groundwater grab samples from shallow groundwater (9 to 13 fbg) contained a single concentration of TPHg (240 micrograms per liter  $[\mu g/l]$  in sample B-7 [GW9-13']) which exceeds ESLs. The RWQCB guidance¹ 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 no BTEX concentrations exceed ESLs in shallow groundwater.

Grab groundwater samples from deeper groundwater (31 to 34 fbg) contained a single TPHg concentration (470  $\mu$ g/l in sample MW-4[GW@31-34']), which exceeds the ESL for groundwater where groundwater is not a source of drinking water. As stated above, the detection of TPHg without BTEX likely does not present a health risk, and the five deeper groundwater grab samples adequately define the vertical extent of impacted groundwater.

Soil vapor samples from soil vapor probe SVP-5 contained concentrations of TPHg (up to  $11,000,000\,\mu g/m^3$ ), benzene (up to  $12,000\,\mu g/m^3$ ), and ethylbenzene (up to  $23,000\,\mu g/m^3$ ) which exceed ESLs. TPHg and BTEX concentrations in soil vapor samples collected from the other three soil vapor probes (SVP-1, SVP-2, and SVP-3) were all below ESLs. Since two of the other soil vapor probes (SVP-2 and SVP-3) are closer to the existing building and in the area of SVP-5, it is unlikely that the soil vapor concentrations are affecting indoor air. Soil vapor p¹robe SVP-4 could not be sampled due to a blockage.

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

#### 8.0 **RECOMMENDATIONS**

Concentrations of TPHg, ethylbenzene, and xylenes detected in soil sample B-8-8.5' (without measurable benzene) are similar to results from previous investigations (samples MW-1-8.5 and EB-1-10.5). Comparison of these soil data with available groundwater data indicates that soil and groundwater impacts are not well correlated, suggesting that impacted soil does not pose a significant risk to groundwater. With current site use, these soils do not present a human health risk through direct exposure. Therefore, no additional soil investigation is recommended.

Results from shallow groundwater grab samples collected from borings B-5, B-7, and B-8 suggest that no additional monitoring wells are warranted in this area, as discussed above. In order to more fully characterize groundwater conditions at the site, CRA recommends conducting a groundwater monitoring program including all eight site wells for at least a full hydrologic cycle (approximately one year). We propose sampling the wells quarterly and analyzing the samples for TPHg and BTEX by EPA Method 8260B. We are not recommending fuel oxygenate analyses because they have not been detected at the site, and the gasoline station operations at the site ceased prior to the use of MTBE in gasoline.

As discussed above, the five deeper groundwater grab samples adequately define the vertical extent of impacted groundwater. No additional deeper groundwater investigation is recommended.

Based on the initial soil vapor concentrations detected in SVP-5, we recommend re-sampling SVP-5 following the screening technique detailed in Appendix E. We also propose a second attempt at obtaining a sample from soil vapor probe SVP-4.

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

Peter Schaefer, CEG, CHG

Auhrey K. Cool, PG



FIGURES

**Former Shell Service Station** 

2301-2307 Lincoln Avenue Alameda, California



**Vicinity Map** 

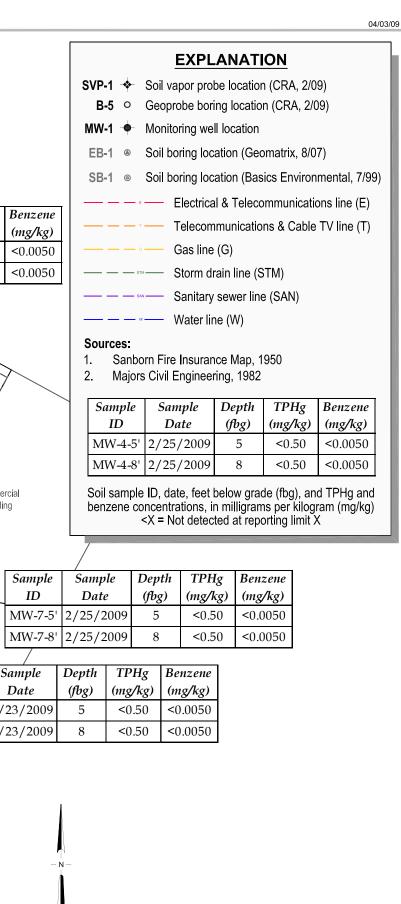
Site Plan

Former Shell Service Station 2301-2307 Lincoln Avenue Alameda, California

Scale (ft)

**EXPLANATION** SVP-1 - Soil vapor probe location (CRA, 2/09) **B-5** • Geoprobe boring location (CRA, 2/09) **MW-1** ◆ Monitoring well location Soil boring location (Geomatrix, 8/07) Soil boring location (Basics Environmental, 7/99) Electrical & Telecommunications line (E) Telecommunications & Cable TV line (T) Former Building (circa 1950) Gas line (G) Storm drain line (STM) 7-11 Store Building Sanitary sewer line (SAN) Former Gasoline & Oil USTs (installed in 1920s) Former Oil Sump (circa 1982)<sup>2</sup> Water line (W) Sources: MW-3 Sanborn Fire Insurance Map, 1950 Former Station Building (circa 1982) Former Building (circa 1950) <sup>1</sup> Majors Civil Engineering, 1982 Former 76 SVP-1 Station Laundorland MW-5 Building MW-2 SVP-2 MW-6 ♥ SB-6 /MW-1 MW-4 Commercial Building SVP-5 EB-1 MW-7 SVP-3 EB-10 B-8 0 EB-11 EB-5 EB-2 Former Shell Station 2301-2307 Lincoln Avenue EB-3 © EB-4 Former USTs (installed in 1970s) SVP-4 Former Dispensers (circa 1982) <sup>2</sup> MW-8 Alameda County Police Dept. LINCOLN AVENUE Alameda Free Library **FIGURE** 30 60

Basemap modified from drawing provided by Geomatrix



**B-5** • Geoprobe boring location (CRA, 2/09)

**MW-1** ◆ Monitoring well location

#### Sources:

Sample	Sample	Depth	ТРНд	Benzene
ID	Date	(fbg)	(mg/kg)	(mg/kg)
MW-4-5'	2/25/2009	5	<0.50	<0.0050
MW-4-8'	2/25/2009	8	<0.50	<0.0050

Soil sample ID, date, feet below grade (fbg), and TPHg and benzene concentrations, in milligrams per kilogram (mg/kg)

	Former Shell Station		•	n ,	SW				/ I	EB-2		$\swarrow$			ID	Date	(fbg	g) (mg/	(kg)
23	301-2307 Lir	coln Avenue			- w	Sidewallk		$\times$	/ ≤/ <b>②</b> EB-4	EB-3	SVP-4 /	/ /	Former USTs		MW-7-5'	2/25/20	)09 5	<0.	50
			F	Former Dispens (circa 1982)		"	7				MW-8		(installed in 1970s	5)	MW-7-8'	2/25/20	)09 8	<0.	50
	,					SAN		<u>\</u>		>		/_							
	Sample	Sample	Depth	ТРНд	Benzene	n_	-7- san		$\sqrt{}$		/ / /		Sa	mple	Sample	Depth	ТРНд	Benzene	?
	ID	Date	(fbg)	(mg/kg)	(mg/kg)				_//	<u> </u>	/ \$ /			ID	Date	(fbg)	(mg/kg)	(mg/kg)	

Sample	Sample	Depth	ТРНд	Benzene	
ID	Date	(fbg)	(mg/kg)	(mg/kg)	
B-5-5.5'	2/27/2009	5.5	< 0.50	<0.0050	
B-5-8.5'	2/27/2009	8.5	<0.50	<0.0050	

Depth

(fbg)

5.5

8.5

Former 76

Station

Sample

Date

2/27/2009

2/27/2009

Sample

ID

B-7-5.5

B-7-8.5'

Alameda County

Police Dept.

**TPHg** 

(mg/kg)

< 0.50

87

Benzene

(mg/kg)

< 0.0050

< 0.50

Former Building

(circa 1950)

MW-1

Sample

ID

MW-5-5

MW-5-81

rmer Gasoline

& Oil USTs

(installed in 1920s)

Sample

Date

2/24/2009

2/24/2009

MW-3

ONTREET

Depth

(fbg)

TPHg

(mg/kg)

< 0.50

< 0.50

SVP-1

MW-2

MW-5/

SB-6

EB-10

Benzene

(mg/kg)

<0.0050

< 0.0050

Sample

MW-6-5'

MW-6-81

Former Oil Sump

(circa 1982)<sup>2</sup>

SVP-2

MW-4

SVP-5

EB-5

**\*a**o/

MW-7

Former Building

7-11 Store Building

MW-6

Sample

Date

2/26/2009

2/26/2009

Sample

ID

MW-4-5

MW-4-81

Former Station

Depth

(fbg)

5

Sample

Date

2/25/2009

2/25/2009

Laundorland

Building

SVP-3

TPHg

(mg/kg)

< 0.50

< 0.50

Depth

(fbg)

5

Benzene

(mg/kg)

< 0.0050

< 0.0050

ТРНд

(mg/kg)

< 0.50

< 0.50

Commercial Building

MW-8-5

MW-8-8'

2/23/2009

2/23/2009

5

8

Benzene

(mg/kg)

< 0.0050

< 0.0050

**TPHg** Benzene Sample Sample Depth ID Date (fbg) (mg/kg) (mg/kg) B-8-5.5 2/27/2009 5.5 < 0.50 < 0.0050 B-8-8.51 2/27/2009 8.5 7,900 <20

LINCOLN AVENUE

30

60

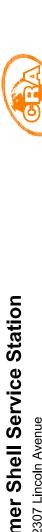
Scale (ft)

Alameda Free Library

Basemap modified from drawing provided by Geomatrix

**FIGURE** 

2301-2307 Lincoln Avenue Alameda, California



**EXPLANATION SVP-1** Soil vapor probe location (CRA, 2/09) Geoprobe boring location (CRA, 2/09) Monitoring well location Soil boring location (Geomatrix, 8/07) Soil boring location (Basics Environmental, 7/99)

Electrical & Telecommunications line (E)

Telecommunications & Cable TV line (T)

Gas line (G) Storm drain line (STM)

Sanitary sewer line (SAN)

Water line (W)

#### Sources:

TPHg Benzene

 $(\mu g/l)$ 

< 0.50

 $(\mu g/l)$ 

470

TPHg Benzene

 $(\mu g/l)$ 

2.0

 $(\mu g/l)$ 

< 50

Date

2/25/2009

Date

Laundorland

Building

Sample ID

Former Station

MW-6 (GW@31-34') 2/26/2009

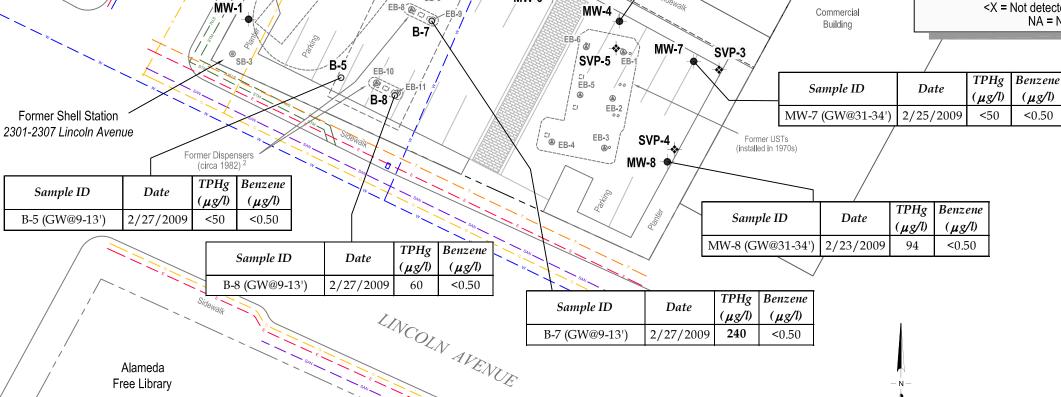
Sample ID

MW-4 (GW@31-34')

- Sanborn Fire Insurance Map, 1950
- Majors Civil Engineering, 1982

	Sample ID	Date	TPHg (μg/l)	Benzene (µg/l)
	B-5 (GW@9-13')	2/27/2009	<50	< 0.50

Grab groundwater sample ID and date and TPHg and benzene concentrations, in micrograms per liter (µg/l) <X = Not detected at reporting limit X NA = Not analyzed



MW-6

Former Buildin

ormer Oil Sump (circa 1982)<sup>2</sup>

SVP-2

B-7 (GW@9-13')

2/27/2009

240

< 0.50

7-11 Store Building

SVP-1

MW-2

MW-5

SB-6

Former Gasoline 6

installed in 1920s)

Former Building

(circa 1950) 1

Benzene

 $(\mu g/l)$ 

< 0.50

ТРНд

 $(\mu g/l)$ 

< 50

Alameda

Free Library

Basemap modified from drawing provided by Geomatrix

Former 76

Station

MW-5 (GW@31-34') 2/24/2009

Date

Sample ID

Alameda County

Police Dept.

MW-3

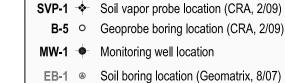
30 60 Scale (ft)

**FIGURE** 

2301-2307 Lincoln Avenue Alameda, California







Soil boring location (Basics Environmental, 7/99)

**EXPLANATION** 

Electrical & Telecommunications line (E)

Telecommunications & Cable TV line (T) Gas line (G)

Storm drain line (STM)

Sanitary sewer line (SAN) Water line (W)

#### Sources:

- Sanborn Fire Insurance Map, 1950
- Majors Civil Engineering, 1982

Sample	Sample	ТРНд	Benzene
ID	Date	$(\mu g/m^3)$	$(\mu g/m^3)$
SVP-1	3/11/2009	<8,900	5.4

Soil vapor sample ID and date and TPHg and benzene concentrations, in micrograms per cubic meter (µg/m³) <X = Not detected at reporting limit X

- L	SB-3	B-5	FB.11		5 VP-5/ E EB-5		* /				
Former Shell Station 1-2307 Lincoln Avenue	SAN		8.00		EB-2			Sample ID	Sample Date	TPHg (μg/m³)	Benzene (µg/m³)
1-2307 LINCOIN AVERIUE	u u	Sidewalk	*	[5]	EB-4 / EB-3 /	SVP-4	Former USTs (installed in 1970s)	SVP-3	3/11/2009	<11,000	5.5
	Former Dispensers (circa 1982) <sup>2</sup>		D 1		7	MW-8					

Sample

ID

SVP-1

Sample

Date

Former Buildin (circa 1950)

7-11 Store Building

3/11/2009

Former Oil Sump (circa 1982)<sup>2</sup>

**TPHg** 

 $(\mu g/m^3)$ 

<8,900

Sample

SVP-2

Benzene

 $(\mu g/m^3)$ 

5.4

Sample

Date

3/11/2009

TPHg

 $(\mu g/m^3)$ 

<9,200

Benzene

 $(\mu g/m^3)$ 

7.3

LINCOLN AVENUE

30

Scale (ft)

60

**FIGURE** 

2301-2307 Lincoln Avenue Alameda, California

MW-3 Former Station Building (circa 1982) Former Building Former 76 SVP-1 Station Laundorland MW-5/ Building MW-2 SVP-2 MW-6 ♥ SB-6 MW-4 Commercial Building MW-7 SVP-3 For 2301-2 ТРНд Benzene Sample Sample Alameda County ID Date  $(\mu g/m^3)$ Police Dept. (μg/m³) 10,000,000 11,000 SVP-5 3/11/2009

Former Gasoline & Oil USTs (installed in 1920s)

Alameda

Free Library

Basemap modified from drawing provided by Geomatrix

TABLES

**TABLE 1** 

#### SOIL ANALYTICAL DATA FORMER SHELL SERVICE STATION 2301-2307 LINCOLN AVE., ALAMEDA, CALIFORNIA

Sample ID	Date	Depth (fbg)	ТРНд	Benzene	Toluene	Ethyl- benzene	Total Xylenes	МТВЕ
B-5-5.5'	2/27/2009	5.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-5-8.5'	2/27/2009	8.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-7-5.5'	2/27/2009	5.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-7-8.5'	2/27/2009	8.5	87	<0.50	<0.50	<0.50	<0.50	<0.50
B-8-5.5'	2/27/2009	5.5	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-8-8.5'	2/27/2009	8.5	<b>7,900</b>	<20	<20	<b>120</b>	<b>150</b>	<20
MW-4-5'	2/25/2009	5	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-4-8'	2/25/2009	8	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-5-5'	2/24/2009	5	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-5-8'	2/24/2009	8	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-6-5'	2/26/2009	5	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-6-8'	2/26/2009	8	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-7-5'	2/25/2009	5	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-7-8'	2/25/2009	8	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-8-5' MW-8-8' Shallow Soil (≤1	2/23/2009 2/23/2009	5 8	<0.50 <0.50	<0.0050 <0.0050	<0.0050 <0.0050	<0.0050 <0.0050	<0.0050 <0.0050	<0.0050 <0.0050 8:4

#### Notes:

All results in miligrams per kilograms (mg/kg) unless otherwise indicated. All analytes analyzed by EPA Method 8260B.

TPHg = Total petroleum hydrocarbons as gasoline

MTBE = Methyl tertiary-butyl ether

fbg = feet below grade

<x = Not detected at reporting limit x

ESL = Environmental screening level

a = San Francisco Bay Regional Water Quality Control Board commercial/industrial Environmental Screening Level for soil where groundwater is not a source of drinking water (Table B of *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]).

TABLE 2

#### GRAB GROUNDWATER ANALYTICAL DATA FORMER SHELL SERVICE STATION 2301-2307 LINCOLN AVE., ALAMEDA, CALIFORNIA

· Sample ID	Date	Depth (fbg)	трнд	Benzene	Toluene	Ethyl- benzene	Total Xylenes	МТВЕ	
B-5 (GW@9-13')	2/27/2009	9 to 13	<50	<0.50	<1.0	<1.0	<1.0	<1.0	
B-7 (GW@9-13')	2/27/2009	9 to 13	240	<0.50	<1.0	5.6	17	<1.0	
B-8 (GW@9-13')	2/27/2009	9 to 13	60	<0.50	<1.0	2.5	2.6	<1.0	
MW-4 (GW@31-34')	2/25/2009	31 to 34	470	2.0	<1.0	14	16	<1.0	
MW-5 (GW@31-34')	2/24/2009	31 to 34	<50	<0.50	<1.0	<1.0	<1.0	<1.0	
MW-6 (GW@31-34')	2/26/2009	31 to 34	<50	<0.50	<1.0	<1.0	<1.0	<1.0	
MW-7 (GW@31-34')	2/25/2009	31 to 34	<50	<0.50	<1.0	<1.0	<1.0	<1.0	
MW-8 (GW@31-34')	2/23/2009	31 to 34	94	<0.50	<1.0	<1.0	<1.0	<1.0	
Groundwater (≤10 fbg	) ESL ";		210	46	130	43	100	1,800	

#### Notes:

All results in  $\mu$ g/l unless otherwise indicated. All analytes analyzed by EPA Method 8260B.

TPHg = Total petroleum hydrocarbons as gasoline

MTBE = Methyl tertiary-butyl ether

< x =Not detected at reporting limit x

ESL = Environmental screening level

a = San Francisco Bay Regional Water Quality Control Board Environmental Screening Level for groundwater where groundwater is not a source of drinking water (Table B of *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]).

TABLE 3

#### SOIL VAPOR ANALYTICAL DATA FORMER SHELL SERVICE STATION 2301-2307 LINCOLN AVENUE, ALAMEDA, CALIFORNIA

Sample ID	Date	ТРНд	Benzene	Toluene	Ethylbenzene	Total Xylenes	МТВЕ	Butane	Isobutane	Propane
SVP-1	3/11/2009	<8,900	5.4	<2.9	<3.4	<13	<11	<18	110	<42
SVP-2	3/11/2009	<9,200	7.3	<3.0	<3.5	<14	<12	<19	<19	<43
SVP-3	3/11/2009	<11,000	5.5	<3.6	<4.2	<17	<14	<23	<23	<52
SVP-5	3/11/2009	10,000,000	11,000	1,800	21,000	<5,900	<4,900	<8,100	<8,100	<18,000
SVP-5 DUP <sup>a</sup>	3/11/2009	11,000,000	12,000	1,600	23,000	<5,500	<4,500	<7,500	<7,500	<17,000
Residential La	nd Use ESL <sup>b</sup> :	10,000	84	63,000	980	21,000	9,400	NA NA	NA.	NA.
Commercial/In Land Use ESLs		29,000	280	180,000	3,300	58,000	31,000	NA .	NA:	NA.

#### Notes:

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

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

Benzene, toluene, ethylbenzene and total xylenes by modified EPA Method TO-15

MTBE = Methyl tertiary-butyl ether by modified EPA Method TO-15

Butane, isobutane, and propane by modified EPA Method TO-15

< x =Not detected at reporting limit x

ESL = Environmental screening level

NA = No applicable ESL

a = Field duplicate

b = San Francisco Bay Regional Water Quality Control Board ESLs for shallow soil gas (Table E of Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater, California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008])

APPENDIX A

SITE HISTORY

#### SITE HISTORY

1999 Phase II Site Investigation: Basics Environmental (Basics) drilled six borings (SB-1 through SB-6, Figure 2) in the western portion of the site. Single soil samples were collected from all of the borings at 5 or 7.5 feet below grade (fbg) and grab groundwater samples were obtained from five of the borings (all except SB-5). Benzene and methyl tertiary-butyl ether (MTBE) were not detected in any of the samples. Analyses of the soil sample from boring SB-3 at 7.5 fbg showed concentrations of 40 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPHg) and 0.012 mg/kg ethylbenzene. Analyses of the grab groundwater sample from SB-3 showed concentrations of up to 4,500 micrograms per liter (µg/l) TPHg, 4.4 µg/l toluene, ethylbenzene, 10 μg/l n-butylbenzene,  $4.0 \, \mu g/1$ xylenes, sec-butylbenzene, 45 μg/l isopropyl benzene, 60 μg/l n-propylbenzene, and 26 μg/l vinyl acetate. These results were presented in Basics' August 12, 1999 Limited Phase II Environmental Site Investigation report.

**2000** *Site Assessment:* Toxichem Management Systems, Inc. (Toxichem) conducted a site assessment which included a review of Basics' investigation, aerial photographs, Sanborn maps, and agency files. The site assessment is presented in Toxichem's May 1, 2000 *Site Assessment Report*.

2007 Site Investigation: Geomatrix installed three groundwater monitoring wells (MW-1 through MW-3, Figure 2) in the western former underground storage tanks (USTs originally installed in the 1920's) area and drilled ten exploratory borings (EB-1 through EB-6 and EB-8 through EB-11, Figure 2) in the area of the eastern former USTs (USTs originally installed in the 1970's) and fuel dispensers. No toluene, fuel oxygenates, or lead scavengers were detected in any of the soil samples. No petroleum hydrocabons were detected in samples collected from 1.5 to 6.5 fbg. Soil samples collected from 8.5 to 14.0 fbg showed concentrations of up to 1,600 mg/kg TPHg, 0.99 mg/kg benzene, 100 mg/kg ethylbenzene, 1.1 mg/kg xylenes, and 21 µg/kg lead. Sample EB-10-2.0 contained a concentration of 550 mg/kg lead. Grab groundwater samples collected from the wells and exploratory borings EB-1 and EB-4 contained concentrations of up to 7,000 µg/l TPHg, 980 µg/l benzene, 490 µg/l ethylbenzene,  $11 \,\mu\text{g}/1$  toluene, and  $19 \,\mu\text{g}/1$  xylenes. Groundwater was gauged at 8.37 to 9.26 fbg and flow direction was calculated to be to the east-northeast. These results were presented in Geomatrix's December 2007 Subsurface Investigation Summary Report.

APPENDIX B

PERMIT



399 Elmhurst Street Hayward, CA 94544-1395 Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 02/04/2009 By jamesy

Permit Numbers: W2009-0108 to W2009-0120

Permits Valid from 02/17/2009 to 02/27/2009

Application Id:

1233616369739

Site Location:

**Project Start Date:** 

**Property Owner:** 

2301-2307 Lincoln Ave,

City of Project Site: Alameda

Alameda, CA

All work is planned within the strip mall parking area.

02/17/2009

Assigned Inspector:

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

Applicant:

Conestoga-Rovers & Associates - Erin Reinhart

5900 Hollis Street,, Suite A, Emeryville, CA 94508

Shell/ Sabanc Sebanc Trustees

2805 Ralston Ave, Hillsborough, CA 94010

Client:

Shell Shell Oil Products US

20945 S. Wilmington Ave, Carson, CA 90810

Phone: 510-420-3372

Phone: --

Completion Date: 02/27/2009

Phone: --

**Total Due:** 

Receipt Number: WR2009-0042 Total Amount Paid:

\$4370.00

Payer Name: Conestoga-Rovers & Paid By: CHECK

**Associates** 

**Works Requesting Permits:** 

Well Construction-Monitoring-Monitoring - 7 Wells

Driller: Gregg Drilling & Testing - Lic #: 485165 - Method: hstem

Work Total: \$2415.00

#### **Specifications**

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2009- 0108	02/04/2009	05/18/2009	MW-10	10.00 in.	4.00 in.	4.00 ft	34.00 ft
W2009- 0109	02/04/2009	05/18/2009	MW-4	10.00 in.	4.00 in.	4.00 ft	34.00 ft
W2009- 0110	02/04/2009	05/18/2009	MW-5	10.00 in.	4.00 in.	4.00 ft	34.00 ft
W2009- 0111	02/04/2009	05/18/2009	MW-6	10.00 in.	4.00 in.	4.00 ft	34.00 ft
W2009- 0112	02/04/2009	05/18/2009	MW-7	10.00 in.	4.00 in.	4.00 ft	34.00 ft
W2009- 0113	02/04/2009	05/18/2009	MW-8	10.00 in.	4.00 in.	4.00 ft	34.00 ft
W2009- 0114	02/04/2009	05/18/2009	MW-9	10.00 in.	4.00 in.	4.00 ft	34.00 ft

#### **Specific Work Permit Conditions**

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

- 3. 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.
- 4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or 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.
- 5. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
- 6. 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.
- 7. 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.
- 8. Minimum surface seal thickness is two inches of cement grout placed by tremie
- 9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
- 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.

Work Total: \$1725.00

Well Construction-Vapor Monitoring Well-Vapor Monitoring Well - 5 Wells

Driller: Gregg Drilling & Testing - Lic #: 485165 - Method: Hand

Sn	 ifi	^-	4i	on	

Permit #	issued Date	Expire Date	Owner Well	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2009- 0115	02/04/2009	05/18/2009	SVP-1	2.50 in.	0.25 in.	1.50 ft	5.50 ft
W2009- 0116	02/04/2009	05/18/2009	SVP-2	2.50 in.	0.25 in.	1.50 ft	5.50 ft
W2009- 0117	02/04/2009	05/18/2009	SVP-3	2.50 in	0.25 in.	1.50 ft	5.50 ft
W2009- 0118	02/04/2009	05/18/2009	SVP-4	2.50 in.	0.25 in.	1.50 ft	5.50 ft
W2009- 0119	02/04/2009	05/18/2009	SVP-5	2.50 in.	0.25 in.	1.50 ft	5.50 ft

#### **Specific Work Permit Conditions**

- 1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.
- 2. Permitte, 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.
- 3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or 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.
- 4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
- 5. 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.
- 6. 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.
- 7. Minimum surface seal thickness is two inches of cement grout placed by tremie
- 8. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
- 9. 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.

Borehole(s) for Investigation-Environmental/Monitorinig Study - 3 Boreholes

Driller: Gregg Drilling & Testing - Lic #: 485165 - Method: DP Work Total: \$230.00

#### **Specifications**

Permit	Issued Dt	Expire Dt	#	Hole Diam	Max Depth
Number			Boreholes		
W2009-	02/04/2009	05/18/2009	3	2.50 in.	13.50 ft
0120					

#### **Specific Work Permit Conditions**

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

- 2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
- 3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 4. Applicant shall contact 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.
- 5. 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.
- 6. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
- 7. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

APPENDIX C

**BORING LOGS** 

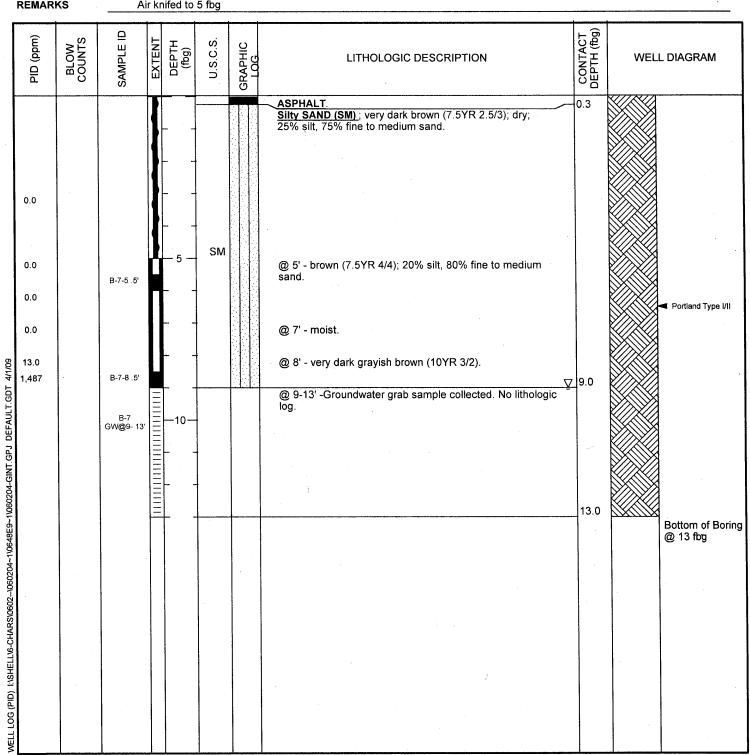


CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	B-5		
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	18-Feb-09		
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED	27-Feb-09		
PROJECT NUMBER	060204	WELL DEVELOPMENT DA	TE (YIELD)	NA	
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEN	ATION _	NA	
DRILLING METHOD	Direct-push	TOP OF CASING ELEVAT	ION _	NA	
BORING DIAMETER	2"	SCREENED INTERVALS		NA	
LOGGED BY	E. Reinhart	DEPTH TO WATER (First	Encountered)	9.00 fbg	$\overline{\Sigma}$
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Statio	;)·	NA	Ţ
		*		•	

REMARI				ifed to	5 fbg		DEPTH TO WATER (Static)		*	
PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL	DIAGRAM
0.0							ASPHALT. Silty SAND with gravel (SM); very dark brown (7.5YR 2.5/3); dry; 20% silt, 60% fine to medium sand, 20% fine gravel.	0.3		
0.0		B-5-5 .5'		- 5 -	SM		<ul> <li>@ 3' - <u>Silty SAND (SM)</u>; 25% silt, 65% fine to medium sand; 10% fine gravel.</li> <li>@ 5' - dark yellowish brown (10YR 4/6); 20% silt, 80% fine to medium sand.</li> </ul>			■ Portland Type I/II
0.0		B-5-8 .5'					@ 7' - moist.  @ 9-13' -Groundwater grab sample collected. No lithologic log.	☑ 9.0		
0.0		B-5 GW@9- 13'		10  				13.0		
										Bottom of Boring @ 13 fbg

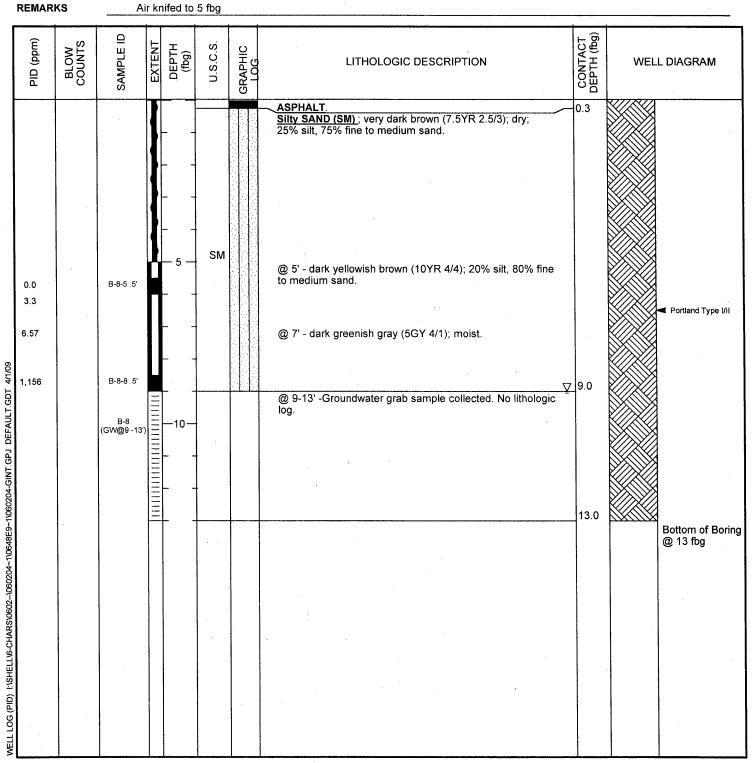


CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	B-7		
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	19-Feb-09		
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED	27-Feb-09		
PROJECT NUMBER	060204	WELL DEVELOPMENT DA	TE (YIELD) _	NA	
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEV	ATION _	NA	
DRILLING METHOD	Direct-push	TOP OF CASING ELEVATI	ON _	NA	
BORING DIAMETER	2"	SCREENED INTERVALS	_	NA	,
LOGGED BY	E. Reinhart	DEPTH TO WATER (First I	Encountered)	9.00 fbg	$\bar{\Delta}$
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static	)	NA	<u> </u>
REMARKS	Air knifed to 5 fbg				•





CLIENT NAME	Shell Oil Products US	BORING/WELL NAME B-8		
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED 18-Feb-09		
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED 27-Feb-09		
PROJECT NUMBER	060204	WELL DEVELOPMENT DATE (YIELD)	NA	
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEVATION	NA	
DRILLING METHOD	Direct-push	TOP OF CASING ELEVATION	NA	
BORING DIAMETER	2"	SCREENED INTERVALS	NA	
LOGGED BY	E. Reinhart	DEPTH TO WATER (First Encountered)	9.00 fbg	$\bar{\Sigma}$
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA	Ţ
	A . 1 . 6 . 1 . 6 . 7 . 6	<del></del>		





**PROJECT NUMBER** 

**DRILLING METHOD** 

**BORING DIAMETER** 

DRILLER

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

Fax: 510-420-9170 **CLIENT NAME** Shell Oil Products US **JOB/SITE NAME** Former Shell Service Station **LOCATION** 2301-2307 Lincoln Avenue, Alameda, CA

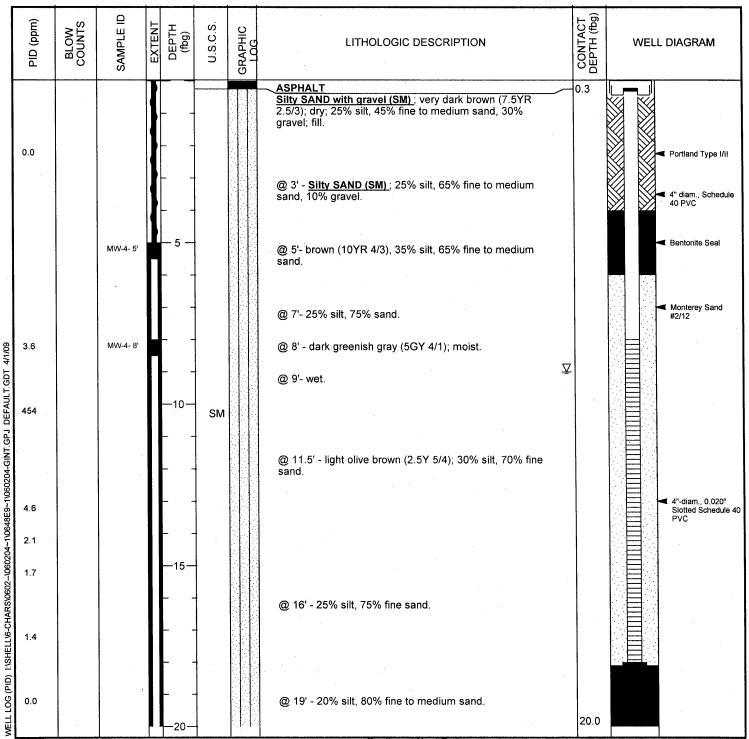
060204 Gregg Drilling, C-57 #485165 Direct-push & hollow-stem auger 10", 2" below 18 fbg.

LOGGED BY E. Reinhart **REVIEWED BY** P. Schaefer **REMARKS** 

Air knifed to 5 fbg

**BORING/WELL NAME** MW-4 17-Feb-09 **DRILLING STARTED** 25-Feb-09 DRILLING COMPLETED NA WELL DEVELOPMENT DATE (YIELD) NA **GROUND SURFACE ELEVATION** TOP OF CASING ELEVATION NA **SCREENED INTERVALS** 8 to 18 fbg

9.00 fbg **DEPTH TO WATER (First Encountered) DEPTH TO WATER (Static)** NA





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

**CLIENT NAME** JOB/SITE NAME

LOCATION

Shell Oil Products US

Former Shell Service Station

2301-2307 Lincoln Avenue, Alameda, CA

**BORING/WELL NAME** 

**DRILLING STARTED** 

DRILLING COMPLETED

MW-4

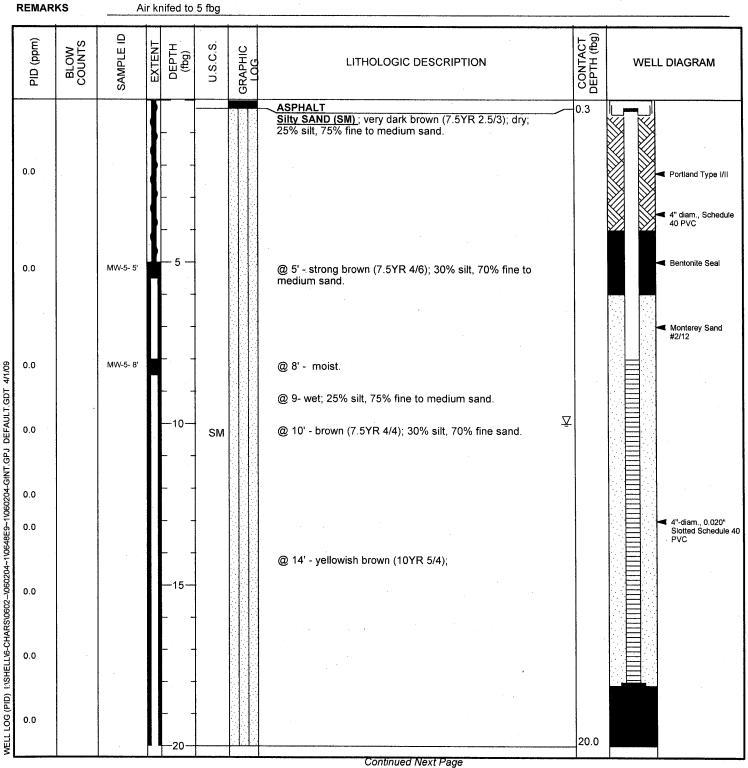
17-Feb-09 25-Feb-09

Continued from Previous Page

PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WEL	L DIAGRAM
0.0							@ 21' - 25% silt, 75% fine to medium sand.			
0.0				25	SM		@ 24' - 20% silt, 80% fine to medium sand.  @ 25' - olive brown (2.5Y 4/3); 20% silt, 80% fine sand.			■ Bentonite Seal
0.0							@ 28' - light olive brown (2.5Y 5/3).			Bentonite Seal
0.0				 30 			@ 29' - 30% silt, 70% fine sand.  @ 30' - light olive brown (2.5Y 5/3).  @ 31-34' -Groundwater grab sample collected. No lithologic log.	31.0		
		MW-4 GW@31 -34					lithologic log.	34.0		
										Bottom of Boring @ 34 fbg
					-					
								-		



JOB/SITE NAME Former Shell Service Station DRILLING STARTED 18-Feb-09	
LOCATION 2301-2307 Lincoln Avenue, Alameda, CA DRILLING COMPLETED 24-Feb-09	
PROJECT NUMBER 060204 WELL DEVELOPMENT DATE (YIELD) NA	
DRILLER Gregg Drilling, C-57 #485165 GROUND SURFACE ELEVATION NA	
DRILLING METHOD Direct-push & hollow-stem auger TOP OF CASING ELEVATION NA	
BORING DIAMETER 10", 2" below 18 fbg. SCREENED INTERVALS 8 to 18 fbg	
LOGGED BY E. Reinhart DEPTH TO WATER (First Encountered) 10.00 fbg	$\overline{\nabla}$
REVIEWED BY P. Schaefer DEPTH TO WATER (Static) NA	Ţ





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

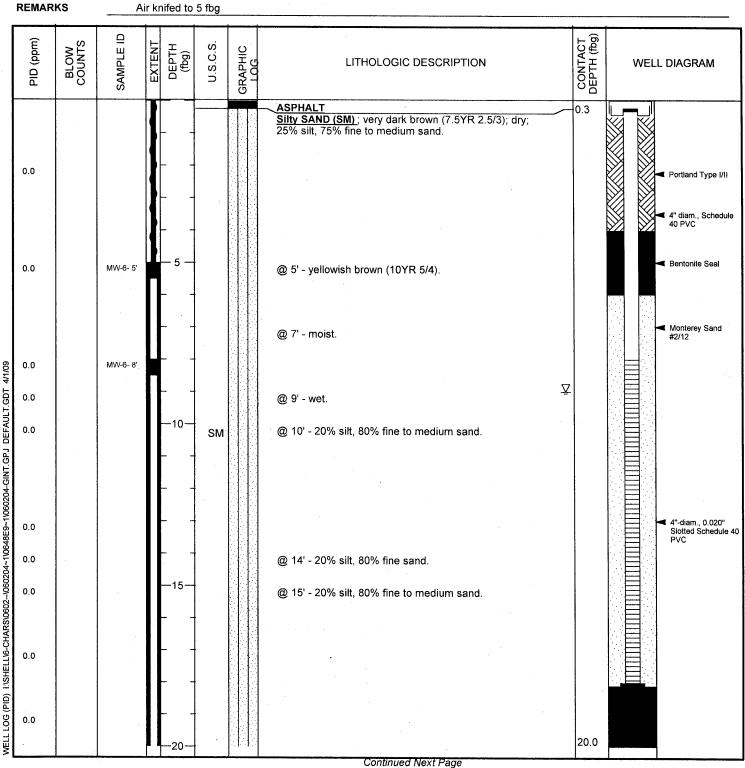
**CLIENT NAME** JOB/SITE NAME LOCATION

Shell Oil Products US BORING/WELL NAME MW-5 Former Shell Service Station 18-Feb-09 **DRILLING STARTED** 2301-2307 Lincoln Avenue, Alameda, CA 24-Feb-09 DRILLING COMPLETED

	Continued from Previous Page											
PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEРТН (fbg)	U.S.C.S.	GRAPHIC	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM			
0.0 0.0 0.0 0.0	BLOW	NW-5 GW@31 -34		DEPTH (fbg)	S.C.S.	GRAPHIC	© 23' - 30% silt, 70% fine to medium sand.  © 28' - 40% silt, 60% fine sand.  © 29' - brown (10YR 4/3); 20% silt, 80% fine to medium sand.  © 30' - brown (10YR 5/3).  © 31-34' -Groundwater grab sample collected. No lithologic log.	ONTAC. 2017 31.0 34.0 DEPTH (fb.	<b>⋖</b> Bentonite Sea	al		
WELL LOG (PID) (XSHELLNG-CHARS)W602-W60204-1W648E9-1W60204-GIN) GFJ DEFAULT GDT 47709									Bottom of B @ 34 fbg	oring		



CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	MW-6		
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	19-Feb-09		
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED	21-Feb-09		
PROJECT NUMBER	060204	WELL DEVELOPMENT DA	ATE (YIELD)	NA	
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELE\	/ATION _	NA	
DRILLING METHOD	Direct-push & hollow-stem auger	TOP OF CASING ELEVAT	ION	NA	
BORING DIAMETER	10", 2" below 18 fbg.	SCREENED INTERVALS		8 to 18 fbg	
LOGGED BY	E. Reinhart	DEPTH TO WATER (First	- (Encountered	9.00 fbg	$\bar{\Sigma}$
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Statio	;)	NA	Ţ





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

**CLIENT NAME** JOB/SITE NAME Shell Oil Products US

**BORING/WELL NAME** 

MW-6

LOCATION

Former Shell Service Station

**DRILLING STARTED** 

19-Feb-09

2301-2307 Lincoln Avenue, Alameda, CA

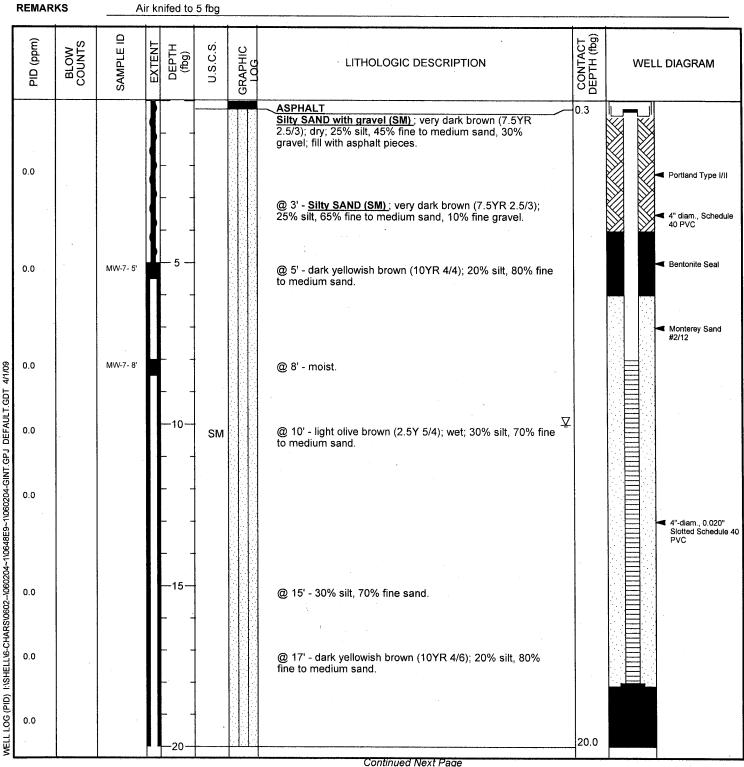
DRILLING COMPLETED 21-Feb-09

Continued from Previous Page

								Continued from Previous Page			
PID (man)	(midd) Oil	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WEI	LL DIAGRAM
WELL LOG (PID) !:SHELLI6-CHARS\060204~1\0648E9~1\060204-GINT.GPJ DEFAULT.GDT 4/1/09  OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO			MW-6 GW@31 -34'			SM		@ 20' - dark yellowish brown (10YR 4/4); 25% silt, 75% fine to medium sand.  @ 25' - light olive brown (2.5Y 5/4); 25% silt, 75% fine sand.  @ 27' - no recovery.  @ 29' -dark grayish brown (2.5Y 4/2); 20% silt, 80% fine to medium sand.  @ 31-34' -Groundwater grab sample collected. No lithologic log.	31.0 34.0		■ Bentonite Seal  Bottom of Boring ② 34 fbg
WELL L											



CLIENT NAME	Shell Oil Products US	BORING/WELL NAME MW-7		
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED 17-Feb	o-09	
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED 25-Feb	o-09	
PROJECT NUMBER	060204	WELL DEVELOPMENT DATE (YIEI	LD) NA	
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEVATION	NA	
DRILLING METHOD	Direct-push & hollow-stem auger	TOP OF CASING ELEVATION	NA	
BORING DIAMETER	10", 2" below 18 fbg.	SCREENED INTERVALS	8 to 18 fbg	
LOGGED BY	E. Reinhart	DEPTH TO WATER (First Encount	ered) 10.00 fbg	$\bar{\Sigma}$
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA .	V





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

**CLIENT NAME** JOB/SITE NAME LOCATION

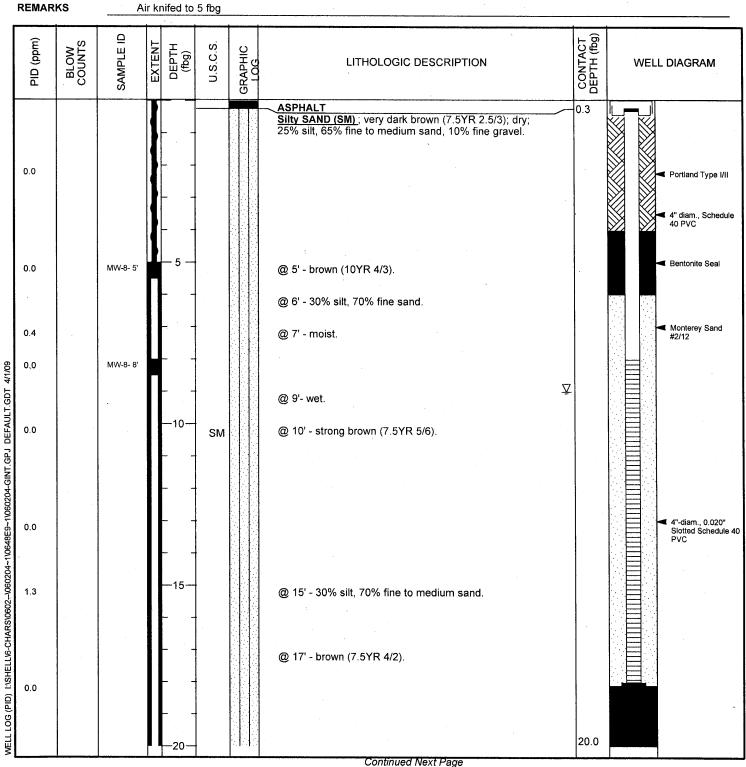
Shell Oil Products US MW-7 **BORING/WELL NAME** Former Shell Service Station **DRILLING STARTED** 17-Feb-09 DRILLING COMPLETED 25-Feb-09 2301-2307 Lincoln Avenue, Alameda, CA

PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.0							@ 22' - light olive brown (2.5Y 5/3).		
0.0					SM		@ 24' - light olive brown (2.5Y 5/4).		
0.0									■ Bentonite Seal
0.0				30	-		@ 29' - olive gray (5Y 5/2); 30% silt, 70% fine sand.  @ 30' - olive gray (5Y 4/2); 20% silt, 80% fine to medium sand.  @ 31-34' -Groundwater grab sample collected. No lithologic log.	31.0	
		MW-7 GW@31 -34'					intrologic log.	34.0	
									Bottom of Bori @ 34 fbg



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

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	MW-8		
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	17-Feb-09		
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED	23-Feb-09		
PROJECT NUMBER	060204	WELL DEVELOPMENT DA	TE (YIELD)	NA .	
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEV	ATION _	NA ·	
DRILLING METHOD	Direct-push & hollow-stem auger	TOP OF CASING ELEVAT	ION _	NA	
BORING DIAMETER	10", 2" below 18 fbg.	SCREENED INTERVALS		8 to 18 fbg	
LOGGED BY	E. Reinhart	DEPTH TO WATER (First	Encountered)	9.00 fbg	$\bar{\Sigma}$
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Statio	;)	NA	Ţ



PAGE 1 OF 2



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

**CLIENT NAME** JOB/SITE NAME Shell Oil Products US

**BORING/WELL NAME** 

MW-8

Former Shell Service Station

**DRILLING STARTED** 

17-Feb-09

LOCATION

2301-2307 Lincoln Avenue, Alameda, CA

DRILLING COMPLETED 23-Feb-09

Continued from Previous Page

	PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WEL	L DIAGRAM
	0.4							@ 20' - olive brown (2.5Y 4/4).			
	0.0				—25— _	SM		@ 25' - 15% silt, 85% fine to medium sand.			<b>⋖</b> Bentonite Seal
	0.0							<ul> <li>@ 27' - dark gray (2.5Y 4/1); 45% silt, 55% fine to medium sand.</li> <li>@ 28' - 30% silt, 70% fine to medium sand.</li> <li>@ 29' - olive brown (2.5Y 4/3).</li> </ul>			
T.GDT 4/1/09	0.0		MW-8 GW@31 -34'					@ 30' - brown (10YR 4/3); 20% silt, 80% fine to medium sand.  @ 31-34' -Groundwater grab sample collected. No lithologic log.	31.0		
204-GINT.GPJ DEFAUL	. **								34.0		Bottom of Boring @ 34 fbg
WELL LOG (PID) INSHELLIG-CHARSIOG02-\060204-1\0648E9-1\060204-GINT.GPJ DEFAULT.GDT 4/1/09											
IELL\6-CHARS\0602-\0											
WELL LOG (PID) INSH											



CLIENT NAME	Shell Oil Products US	BORING/WELL NAME SVP-1		
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED 19-Feb-0	)9	
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED 19-Feb-0	9	
PROJECT NUMBER	060204	WELL DEVELOPMENT DATE (YIELD	) NA	
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEVATION	NA	
DRILLING METHOD	Air-knife	TOP OF CASING ELEVATION	NA	
BORING DIAMETER	3"	SCREENED INTERVALS	4.9 to 5 fbg	
LOGGED BY	E. Reinhart	DEPTH TO WATER (First Encounter	ed) NA	Δ
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA	Ţ

PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.0					SM		ASPHALT Silty SAND (SM); very dark brown (7.5YR 2.5/3); dry; 25% silt, 75% fine to medium sand.	0.3	Portland Type I/II  Bentonite Seal  Monterey Sand #2/12
				5 —	.*				Monterey Sand #2/12 High Density Por Polyethylene Soi Vapor Implant Bottom of Bori @ 5 fbg
•									



CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SVP-2		
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	19-Feb-09		
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED	19-Feb-09		
PROJECT NUMBER	060204	WELL DEVELOPMENT DAT	E (YIELD)	NA	
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEVA	TION _	NA	
DRILLING METHOD	Air-knife	TOP OF CASING ELEVATION	N	NA	
BORING DIAMETER	3"	SCREENED INTERVALS	_	4.9 to 5 fbg	
LOGGED BY	E. Reinhart	DEPTH TO WATER (First E	ncountered)	NA	Σ
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	·	NA	Ţ

REMAR	KS	<del></del>				-			
PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.0					SM		ASPHALT Silty SAND (SM); very dark brown (7.5YR 2.5/3); dry; 25% silt, 65% fine to medium sand, 10% fine gravel.	5.0	Portland Type I/II  Bentonite Seal  Monterey Sand #2/12 High Density Porous Polyethylene Soil Vapor Implant Bottom of Boring
j?									@ 5 fbg
						*			



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608 700

Tele	ohone:	510-420-07
Fax:	510-42	20-9170

**CLIENT NAME** Shell Oil Products US SVP-3 **BORING/WELL NAME** JOB/SITE NAME Former Shell Service Station 18-Feb-09 **DRILLING STARTED** LOCATION 2301-2307 Lincoln Avenue, Alameda, CA DRILLING COMPLETED 18-Feb-09 **PROJECT NUMBER** 060204 WELL DEVELOPMENT DATE (YIELD) NA **DRILLER** Gregg Drilling, C-57 #485165 NA **GROUND SURFACE ELEVATION** Air-knife **DRILLING METHOD TOP OF CASING ELEVATION** NΑ **BORING DIAMETER** 3" SCREENED INTERVALS 4.9 to 5 fbg LOGGED BY E. Reinhart **DEPTH TO WATER (First Encountered)** NA REVIEWED BY P Schaefer

REVIEWED BY	F	P. Schaefer				DEPTH TO WATER (Static)			١	<b>Ā</b>
REMARKS									······	
PID (ppm) BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	u.s.c.s.	GRAPHIC	LITHOLOGIC DESCRIPTION		CONTACT DEPTH (fbg)	WELI	_ DIAGRAM
0.0			SM			ASPHALT  Silty SAND with gravel (SM); very dark brown (7.5YR 2.5/3); dry; 25% silt, 45% fine to medium sand, 30% gravel; fill, asphalt pieces 1-3", garbage.  @ 2' - Silty SAND (SM); 25% silt, 65% fine to medium sand, 10% fine gravel.		5.0		Portland Type I/II  Bentonite Seal  Monterey Sand #2/12
			5						1	Monterey Sand #2/12 High Density Poror Polyethylene Soil Vapor Implant Bottom of Borin  5 fbg



CLIENT NAME	Shell Oil Products US	BORING/WELL NAME SVP-4		
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED 18-Feb-09		
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED 18-Feb-09		
PROJECT NUMBER	060204	WELL DEVELOPMENT DATE (YIELD)	NA	
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEVATION	NA	
DRILLING METHOD	Air-knife	TOP OF CASING ELEVATION	NA	
BORING DIAMETER	3"	SCREENED INTERVALS	4.9 to 5 fbg	
LOGGED BY	E. Reinhart	DEPTH TO WATER (First Encountered	i) NA	$\bar{\Sigma}$
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA NA	Y

REMAR	KS						DEFINIO WATER (Static)		
PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.0				5 —	SM		ASPHALT Silty SAND (SM); very dark brown (7.5YR 2.5/3); dry; 25% silt, 65% fine to medium sand, 10% fine gravel.	5.0	Portland Type I/II  Bentonite Seal  Monterey Sand #2/12 High Density Porous Polyethylene Soil Vapor Implant Bottom of Boring @ 5 fbg
WELL LUG (PID) INSHELLIG-CHARSWOOZ-WOOZWA-TWOAGES-TWOOZWA-GINTIGFJ DEFAULTIGD 4/109									

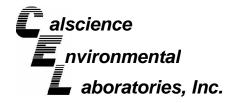


CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SVP-5		
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	18-Feb-09		
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED	18-Feb-09		
PROJECT NUMBER	060204	WELL DEVELOPMENT DA	TE (YIELD) _	NA	
DRILLER	Gregg Drilling, C-57 #485165	GROUND SURFACE ELEV	ATION _	NA	
DRILLING METHOD	Air-knife	TOP OF CASING ELEVAT	ION _	NA	
BORING DIAMETER	3"	SCREENED INTERVALS		4.9 to 5 fbg	
LOGGED BY	E. Reinhart	DEPTH TO WATER (First	Encountered)	NA	$\overline{\Sigma}$
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Statio	:)	NA	Ţ
		• • • • • • • • • • • • • • • • • • • •	•		

REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA <u>I</u>				
REMARKS							
PID (ppm) BLOW COUNTS	SAMPLE ID EXTENT DEPTH (fbg) U.S.C.S. GRAPHIC	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM			
WELL LOG (PID) INSHELLIG-CHARS/0602-U060204-1/0648E9-1/060204-GINT GPJ DEFAULT.GDT 4/1/09	SM SM	ASPHALT Silty SAND with gravel (SM); very dark brown (7.5YR 2.5/3), dry; 25% silt, 45% fine to medium sand, 30% gravel; fill.  ② 1' - Silty SAND (SM); 25% silt, 65% fine to medium sand, 10% fine gravel.	) O 3	Portland Type i/II  Bentonite Seal  Monterey Sand #2/12 High Density Porous Polyethylene Soil Vapor Implant Bottom of Boring @ 5 fbg			
WELL LOG (F							

#### APPENDIX D

CERTIFIED ANALYTICAL REPORTS





March 09, 2009

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

Subject: Calscience Work Order No.: 09-02-2186

Client Reference: 2301-2307 Lincol Ave, Alameda

#### **Dear Client:**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/25/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental Laboratories, Inc.

Philip Samelle for

Jessie Kim

Project Manager

CA-ELAP

NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 ·

TEL:(714) 895-5494 ·

FAX: (714) 894-7501



#### **Analytical Report**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation:

09-02-2186 EPA 5030B

02/25/09

Method: Units:

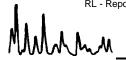
LUFT GC/MS / EPA 8260B

mg/kg

Project: 2301-2307 Lincol Ave, Alameda

Page 1 of 2

1 10,000. 2001 2001	Lincol Ave, A	iamicaa								ıuç	JC 1 01 Z
Client Sample Number				ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/T I Analyz		QC Batch ID
MW-8-5'			09-02-	2186-1-A	02/23/09 09:48	Solid	GC/MS UU	03/05/09	03/05/ 18:3		090305L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl I	Ether (MTB	E)	ND	0.0050	1	
Toluene	ND	0.0050	1		TPPH			ND	0.50	1	
Surrogates:	<u>REC (%)</u>	Control Limits		Qual	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	115	73-139			1,2-Dichloroeth	nane-d4		122	73-145		
Toluene-d8	101	90-108			1,4-Bromofluor	robenzene		87	71-113		
Toluene-d8-TPPH	102	88-112			•						
MW-8-8'			09-02-	2186-2-A	02/23/09 09:51	Solid	GC/MS UU	03/05/09	03/05/ 19:0		090305L01
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	DF	Qual
Benzene	ND	0.0050	1	<u> </u>	Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl I	Ether (MTB	E)	ND	0.0050	1	
Toluene	ND	0.0050	1		TPPH	,	,	ND	0.50	1	
Surrogates:	REC (%)	Control Limits		<u>Qual</u>	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	118	73-139			1,2-Dichloroeth	nane-d4		131	73-145		
Toluene-d8	101	90-108			1,4-Bromofluor	robenzene		88	71-113		
Toluene-d8-TPPH	102	88-112									
MW-5-5'			09-02-	2186-3-A	02/24/09 09:30	Solid	GC/MS UU	03/05/09	03/05/ 19:2		090305L01
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	DF	<u>Qual</u>
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl	Ether (MTB	E)	ND	0.0050	1	
Toluene	ND	0.0050	1		TPPH	- ( -	,	ND	0.50	1	
Surrogates:	<u>REC (%)</u>	Control Limits	•	Qual	Surrogates:			REC (%)	Control Limits	·	Qual
Dibromofluoromethane	117	73-139			1,2-Dichloroeth	nane-d4		132	73-145		
Toluene-d8	101	90-108			1,4-Bromofluor	robenzene		87	71-113		
Toluene-d8-TPPH	102	88-112									



DF - Dilution Factor , Q



#### **Analytical Report**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation:

09-02-2186 EPA 5030B

02/25/09

Method: Units: LUFT GC/MS / EPA 8260B

mg/kg

Project: 2301-2307 Lincol Ave, Alameda

Page 2 of 2

Client Sample Number				b Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Ti Analyz		QC Batch ID
MW-5-8'			09-02-2	2186-4-A	02/24/09 09:32	Solid	GC/MS UU	03/05/09	03/05/ 19:4		090305L01
Parameter Parameter	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	RL	DF	<u>Qual</u>
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl E	ther (MTB	E)	ND	0.0050	1	
Toluene	ND	0.0050	1		TPPH	•	,	ND	0.50	1	
Surrogates:	<u>REC (%)</u>	Control Limits		Qual	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	118	73-139			1,2-Dichloroeth	ane-d4		132	73-145		
Toluene-d8	102	90-108			1,4-Bromofluor	obenzene		88	71-113		
Toluene-d8-TPPH	103	88-112									
Method Blank			099-12	-798-308	N/A	Solid	GC/MS UU	03/05/09	03/05/ 12:5		090305L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl E	ther (MTB	E)	ND	0.0050	1	
Toluene	ND	0.0050	1		TPPH	`	,	ND	0.50	1	
Surrogates:	REC (%)	Control Limits		<u>Qual</u>	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	108	73-139			1,2-Dichloroeth	ane-d4		112	73-145		
Toluene-d8	99	90-108			1,4-Bromofluor	obenzene		87	71-113		
Toluene-d8-TPPH	100	88-112									

All Rep



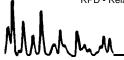
## **Quality Control - Spike/Spike Duplicate**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/25/09 09-02-2186 EPA 5030B LUFT GC/MS / EPA 8260B

Project 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
09-02-2191-5	Solid	GC/MS UU	03/05/09		03/05/09	090305S01
						<u> </u>
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	100	79-115	2	0-13	
Carbon Tetrachloride	103	103	55-139	0	0-15	
Chlorobenzene	100	100	79-115	0	0-17	
1,2-Dibromoethane	103	100	70-130	3	0-30	
1,2-Dichlorobenzene	99	98	63-123	1	0-23	
1,1-Dichloroethene	105	105	69-123	0	0-16	
Ethylbenzene	106	107	70-130	1	0-30	
Toluene	102	101	79-115	1	0-15	
Trichloroethene	99	98	66-144	1	0-14	
Vinyl Chloride	98	99	60-126	1	0-14	
Methyl-t-Butyl Ether (MTBE)	100	98	68-128	2	0-14	
Tert-Butyl Alcohol (TBA)	90	86	44-134	4	0-37	
Diisopropyl Ether (DIPE)	114	112	75-123	2	0-12	
Ethyl-t-Butyl Ether (ETBE)	112	111	75-117	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	110	107	79-115	3	0-12	
Ethanol	87	85	42-138	3	0-28	



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: Work Order No: Preparation: Method:

N/A 09-02-2186 **EPA 5030B** 

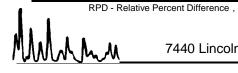
LUFT GC/MS / EPA 8260B

Project: 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared		ate yzed	LCS/LCSD E Number	
099-12-798-308	Solid	GC/MS UU	03/05/09	03/05	/09	090305L0	)1
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	<u>RPD</u>	RPD CL	Qualifiers
Benzene	100	99	84-114	79-119	1	0-7	
Carbon Tetrachloride	103	103	66-132	55-143	1	0-12	
Chlorobenzene	101	100	87-111	83-115	1	0-7	
1,2-Dibromoethane	104	102	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	101	100	79-115	73-121	1	0-8	
1,1-Dichloroethene	105	105	73-121	65-129	1	0-12	
Ethylbenzene	106	105	80-120	73-127	1	0-20	
Toluene	101	100	78-114	72-120	1	0-7	
Trichloroethene	98	98	84-114	79-119	0	0-8	
Vinyl Chloride	96	101	63-129	52-140	4	0-15	
Methyl-t-Butyl Ether (MTBE)	101	105	77-125	69-133	4	0-11	
Tert-Butyl Alcohol (TBA)	89	91	47-137	32-152	2	0-27	
Diisopropyl Ether (DIPE)	116	115	76-130	67-139	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	114	112	76-124	68-132	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	111	109	82-118	76-124	2	0-11	
Ethanol	109	96	59-131	47-143	13	0-21	
TPPH	93	96	65-135	53-147	2	0-30	

Total number of LCS compounds: 17 Total number of ME compounds: 0 Total number of ME compounds allowed :

LCS ME CL validation result: Pass





### **Glossary of Terms and Qualifiers**



Work Order Number: 09-02-2186

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
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 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 with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
Е	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
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.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

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					☑ RECE	IPT VER	UFICATI	ION REG	QUESTE	)		Purgeable (8260B)	<u>@</u>	a a		<u>a</u>		ءَ ا	a   a	1,2 DCA (8260B)		Ethanol (8260B)	Methanol (8015M)	TPH - MO (8015M)		ပွ		_					
			SAM	PLING		Т	PR	ESERVA	ATIVE	$\neg \tau$		nrg,	260	2601	nate	1260	809	9097	260	(82	89	(826	8) (8	0	Meta	827	260)	082)					
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USE MLY	·		DATE	TIME		HCL	ниоз	H2SO4	NONE	ica i	COM1.	TPH	TPHg (8260B)	BTEX (8260B)	5 Oxygenates	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B) FTRE (8260B)	12,	EDB (8260B)	Eta	Mett	푭	CAM17 Metals	SVOCs (8270C)	VOCs (8260)	PCBs (8082)				aboratory	•
1	MW-8-5'		2/23/00	9:48	Soil					X	1		Х	Х		х	+				_			Ė			-			$\neg$			
2	Mw-8-8'		2/23/09	9:51	Soil			_		Ŷ	i		X	X		Х	_	+		+		Н							$\Box$				
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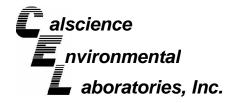
WORK ORDER #: **09-** © **2-2** [8]

# SAMPLE RECEIPT FORM

Cooler <u>\</u> of <u>\</u>

CLIENT: CLA	DATE: <u>2</u>	125/09
TEMPERATURE: (Criteria: 0.0 °C - 6.0 °C, not frozen)  Temperature 2 °C - 0.2 °C (CF) = 2 · \ °C  Sample(s) outside temperature criteria (PM/APM contacted by:).  Sample(s) outside temperature criteria but received on ice/chilled on same		□ Sample
☐ Received at ambient temperature, placed on ice for transport by C  Ambient Temperature; ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs		1118
	Only	Initial: WB
CUSTODY SEALS INTACT:  □ Cooler □ □ No (Not Intact) □ Not Presen □ Sample □ □ No (Not Intact) □ Not Presen		Initial: WS
SAMPLE CONDITION: Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	/· 🗆	
COC document(s) received complete		
Sampler's name indicated on COC		
Sample container label(s) consistent with COC		
Sample container(s) intact and good condition		
Correct containers and volume for analyses requested		
Analyses received within holding time		
Proper preservation noted on COC or sample container		
Volatile analysis container(s) free of headspace		
Tedlar bag(s) free of condensation		
CONTAINER TYPE:		
Solid: □4ozCGJ □8ozCGJ □16ozCGJ ☑Sleeve □EnCores® □	TerraCores <sup>®</sup>	
Water: □VOA □VOAh □VOAna₂ □125AGB □125AGBh □125	5AGBpo₄ □1A	AGB □1AGBna₂
□1AGBs □500AGB □500AGBs □250CGB □250CGBs □1PB □	□500PB □50	0PBna □250PB
□250PBn □125PB □125PBznna □100PBsterile □100PBna₂ □		
Air: □Tedlar® □Summa® □		beled by:
Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle  Preservative: h:HCL n:HNO <sub>3</sub> na <sub>2</sub> :Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> na:NaOH po <sub>4</sub> :H <sub>3</sub> PO <sub>4</sub> s:H <sub>2</sub> SO <sub>4</sub> znna:7nAc <sub>3</sub>		iewed by:

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March 09, 2009

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

Subject: **Calscience Work Order No.:** 09-02-2185

> Client Reference: 2301-2307 Lincol Ave, Alameda

#### **Dear Client:**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/25/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental

Philip Samelle for

Laboratories, Inc.

Jessie Kim

Project Manager

NELAP ID: 03220CA 7440 Lincoln Way, Garden Grove, CA 92841-1427 · TEL:(714) 895-5494 ·

**CSDLAC ID: 10109** 

SCAQMD ID: 93LA0830

FAX: (714) 894-7501



#### **Analytical Report**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation:

09-02-2185 EPA 5030B

02/25/09

Method: Units: LUFT GC/MS / EPA 8260B

ug/L

Project: 2301-2307 Lincol Ave, Alameda

Page 1 of 1

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Client Sample Number				ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/T Analyz		QC Batch ID
MW-8(GW@31-34')			09-02-	2185-1-B	02/23/09 12:25	Aqueous	GC/MS OO	03/06/09	03/06/ 21:2		090306L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>
Benzene	ND	0.50	1		Xylenes (total)	)		ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl	Ether (MTB	E)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH			94	50	1	
Surrogates:	<u>REC (%)</u>	Control Limits		<u>Qual</u>	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	108	74-140			1,2-Dichloroet	thane-d4		109	74-146		
Toluene-d8	100	88-112			Toluene-d8-T				88-112		
1,4-Bromofluorobenzene	91	74-110			roldono do 11			01	00 112		
MW-5(GW@31-34')			09-02-	2185-2-B	02/24/09 10:30	Aqueous	GC/MS OO	03/06/09	03/06/ 21:5		090306L01
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	<b>\</b>		ND	1.0	1	<u> </u>
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl		E)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	Luici (ivii b	_,	ND	50	1	
Surrogates:	REC (%)	Control	•	Qual	Surrogates:			REC (%)	Control	•	<u>Qual</u>
Dibromofluoromethane	104	<u>Limits</u> 74-140			1,2-Dichloroet	thane-d4		111	<u>Limits</u> 74-146		
Toluene-d8	101	88-112			Toluene-d8-T				88-112		
1,4-Bromofluorobenzene	91	74-110			roldono do 11				00 112		
Method Blank			099-12	2-767-1,259	9 N/A	Aqueous	GC/MS OO	03/06/09	03/06/ 18:2		090306L01
Parameter	Result	RL	DF	Qual	<u>Parameter</u>			Result	RL	DF	Qual
Benzene	ND	0.50		Quai	Xylenes (total)	<b>\</b>		ND	1.0		Quai
Ethylbenzene	ND ND	1.0	1 1		Methyl-t-Butyl		E)	ND ND	1.0	1	
Toluene	ND ND	1.0	1		TPPH	Eulei (IVII D	<i>□</i> )		50	1	
Surrogates:	REC (%)	Control	1	<u>Qual</u>	Surrogates:			REC (%)	Control	Ţ	<u>Qual</u>
		<u>Limits</u>							<u>Limits</u>		
Dibromofluoromethane	110	74-140			1,2-Dichloroet				74-146		
Toluene-d8	100	88-112			Toluene-d8-T	PPH		98	88-112		
1,4-Bromofluorobenzene	88	74-110									

Manual RL-Rep

DF - Dilution Factor , Qual - Qualifiers



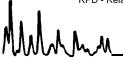
## **Quality Control - Spike/Spike Duplicate**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/25/09 09-02-2185 EPA 5030B LUFT GC/MS / EPA 8260B

Project 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
09-02-2267-1	Aqueou	s GC/MS OO	03/06/09		03/06/09	090306S01
						<u> </u>
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	98	96	88-118	2	0-7	
Carbon Tetrachloride	102	100	67-145	2	0-11	
Chlorobenzene	96	95	88-118	1	0-7	
1,2-Dibromoethane	92	92	70-130	0	0-30	
1,2-Dichlorobenzene	96	97	86-116	1	0-8	
1,1-Dichloroethene	92	90	70-130	1	0-25	
Ethylbenzene	106	104	70-130	2	0-30	
Toluene	104	101	87-123	3	0-8	
Trichloroethene	98	96	79-127	2	0-10	
Vinyl Chloride	84	84	69-129	0	0-13	
Methyl-t-Butyl Ether (MTBE)	105	107	71-131	2	0-13	
Tert-Butyl Alcohol (TBA)	98	99	36-168	2	0-45	
Diisopropyl Ether (DIPE)	115	113	81-123	2	0-9	
Ethyl-t-Butyl Ether (ETBE)	109	111	72-126	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	111	112	72-126	1	0-12	
Ethanol	103	108	53-149	4	0-31	



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: Work Order No: Preparation: Method: N/A 09-02-2185 EPA 5030B

LUFT GC/MS / EPA 8260B

Project: 2301-2307 Lincol Ave, Alameda

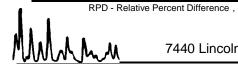
Quality Control Sample ID	Matrix	Instrument	Date Prepared		ate yzed	LCS/LCSD Batch Number				
099-12-767-1,259	Aqueous	GC/MS OO	03/06/09	03/06	/09	090306L	01			
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers			
Benzene	104	100	84-120	78-126	3	0-8				
Carbon Tetrachloride	110	104	63-147	49-161	5	0-10				
Chlorobenzene	99	97	89-119	84-124	3	0-7				
1,2-Dibromoethane	103	100	80-120	73-127	3	0-20				
1,2-Dichlorobenzene	97	97	89-119	84-124	0	0-9				
1,1-Dichloroethene	104	96	77-125	69-133	8	0-16				
Ethylbenzene	108	105	80-120	73-127	3	0-20				
Toluene	106	104	83-125	76-132	2	0-9				
Trichloroethene	107	103	89-119	84-124	3	0-8				
Vinyl Chloride	93	91	63-135	51-147	2	0-13				
Methyl-t-Butyl Ether (MTBE)	109	109	82-118	76-124	1	0-13				
Tert-Butyl Alcohol (TBA)	89	95	46-154	28-172	6	0-32				
Diisopropyl Ether (DIPE)	119	116	81-123	74-130	3	0-11				
Ethyl-t-Butyl Ether (ETBE)	108	109	74-122	66-130	1	0-12				
Tert-Amyl-Methyl Ether (TAME)	110	112	76-124	68-132	2	0-10				
Ethanol	96	108	60-138	47-151	12	0-32				
TPPH	107	105	65-135	53-147	2	0-30				

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed:

LCS ME CL validation result: Pass



erence, CL - Control Limit



## **Glossary of Terms and Qualifiers**



Work Order Number: 09-02-2185

Qualifier	<u>Definition</u>
*	See applicable analysis comment.
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 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 with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
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.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

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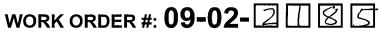


WORK ORDER #: **09-** © **2-2 1 8 5** 

## SAMPLE RECEIPT FORM

Cooler <u>'</u> of <u>'</u>

CLIENT: DATE: 2 / 25 / 09
TEMPERATURE: (Criteria: 0.0 °C - 6.0 °C, not frozen)  Temperature
Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only Initial: ☐ Metals Only
CUSTODY SEALS INTACT:  Cooler
SAMPLE CONDITION:  Yes No N/A
Chain-Of-Custody (COC) document(s) received with samples
COC document(s) received complete
Sampler's name indicated on COC.
Sample container label(s) consistent with COC.
Sample container(s) intact and good condition.
Correct containers and volume for analyses requested
Analyses received within holding time.
Proper preservation noted on COC or sample container
Volatile analysis container(s) free of headspace
Tedlar bag(s) free of condensation
CONTAINER TYPE:
Solid: □4ozCGJ □8ozCGJ □16ozCGJ □Sleeve □EnCores® □TerraCores® □
Water: □VOA 🗹VOAh □VOAna₂ □125AGB □125AGBh □125AGBpo₄ □1AGB □1AGBna₂
□1AGBs □500AGB □500AGBs □250CGB □250CGBs □1PB □500PB □500PBna □250PB
□250PBn □125PB □125PBznna □100PBsterile □100PBna₂ □ □ □ □ □ □
Air: Tedlar® Summa®   Checked/Labeled by: Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle  Preservative: h:HCL n:HNO3 na2:Na2S2O3 na:NaOH po4:H3PO4 s:H2SO4 znna:ZnAc2+NaOH  Scanned by: C

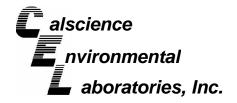




# Laboratories, Inc. SAMPLE ANOMALY FORM

CHAIN OF CUSTODY (COC):					Comn	Comments:			
<ul> <li>□ Not relinquished by client – no signature</li> <li>□ No date/time relinquished</li> <li>□ COC not received with samples – notify PM</li> <li>□ Incomplete information regarding samples, tests, etc.</li> </ul>									
SAMPLES - CONTAINERS & LABELS:					Com	Comments:			
Samples NOT RECEIVED but listed on COC  Samples received but NOT LISTED on COC  Holding time expired − list sample ID(s) and test  Insufficient quantities for analysis − list test  Improper container(s) used − list test  No preservative noted on COC or label − list test & notify lab  Sample labels illegible − note test/container type  Sample labels do not match COC − Note in comments  Sample ID  Date and/or Time Collected  Project Information  # of containers  Sample containers compromised − Note in comments  Leaking  Broken  Without Labels									
HEADSPACE – Containers with Bubble > 6mm or ¼ inch:									
Sample #	Container ID(s)  A1B, C	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of RSK or CO <sub>2</sub> or DO or Organic Lead Received	
Comments:									
Initial / Date NC 2/25/09									

SOP T100\_081 (09/19/08)





March 09, 2009

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

Subject: Calscience Work Order No.: 09-02-2416

Client Reference: 2301-2307 Lincoln Ave., Alameda, CA

#### **Dear Client:**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/27/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental

Philip Samelle for

Laboratories, Inc.

Jessie Kim

Project Manager

CA-ELAP

NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 ·

TEL:(714) 895-5494 ·

FAX: (714) 894-7501





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation:

09-02-2416 EPA 5030B

Method: Units: LUFT GC/MS / EPA 8260B

ug/L

02/27/09

Project: 2301-2307 Lincoln Ave., Alameda, CA

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Client Sample Number				ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/T Analyz		QC Batch ID
MW-4 (GW@31-34')			09-02-	2416-1-C	02/25/09 14:10	Aqueous	GC/MS R	03/03/09	03/03/ 21:0		090303L01
<u>Parameter</u>	Result	<u>RL</u>	DF	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	2.0	0.50	1		Xylenes (total	)		16	1.0	1	
Ethylbenzene	14	1.0	1		Methyl-t-Butyl	I Ether (MTBI	Ε)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	•	,	470	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	99	74-140			1,2-Dichloroe	thane-d4		102	74-146		
Toluene-d8	99	88-112			Toluene-d8-T			101	88-112		
1,4-Bromofluorobenzene	91	74-110									
MW-6 (GW@31-34')			09-02-	2416-2-B	02/26/09 10:00	Aqueous	GC/MS R	03/04/09	03/04/ 14:5		090304L01
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total	)		ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl	,	Ε)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH		_,	ND	50	1	
Surrogates:	REC (%)	Control	•	Qual	Surrogates:			REC (%)	Control	·	Qual
		Limits							Limits		
Dibromofluoromethane	101	74-140			1,2-Dichloroe	thane-d4		105	74-146		
Toluene-d8	99	88-112			Toluene-d8-T	PPH		102	88-112		
1,4-Bromofluorobenzene	91	74-110									
Method Blank			099-12	2-767-1,226	6 N/A	Aqueous	GC/MS R	03/03/09	03/03/ 14:1		090303L01
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total	)		ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl	,	Ε)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	, , , , , , , , , , , , , , , , , , , ,	,	ND	50	1	
Surrogates:	REC (%)	Control	•	Qual	Surrogates:			REC (%)	Control	·	<u>Qual</u>
Dibromofluoromethane	102	<u>Limits</u> 74-140			1,2-Dichloroe	thana d4		102	<u>Limits</u> 74-146		
Toluene-d8	99	74-140 88-112			Toluene-d8-T			102	74-146 88-112		
1,4-Bromofluorobenzene	89	74-110			i didelle-do- l	1 1 11		101	00-112		

Mullin

DF - Dilution Factor

Qual - Qualifiers





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

Date Received: 02/27/09 Work Order No: 09-02-2416 Preparation: **EPA 5030B** Method: LUFT GC/MS / EPA 8260B

Units: ug/L

Project: 2301-2307 Lincoln Ave., Alameda, CA

Page 2 of 2

Client Sample Number				ib Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepare	Date/Ti d Analyz		QC Batch ID
Method Blank			099-12	-767-1,236	N/A	Aqueous	GC/MS R	03/04/09	03/04/0 14:01		090304L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)			ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl	Ether (MTBE	≣)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH			ND	50	1	
Surrogates:	<b>REC (%)</b>	Control		Qual	Surrogates:			REC (%)	Control		Qual
		<u>Limits</u>							<u>Limits</u>		
Dibromofluoromethane	101	74-140			1,2-Dichloroet	hane-d4		101	74-146		
Toluene-d8	98	88-112			Toluene-d8-TI	PPH		100	88-112		
1,4-Bromofluorobenzene	87	74-110									



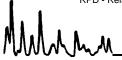
## **Quality Control - Spike/Spike Duplicate**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/27/09 09-02-2416 EPA 5030B LUFT GC/MS / EPA 8260B

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
09-02-1851-10	Aqueous	GC/MS R	03/03/09		03/03/09	090303S01
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	90	91	88-118	1	0-7	
Carbon Tetrachloride	92	95	67-145	4	0-11	
Chlorobenzene	91	96	88-118	5	0-7	
1,2-Dibromoethane	98	100	70-130	3	0-30	
1,2-Dichlorobenzene	94	102	86-116	8	0-8	
1,1-Dichloroethene	92	93	70-130	1	0-25	
Ethylbenzene	97	99	70-130	2	0-30	
Toluene	94	95	87-123	2	0-8	
Trichloroethene	88	90	79-127	2	0-10	
Vinyl Chloride	102	110	69-129	8	0-13	
Methyl-t-Butyl Ether (MTBE)	100	100	71-131	0	0-13	
Tert-Butyl Alcohol (TBA)	97	95	36-168	2	0-45	
Diisopropyl Ether (DIPE)	97	99	81-123	3	0-9	
Ethyl-t-Butyl Ether (ETBE)	103	103	72-126	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	100	100	72-126	0	0-12	
Ethanol	106	102	53-149	4	0-31	





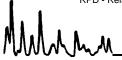
## **Quality Control - Spike/Spike Duplicate**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/27/09 09-02-2416 EPA 5030B LUFT GC/MS / EPA 8260B

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
09-02-1980-1	Aqueous	GC/MS R	03/04/09		03/04/09	090304S01
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
Benzene	96	95	88-118	0	0-7	
Carbon Tetrachloride	100	97	67-145	3	0-11	
Chlorobenzene	98	98	88-118	0	0-7	
1,2-Dibromoethane	105	102	70-130	2	0-30	
1,2-Dichlorobenzene	103	103	86-116	0	0-8	
1,1-Dichloroethene	101	101	70-130	0	0-25	
Ethylbenzene	103	103	70-130	0	0-30	
Toluene	99	99	87-123	0	0-8	
Trichloroethene	94	93	79-127	1	0-10	
Vinyl Chloride	108	117	69-129	8	0-13	
Methyl-t-Butyl Ether (MTBE)	109	107	71-131	2	0-13	
Tert-Butyl Alcohol (TBA)	101	101	36-168	0	0-45	
Diisopropyl Ether (DIPE)	107	115	81-123	7	0-9	
Ethyl-t-Butyl Ether (ETBE)	108	106	72-126	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	102	102	72-126	0	0-12	
Ethanol	109	116	53-149	6	0-31	





## **Quality Control - LCS/LCS Duplicate**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method:

09-02-2416 EPA 5030B

N/A

LUFT GC/MS / EPA 8260B

Project: 2301-2307 Lincoln Ave., Alameda, CA

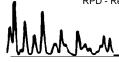
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da Anal	ate yzed	LCS/LCSD   Numbe	
099-12-767-1,226	Aqueous	GC/MS R	03/03/09	03/03	/09	090303L	01
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	90	92	84-120	78-126	2	0-8	
Carbon Tetrachloride	94	97	63-147	49-161	3	0-10	
Chlorobenzene	92	96	89-119	84-124	4	0-7	
1,2-Dibromoethane	96	104	80-120	73-127	7	0-20	
1,2-Dichlorobenzene	96	100	89-119	84-124	4	0-9	
1,1-Dichloroethene	91	96	77-125	69-133	5	0-16	
Ethylbenzene	96	102	80-120	73-127	5	0-20	
Toluene	94	98	83-125	76-132	4	0-9	
Trichloroethene	91	98	89-119	84-124	8	0-8	
Vinyl Chloride	101	110	63-135	51-147	9	0-13	
Methyl-t-Butyl Ether (MTBE)	95	102	82-118	76-124	7	0-13	
Tert-Butyl Alcohol (TBA)	93	98	46-154	28-172	6	0-32	
Diisopropyl Ether (DIPE)	95	98	81-123	74-130	3	0-11	
Ethyl-t-Butyl Ether (ETBE)	102	105	74-122	66-130	4	0-12	
Tert-Amyl-Methyl Ether (TAME)	100	102	76-124	68-132	1	0-10	
Ethanol	95	102	60-138	47-151	7	0-32	
TPPH	94	94	65-135	53-147	0	0-30	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed:

LCS ME CL validation result: Pass





## **Quality Control - LCS/LCS Duplicate**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method:

09-02-2416 EPA 5030B

N/A

LUFT GC/MS / EPA 8260B

Project: 2301-2307 Lincoln Ave., Alameda, CA

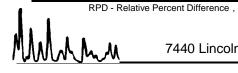
Quality Control Sample ID	Matrix	Instrument	Date Prepared		ate yzed	LCS/LCSD   Numbe	
099-12-767-1,236	Aqueous	GC/MS R	03/04/09	03/04	/09	090304L	01
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	92	92	84-120	78-126	0	0-8	
Carbon Tetrachloride	93	90	63-147	49-161	3	0-10	
Chlorobenzene	92	96	89-119	84-124	4	0-7	
1,2-Dibromoethane	100	98	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	97	97	89-119	84-124	0	0-9	
1,1-Dichloroethene	92	92	77-125	69-133	0	0-16	
Ethylbenzene	96	98	80-120	73-127	2	0-20	
Toluene	97	98	83-125	76-132	1	0-9	
Trichloroethene	92	93	89-119	84-124	1	0-8	
Vinyl Chloride	103	111	63-135	51-147	8	0-13	
Methyl-t-Butyl Ether (MTBE)	88	94	82-118	76-124	7	0-13	
Tert-Butyl Alcohol (TBA)	95	94	46-154	28-172	1	0-32	
Diisopropyl Ether (DIPE)	99	98	81-123	74-130	1	0-11	
Ethyl-t-Butyl Ether (ETBE)	103	101	74-122	66-130	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	100	100	76-124	68-132	0	0-10	
Ethanol	102	110	60-138	47-151	8	0-32	
TPPH	103	97	65-135	53-147	6	0-30	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed:

LCS ME CL validation result: Pass





## **Glossary of Terms and Qualifiers**



Work Order Number: 09-02-2416

Qualifier	<u>Definition</u>
*	See applicable analysis comment.
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 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 with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
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.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

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2_	MW-6 (GW@31-34°)	72909	10:00	Groundwa	tv	<u> </u>		1	X	3		χ	^		$\triangle$									1							Sampled (NON-Present	d
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																															05/2/06 Revision	_ `

Cooler \_\_\_\_ of \_\_\_



WORK ORDER #: **09- 2-2 4 1 6** 

# raboratories, Inc. SAMPLE RECEIPT FORM

CLIENT: DATE: C	02127109
TEMPERATURE: (Criteria: 0.0 °C - 6.0 °C, not frozen)  Temperature 2.9 °C - 0.2 °C (CF) = 2.7 °C Blank  Sample(s) outside temperature criteria (PM/APM contacted by:).  Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling Bases in the first temperature criteria but received on ice/chilled on same day of sampling Bases in the first temperature criteria but received on ice/chilled on same day of sampling Bases in the first temperature criteria but received on ice/chilled on same day of sampling Bases in the first temperature criteria but received on ice/chilled on same day of sampling Bases in the first temperature criteria but received on ice/chilled on same day of sampling Bases in the first temperature criteria but received on ice/chilled on same day of sampling Bases in the first temperature criteria but received on ice/chilled on same day of sampling Bases in the first temperature criteria but received on ice/chilled on same day of sampling Bases in the first temperature criteria but received on ice/chilled on same day of sampling Bases in the first temperature criteria but received on ice/chilled on same day of sampling Bases in the first temperature criteria but received on ice/chilled on same day of sampling Bases in the first temperature criteria but received on ice/chilled on same day of sampling Bases in the first temperature criteria but received on ice/chilled on same day of sample criteria but received on ice/chilled on same day of sample criteria but received on ice/chilled on same day of sample criteria but received on ice/chilled on same day of sample criteria but received on ice/chilled on same day of sample criteria but received on ice/chilled on same day of sample criteria but received on ice/chilled on same day of sample criteria but received on ice/chilled on same day of sample criteria but received on ice/chilled on same day of sample criteria but received on ice/chilled on same day of sample criteria but received on ice/chilled on sample criteria bu	□ <b>Sarmple</b> ling.
☐ Received at ambient temperature, placed on ice for transport by Courier.  Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only	Initial N
CUSTODY SEALS INTACT:	Initial: NC
☐ Cooler ☐ ☐ No (Not Intact) ☐ Not Present ☐ N/A ☐ Sample ☐ ☐ No (Not Intact) ☐ Not Present	Initial: <u>NC</u> Initial: <u>BF</u>
SAMPLE CONDITION:	
SAMPLE CONDITION:  Chain-Of-Custody (COC) document(s) received with samples.  COC document(s) received complete.  Sampler's name indicated on COC.  Sample container label(s) consistent with COC.  Sample container(s) intact and good condition.  Correct containers and volume for analyses requested.  Analyses received within holding time.  Proper preservation noted on COC or sample container.  Volatile analysis container(s) free of headspace.  Tedlar bag(s) free of condensation.	
Container: C.Clear, A.Amban, B.D.I. (D. 1)	1AGB □1AGBna₂ 500PBna □250PB □ □ /Labeled by: BF Reviewed by: D



WORK ORDER #: 0 9-02-74/

## Laboratories, Inc. SAMPLE ANOMALY FORM

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JC – Note i	n comments				
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<b>ed</b> – Note i	n comments				
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Bubble >	6mm or ¼ i	nch:			
Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of RSK or CO <sub>2</sub> or DO or Organic Lead Received
:					
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	s – notify P ing sample BELS: sted on Co TED on Co ple ID(s) an vsis – list test – list test a est/containe DC – Note i  Bubble > Sample	BELS: sted on COC TED on COC ple ID(s) and test vsis – list test st test – list test and notify lab est/container type DC – Note in comments  ed – Note in comments  Bubble > 6mm or 1/4 i  Sample Container	s – notify PM ing samples, tests, etc.  BELS: Commissed on COC TED on COC ple ID(s) and test //sis – list test st test	ing samples, tests, etc.  BELS: Comments:  sted on COC TED on COC ple ID(s) and test vsis – list test st test — list test and notify lab pest/container type OC – Note in comments  Bubble > 6mm or ½ inch:  Sample Container # of Vials Received #	s – notify PM ing samples, tests, etc.  BELS: Comments:  sted on COC TED on COC ple ID(s) and test /sis – list test st test – list test and notify lab est/container type OC – Note in comments  Bubble > 6mm or 1/4 inch:  Sample Container # of Vials Sample Container

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March 10, 2009

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

Subject: Calscience Work Order No.: 09-02-2320

Client Reference: 2301-2307 Lincol Ave, Alameda

#### **Dear Client:**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/26/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental

Philip Samelle for

Laboratories, Inc.

Jessie Kim

Project Manager

CA-ELAP

NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 ·

TEL:(714) 895-5494 ·

FAX: (714) 894-7501





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

Date Received: Work Order No: Preparation:

**EPA 5030B** LUFT GC/MS / EPA 8260B

Method: Units:

mg/kg

02/26/09

09-02-2320

Project: 2301-2307 Lincol Ave, Alameda

Page 1 of 2

Client Sample Number											
Olichi Gampic Number				ib Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Ti Analyz		QC Batch ID
MW-7-5'			09-02-	2320-1-A	02/25/09 09:00	Solid	GC/MS PP	03/07/09	03/07/ 14:5		090307L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl E	ther (MTB	E)	ND	0.0050	1	
Toluene	ND	0.0050	1		TPPH			ND	0.50	1	
Surrogates:	REC (%)	Control Limits		<u>Qual</u>	Surrogates:		<u> </u>	REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	111	73-139			1,2-Dichloroetha	ane-d4		120	73-145		
Toluene-d8	102	90-108			1,4-Bromofluoro	obenzene		100	71-113		
Toluene-d8-TPPH	102	88-112									
MW-7-8'			09-02-	2320-2-A	02/25/09 09:05	Solid	GC/MS PP	03/07/09	03/07/ 18:1		090307L01
Parameter	Result	RL	<u>DF</u>	Qual	Parameter			Result	RL	DF	Qual
Benzene	ND	0.0050		Qual	Xylenes (total)			ND	0.0050		Quai
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl E	thor (MTR	<b>E</b> \	ND	0.0050	1	
Toluene	ND	0.0050	1 1		TPPH	uner (IVITE	L)	ND	0.50	1	
Surrogates:	REC (%)	Control		Qual	Surrogates:		1	REC (%)	Control	'	Qual
<u>Sarrogates.</u>	<u>IXEO (70)</u>	Limits		Quui	Ourrogatos.			(70 <u>)</u>	Limits		<u>Quui</u>
Dibromofluoromethane	113	73-139			1,2-Dichloroetha	ane-d4		120	73-145		
Toluene-d8	104	90-108			1,4-Bromofluoro	benzene		100	71-113		
Toluene-d8-TPPH	103	88-112			,				-		
MW-4-5'			09-02-	2320-3-A	02/25/09 13:13	Solid	GC/MS PP	03/07/09	03/07/ 18:3		090307L01
Parameter	Result	<u>RL</u>	DF	Qual	Parameter			Result	<u>RL</u>	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)				0.0050	1	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl E	ther (MTR	E)	ND	0.0050	1	
Toluene	ND	0.0050	1		TPPH	(	,	ND	0.50	1	
Surrogates:	REC (%)	Control	•	Qual	Surrogates:		ı	REC (%)	Control	•	Qual
- —		Limits			<del></del> _		•	<del></del>	Limits		
					4.0 Diablements	11		440	70 445		
Dibromofluoromethane	112	73-139			1,2-Dichloroeth			116	73-145		
Dibromofluoromethane Toluene-d8 Toluene-d8-TPPH	112 104	73-139 90-108			1,4-Bromofluoro				73-145 71-113		

DF - Dilution Factor Qual - Qualifiers





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation:

09-02-2320 EPA 5030B

02/26/09

Method: Units: LUFT GC/MS / EPA 8260B

mg/kg

Project: 2301-2307 Lincol Ave, Alameda

Page 2 of 2

											·
Client Sample Number				b Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Ti Analyz		QC Batch II
MW-4-8'			09-02-2	2320-4-A	02/25/09 13:18	Solid	GC/MS PF	03/07/09	03/07/0 19:05		090307L01
<u>Parameter</u>	Result	<u>RL</u>	DF	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl E	ther (MTB	E)	ND	0.0050	1	
Toluene	ND	0.0050	1		TPPH		,	ND	0.50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	115	73-139			1,2-Dichloroeth	ane-d4		118	73-145		
Toluene-d8	104	90-108			1,4-Bromofluor	obenzene		100	71-113		
Toluene-d8-TPPH	103	88-112									
Method Blank			099-12	-798-314	N/A	Solid	GC/MS PF	03/07/09	03/07/0 14:00		090307L01
Parameter Parameter	Result	RL	DF	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl E	ther (MTB	E)	ND	0.0050	1	
Toluene	ND	0.0050	1		TPPH	`	•	ND	0.50	1	
Surrogates:	REC (%)	Control Limits		<u>Qual</u>	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	109	73-139			1,2-Dichloroeth	ane-d4		110	73-145		
Toluene-d8	102	90-108			1,4-Bromofluor	obenzene		99	71-113		
Toluene-d8-TPPH	102	88-112									





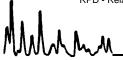
## **Quality Control - Spike/Spike Duplicate**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/26/09 09-02-2320 EPA 5030B LUFT GC/MS / EPA 8260B

Project 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
MW-7-5'	Solid	GC/MS PP	03/07/09		03/07/09	090307S01
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	<u>Qualifiers</u>
Record	00	400	70.445		0.40	
Benzene	99	100	79-115	1	0-13	
Carbon Tetrachloride	97	107	55-139	10	0-15	
Chlorobenzene	92	90	79-115	2	0-17	
1,2-Dibromoethane	94	86	70-130	9	0-30	
1,2-Dichlorobenzene	89	82	63-123	8	0-23	
1,1-Dichloroethene	109	111	69-123	2	0-16	
Ethylbenzene	93	93	70-130	1	0-30	
Toluene	99	100	79-115	0	0-15	
Trichloroethene	95	97	66-144	2	0-14	
Vinyl Chloride	137	122	60-126	12	0-14	3
Methyl-t-Butyl Ether (MTBE)	107	99	68-128	8	0-14	
Tert-Butyl Alcohol (TBA)	96	64	44-134	41	0-37	4
Diisopropyl Ether (DIPE)	111	105	75-123	5	0-12	
Ethyl-t-Butyl Ether (ETBE)	106	101	75-117	5	0-12	
Tert-Amyl-Methyl Ether (TAME)	97	92	79-115	5	0-12	
Ethanol	87	29	42-138	101	0-28	4,3





## **Quality Control - LCS/LCS Duplicate**



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

Date Received: Work Order No: Preparation: Method:

N/A 09-02-2320 **EPA 5030B** 

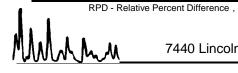
LUFT GC/MS / EPA 8260B

Project: 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da Anal	ate yzed	LCS/LCSD Numbe	
099-12-798-314	Solid	GC/MS PP	03/07/09	03/07	/09	090307L	01
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	103	103	84-114	79-119	1	0-7	
Carbon Tetrachloride	108	116	66-132	55-143	7	0-12	
Chlorobenzene	97	97	87-111	83-115	0	0-7	
1,2-Dibromoethane	98	100	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	95	94	79-115	73-121	1	0-8	
1,1-Dichloroethene	110	111	73-121	65-129	1	0-12	
Ethylbenzene	99	99	80-120	73-127	0	0-20	
Toluene	103	104	78-114	72-120	1	0-7	
Trichloroethene	102	103	84-114	79-119	1	0-8	
Vinyl Chloride	120	121	63-129	52-140	1	0-15	
Methyl-t-Butyl Ether (MTBE)	111	115	77-125	69-133	3	0-11	
Tert-Butyl Alcohol (TBA)	94	98	47-137	32-152	4	0-27	
Diisopropyl Ether (DIPE)	114	116	76-130	67-139	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	112	116	76-124	68-132	3	0-12	
Tert-Amyl-Methyl Ether (TAME)	105	107	82-118	76-124	3	0-11	
Ethanol	98	97	59-131	47-143	2	0-21	
TPPH	113	106	65-135	53-147	6	0-30	

Total number of LCS compounds: 17 Total number of ME compounds: 0 Total number of ME compounds allowed :

LCS ME CL validation result: Pass





## **Glossary of Terms and Qualifiers**



Work Order Number: 09-02-2320

Qualifier	<u>Definition</u>
*	See applicable analysis comment.
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 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 with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
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.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

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work order #: **09**-□ **2**-**2 3 2 0** 

## SAMPLE RECEIPT FORM

Cooler \ of \

CLIENT: ULA	DATE: _	2 126 109
TEMPERATURE: (Criteria: 0.0 °C − 6.0 °C, not frozen)  Temperature\ • 9 °C − 0.2 °C (CF) =\ _ + _ °C	<b>Blank</b> of samplin	☐ Sample
☐ Received at ambient temperature, placed on ice for transport by Cou	rier.	
Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Or	nly	Initial: Wh
CUSTODY SEALS INTACT:  Cooler	□ N/A	Initial: WB
SAMPLE CONDITION: Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples		
COC document(s) received complete		
Sampler's name indicated on COC		
Sample container label(s) consistent with COC	, 🗆	
Sample container(s) intact and good condition	_ 🗆	
Correct containers and volume for analyses requested		
Analyses received within holding time		
Proper preservation noted on COC or sample container		
Volatile analysis container(s) free of headspace		
Tedlar bag(s) free of condensation		d
CONTAINER TYPE:		
Solid: □4ozCGJ □8ozCGJ □16ozCGJ ଢSleeve □EnCores® □Te	rraCores <sup>®</sup>	
Water: □VOA □VOAh □VOAna <sub>2</sub> □125AGB □125AGBh □125AG	ЗВро₄ □	1AGB □1AGBna <sub>2</sub>
□1AGBs □500AGB □500AGBs □250CGB □250CGBs □1PB □56	00PB □5	500PBna □250PB
□250PBn □125PB □125PBznna □100PBsterile □100PBna <sub>2</sub> □	□_	
Air: ☐Tedlar® ☐Summa® ☐  Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle  Preservative: h:HCL n:HNO3 na2:Na2S2O3 na:NaOH po4:H3PO4 s:H2SO4 znna:ZnAc2+Na	Re	eviewed by: YL

SOP T100\_090 (12/10/08)





March 10, 2009

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

Subject: Calscience Work Order No.: 09-02-2321

Client Reference: 2301-2307 Lincol Ave, Alameda

#### **Dear Client:**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/26/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental

Philip Samelle for

Laboratories, Inc.

Jessie Kim Project Manager

CA-ELAP ID: 1230 · NELAP ID: 03220CA · CSDLAC ID: 10109 · SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 · TEL:(714) 895-5494 · FAX: (714) 894-7501





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: 02/26/09 09-02-2321

Method:

EPA 5030B

Units:

LUFT GC/MS / EPA 8260B

ug/L

Project: 2301-2307 Lincol Ave, Alameda

Page 1 of 1

Client Sample Number				b Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Ti I Analyz		QC Batch ID
MW-7 (GW@31-34')			09-02-2	2321-1-A	02/25/09 09:50	Aqueous	GC/MS W	03/06/09	03/07/0 00:15		090306L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	)		ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl		≣)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	`	,	ND	50	1	
Surrogates:	REC (%)	Control Limits		<u>Qual</u>	Surrogates:			REC (%)	Control Limits		Qual
Dibromofluoromethane	125	74-140			1,2-Dichloroet	hane-d4		127	74-146		
Toluene-d8	106	88-112			Toluene-d8-T	PPH		106	88-112		
1,4-Bromofluorobenzene	94	74-110									
Method Blank			099-12	-767-1,253	N/A	Aqueous	GC/MS W	03/06/09	03/06/ 16:38		090306L01
<u>Parameter</u>	Result	RL	DF	Qual	Parameter			Result	<u>RL</u>	DF	<u>Qual</u>
Benzene	ND	0.50	1		Xylenes (total)	)		ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl	Ether (MTB	≣)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH	`	,	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	117	74-140			1,2-Dichloroet	hane-d4		116	74-146		
Toluene-d8	103	88-112			Toluene-d8-T	PPH		103	88-112		
1,4-Bromofluorobenzene	95	74-110									





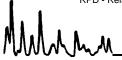
## **Quality Control - Spike/Spike Duplicate**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/26/09 09-02-2321 EPA 5030B LUFT GC/MS / EPA 8260B

Project 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
09-02-2132-4	Aqueous	s GC/MS W	03/06/09		03/06/09	090306S01
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	105	103	88-118	2	0-7	
Carbon Tetrachloride	101	98	67-145	3	0-11	
Chlorobenzene	104	102	88-118	2	0-7	
1,2-Dibromoethane	105	106	70-130	0	0-30	
1,2-Dichlorobenzene	102	100	86-116	2	0-8	
1,1-Dichloroethene	96	93	70-130	3	0-25	
Ethylbenzene	104	103	70-130	1	0-30	
Toluene	105	104	87-123	1	0-8	
Trichloroethene	103	101	79-127	1	0-10	
Vinyl Chloride	85	81	69-129	4	0-13	
Methyl-t-Butyl Ether (MTBE)	94	91	71-131	4	0-13	
Tert-Butyl Alcohol (TBA)	97	98	36-168	1	0-45	
Diisopropyl Ether (DIPE)	86	83	81-123	4	0-9	
Ethyl-t-Butyl Ether (ETBE)	86	84	72-126	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	93	93	72-126	0	0-12	
Ethanol	103	113	53-149	9	0-31	





## **Quality Control - LCS/LCS Duplicate**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2321 EPA 5030B

LUFT GC/MS / EPA 8260B

Project: 2301-2307 Lincol Ave, Alameda

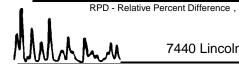
Quality Control Sample ID	Matrix	Instrument	Date Prepared		ate yzed	LCS/LCSD   Numbe	
099-12-767-1,253	Aqueous	GC/MS W	03/06/09	03/06	/09	090306L	01
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	101	102	84-120	78-126	1	0-8	
Carbon Tetrachloride	96	97	63-147	49-161	2	0-10	
Chlorobenzene	99	102	89-119	84-124	3	0-7	
1,2-Dibromoethane	99	104	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	98	99	89-119	84-124	1	0-9	
1,1-Dichloroethene	90	89	77-125	69-133	0	0-16	
Ethylbenzene	99	101	80-120	73-127	2	0-20	
Toluene	102	102	83-125	76-132	0	0-9	
Trichloroethene	99	102	89-119	84-124	3	0-8	
Vinyl Chloride	86	86	63-135	51-147	1	0-13	
Methyl-t-Butyl Ether (MTBE)	85	89	82-118	76-124	4	0-13	
Tert-Butyl Alcohol (TBA)	89	91	46-154	28-172	2	0-32	
Diisopropyl Ether (DIPE)	82	83	81-123	74-130	1	0-11	
Ethyl-t-Butyl Ether (ETBE)	81	82	74-122	66-130	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	88	91	76-124	68-132	3	0-10	
Ethanol	105	94	60-138	47-151	11	0-32	
TPPH	79	80	65-135	53-147	0	0-30	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed:

LCS ME CL validation result : Pass



CL - Control Limit



## **Glossary of Terms and Qualifiers**



Work Order Number: 09-02-2321

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
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 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 with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
Е	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
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.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

LAB (LOCATION)						l	S	hell	O	il P	roc	du	cts	Ch	ain	O	Cı	ust	ody	/R	ec	or	d						
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TURNAROUND TIME (CALENDAR DAYS):  STANDARD (14 DAY)		2 DAYS	<b>□</b> 24 HC	OURS		RESUL	TS NEEDE ON W	D ÆEKEND	Ŀ	,								RE	QUE	STED	ANA	ALYS	sis						
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ப்பு Field Sample Identification	DATE	TIME	MATRIX					NO. OF CONT.	ΙΞ	TPHg (8260B)	BTEX (8260B)	5 Oxygenates	MTBE (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	TPH - MO (8015M)	CAM17 Metals - Total	SVOCs (8270C)	S.	PCBs (8082)		.	Container PID Re	eadings
USE CALLY	DATE	110005		HCL	HNO3 H2	SO4 NON	ICO OTHER		표	直	B 1	50	¥   £		Į.	ETE	1,2		Eţ	Met	푵	GA	S	VOCs (8260)	ğ	Ì	.	or Laboratory i	
1 MW-7 (GWe31-34')	4/25/09	9:50	Groondwater	X			X	3		Х	Х	$\Box$	х	T													7	zeroheadspace Sampled 2/2	1 When-
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1000/Palley TOGSO	12	30 <sup>′</sup>					,	$O_{\mathcal{O}}$	<u></u> ℃	100	at	٠.,	$\overline{C}$	E	<u>.</u>						2	12	b	100	9	ĺ	J	,00U	
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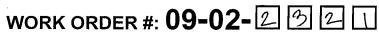


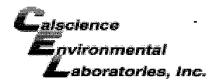
WORK ORDER #: **09-** 0 2-2321

## SAMPLE RECEIPT FORM

Cooler <u>\</u> of <u>\</u>

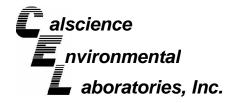
CLIENT: CXX	<b>DATE</b> : <u>2</u>	126/09
TEMPERATURE: (Criteria: 0.0 °C − 6.0 °C, not frozen)  Temperature	urier.	Sample
CUSTODY SEALS INTACT:  Cooler	□ N/A	Initial: <u>Wb</u> Initial: <u>W</u> B
SAMPLE CONDITION: Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples		
COC document(s) received complete		
Sampler's name indicated on COC		
Sample container label(s) consistent with COC		
Sample container(s) intact and good condition	🗆	
Correct containers and volume for analyses requested		
Analyses received within holding time		
Proper preservation noted on COC or sample container		. 🗆
Volatile analysis container(s) free of headspace		
Tedlar bag(s) free of condensation		
CONTAINER TYPE:		
Solid: □4ozCGJ □8ozCGJ □16ozCGJ □Sleeve □EnCores® □To	erraCores <sup>®</sup> I	
<b>Water</b> : □VOA □VOAh □VOAna <sub>2</sub> □125AGB □125AGBh □125A	\GBpo₄ □1A	GB □1AGBna <sub>2</sub>
□1AGBs □500AGB □500AGBs □250CGB □250CGBs □1PB □5	500PB □500	PBna □250PB
□250PBn □125PB □125PBznna □100PBsterile □100PBna₂ □		
Air: ☐Tedlar <sup>®</sup> ☐Summa <sup>®</sup> ☐  Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle  Preservative: h:HCL n:HNO <sub>3</sub> na <sub>2</sub> :Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> na:NaOH po <sub>4</sub> :H <sub>3</sub> PO <sub>4</sub> s:H <sub>2</sub> SO <sub>4</sub> znna:ZnAc <sub>2</sub> +N		ewed by: Y L





## Laboratories, Inc. SAMPLE ANOMALY FORM

CHAIN OF CUSTODY (COC):			Comi	ments:		
<ul> <li>□ Not relinquished by client – not</li> <li>□ No date/time relinquished</li> <li>□ COC not received with sample</li> <li>□ Incomplete information regard</li> </ul>						
SAMPLES - CONTAINERS & LA	BELS:		Com	ments:		
□ Samples NOT RECEIVED but I □ Samples received but NOT LIS □ Holding time expired – list sam □ Insufficient quantities for anal □ Improper container(s) used – I □ No preservative noted on COC □ Sample labels illegible – note to □ Sample labels do not match C □ Sample labels do not match C □ Date and/or Time Collect □ Project Information □ # of containers □ Sample containers compromis □ Leaking □ Broken □ Without Labels □ Other:	STED on CO ple ID(s) ar ysis – list te ist test or label – est/containe OC – Note i	DC nd test est list test & noti er type in comments				
HEADSPACE – Containers with	Bubble >	6mm or ¼ i	nch:			
Sample Container # of Vials Received  \( \begin{array}{c c} A \leftrightarrow \cdot & 3 \end{array}	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of RSK or CO <sub>2</sub> or DO or Organic Lead Received
Comments:				Initial / Da	te_W3_2	2609





March 11, 2009

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

Subject: Calscience Work Order No.: 09-02-2415

Client Reference: 2301-2307 Lincol Ave., Alameda, CA

#### **Dear Client:**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/27/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental Laboratories, Inc.

Philip Samelle for

Jessie Kim

Project Manager

CA-ELAP ID: 1230 · 7440 Lincoln

NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 ·

TEL:(714) 895-5494 ·

FAX: (714) 894-7501





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received:
Work Order No:
Preparation:

Method: LUFT GC/MS / EPA 8260B Units: mg/kg

Project: 2301-2307 Lincol Ave., Alameda, CA

Page 1 of 1

02/27/09

09-02-2415

EPA 5030B

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Client Sample Number				ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/T I Analy		QC Batch ID	
MW-6-5'			09-02-	2415-1-A	02/26/09 09:10	Solid	GC/MS PP	03/07/09	03/07 19:3		090307L01	
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual	
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1		
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl	Ether (MTB	BE)	ND	0.0050	1		
Toluene	ND	0.0050	1		TPPH			ND	0.50	1		
Surrogates:	<u>REC (%)</u>	Control Limits		Qual	Surrogates:			REC (%)	Control Limits		<u>Qual</u>	
Dibromofluoromethane	117	73-139			1,2-Dichloroeth	hane-d4		121	73-145			
Toluene-d8	104	90-108			1.4-Bromofluo			101	71-113			
Toluene-d8-TPPH	104	88-112			i, i Biomondo	10001120110			71 110			
MW-6-8'			09-02-	2415-2-A	02/26/09 09:13	Solid	GC/MS PP	03/07/09	03/07 19:5		090307L01	
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	DF	Qual	
Benzene	ND	0.0050	<u> </u>	<u> </u>	Xylenes (total)			ND	0.0050	1	<u> </u>	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl		RE)	ND	0.0050	1		
Toluene	ND	0.0050	1		TPPH	o. ( D	<i>,</i> _,	ND	0.50	1		
Surrogates:	REC (%)	Control Limits	·	Qual	Surrogates:			REC (%)	Control Limits	•	Qual	
Dibromofluoromethane	114	73-139			1,2-Dichloroeth	hane-d4		115	73-145			
Toluene-d8	104	90-108			1,4-Bromofluo			101	71-113			
Toluene-d8-TPPH	103	88-112			.,							
Method Blank			099-12	2-798-314	N/A	Solid	GC/MS PP	03/07/09	03/07 14:0		090307L01	
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	DF	Qual	
Benzene	ND	0.0050		<u> </u>	Xylenes (total)			ND	0.0050		<u> Quui</u>	
Ethylbenzene	ND ND	0.0050	1 1		Methyl-t-Butyl		)E\	ND ND	0.0050	1 1		
Toluene	ND ND	0.0050	1		TPPH	ruiei (ivi i b	,L)	ND	0.50	1		
Surrogates:	REC (%)	Control	'	Qual	Surrogates:			REC (%)	Control	'	Qual	
		<u>Limits</u>							<u>Limits</u>			
Dibromofluoromethane	109	73-139			1,2-Dichloroeth			110	73-145			
Toluene-d8	102	90-108			1,4-Bromofluo	robenzene		99	71-113			
Toluene-d8-TPPH	102	88-112										

Manual RL-Rep

DF - Dilution Factor , Qual - Qualifiers



## **Quality Control - Spike/Spike Duplicate**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/27/09 09-02-2415 EPA 5030B LUFT GC/MS / EPA 8260B

Project 2301-2307 Lincol Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
09-02-2320-1	Solid	GC/MS PP	03/07/09		03/07/09	090307S01
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	99	100	79-115	1	0-13	
Carbon Tetrachloride	97	107	55-139	10	0-15	
Chlorobenzene	92	90	79-115	2	0-17	
1,2-Dibromoethane	94	86	70-130	9	0-30	
1,2-Dichlorobenzene	89	82	63-123	8	0-23	
1,1-Dichloroethene	109	111	69-123	2	0-16	
Ethylbenzene	93	93	70-130	1	0-30	
Toluene	99	100	79-115	0	0-15	
Trichloroethene	95	97	66-144	2	0-14	
Vinyl Chloride	137	122	60-126	12	0-14	3
Methyl-t-Butyl Ether (MTBE)	107	99	68-128	8	0-14	
Tert-Butyl Alcohol (TBA)	96	64	44-134	41	0-37	4
Diisopropyl Ether (DIPE)	111	105	75-123	5	0-12	
Ethyl-t-Butyl Ether (ETBE)	106	101	75-117	5	0-12	
Tert-Amyl-Methyl Ether (TAME)	97	92	79-115	5	0-12	
Ethanol	87	29	42-138	101	0-28	4,3





## **Quality Control - LCS/LCS Duplicate**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2415 EPA 5030B

LUFT GC/MS / EPA 8260B

Project: 2301-2307 Lincol Ave., Alameda, CA

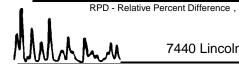
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da Anal	ate yzed	LCS/LCSD Batch Number			
099-12-798-314	Solid	GC/MS PP	03/07/09	03/07	/09	090307L	01		
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers		
Benzene	103	103	84-114	79-119	1	0-7			
Carbon Tetrachloride	108	116	66-132	55-143	7	0-12			
Chlorobenzene	97	97	87-111	83-115	0	0-7			
1,2-Dibromoethane	98	100	80-120	73-127	2	0-20			
1,2-Dichlorobenzene	95	94	79-115	73-121	1	0-8			
1,1-Dichloroethene	110	111	73-121	65-129	1	0-12			
Ethylbenzene	99	99	80-120	73-127	0	0-20			
Toluene	103	104	78-114	72-120	1	0-7			
Trichloroethene	102	103	84-114	79-119	1	0-8			
Vinyl Chloride	120	121	63-129	52-140	1	0-15			
Methyl-t-Butyl Ether (MTBE)	111	115	77-125	69-133	3	0-11			
Tert-Butyl Alcohol (TBA)	94	98	47-137	32-152	4	0-27			
Diisopropyl Ether (DIPE)	114	116	76-130	67-139	1	0-8			
Ethyl-t-Butyl Ether (ETBE)	112	116	76-124	68-132	3	0-12			
Tert-Amyl-Methyl Ether (TAME)	105	107	82-118	76-124	3	0-11			
Ethanol	98	97	59-131	47-143	2	0-21			
TPPH	113	106	65-135	53-147	6	0-30			

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed:

LCS ME CL validation result : Pass





## **Glossary of Terms and Qualifiers**

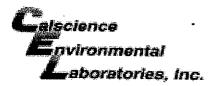


Work Order Number: 09-02-2415

Qualifier	<u>Definition</u>
*	See applicable analysis comment.
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 or 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 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 with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
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.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

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LAR USE OACY	Field Sample Identification	DATE	TIME	MATRIX				ice	CONT		TPH-	BTEX (8260B)	5 Oxygenates	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	TPH - MO (8015M)	CAM17 Metals - Total	SVOCs (8270C)	Vocs (8260)	PCBs (8082)			Container PID Re or Laboratory N	
	MW-6-5'	2/26/09	9:10	so	HCL	HNO3 H2	SO4 N	ONE OTHE	1	X	-	X	2	X		-	-   "	u ←	ш	Ш	Σ	1-	0	S	^	<u>a</u>	Н	H		
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Cooler \_\_\_\_\_ of \_\_\_



WORK ORDER #: **09- 0 2-2 4 1 9** 

# SAMPLE RECEIPT FORM

CLIENT:CRA	DATE: 💇	2127109
☐ Sample(s) outside temperature criteria (PM/APM contacted by:).	Blank [	□ Sarmple
☐ Sample(s) outside temperature criteria but received on ice/chilled on same day		e.
☐ Received at ambient temperature, placed on ice for transport by Cou  Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Or		Initial: NZ
CUSTODY SEALS INTACT:		11. 1
☐ Cooler ☐ ☐ No (Not Intact) ☐ Not Present	□ N/A	Initial: NC
☐ Sample ☐ ☐ No (Not Intact) ☐ Not Present		Initial: <u>り</u> し
SAMPLE CONDITION: Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples		
COC document(s) received complete		
Sampler's name indicated on COC		
Sample container label(s) consistent with COC		
Sample container(s) intact and good condition		
Correct containers and volume for analyses requested		
Analyses received within holding time		
Proper preservation noted on COC or sample container		<b>Z</b> ~
Volatile analysis container(s) free of headspace		
Tedlar bag(s) free of condensation		
CONTAINER TYPE:		
Solid: □4ozCGJ □8ozCGJ □16ozCGJ □Sleeve □EnCores® □Ter		
Water: □VOA □VOAh □VOAna₂ □125AGB □125AGBh □125AG		
□1AGBs □500AGB □500AGBs □250CGB □250CGBs □1PB □50		
□250PBn □125PB □125PBznna □100PBsterile □100PBna <sub>2</sub> □		
Air CT. II. O. C.	Checked/Lab	beled by: DS





April 03, 2009

The original report has been revised/corrected.

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

Subject: Calscience Work Order No.: 09-02-2548

Client Reference: 2301-2307 Lincoln Ave., Alameda, CA

#### **Dear Client:**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/28/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental Laboratories, Inc.

Jessie Kim Project Manager

80 · NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 ·

TEL:(714) 895-5494 ·

FAX: (714) 894-7501





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

Date Received: Work Order No: Preparation:

09-02-2548 EPA 5030B

Method: Units:

LUFT GC/MS / EPA 8260B

ug/L

02/28/09

Project: 2301-2307 Lincoln Ave., Alameda, CA

Page 1 of 2

		7	, <i>.</i>	-							,
Client Sample Number				ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/T I Analyz		QC Batch II
B-5 (GW@9-13')			09-02-	2548-1-A	02/27/09 10:52	Aqueous	GC/MS RR	03/09/09	03/10/ 07:4		090309L02
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	0.50	1		Xylenes (total)	)		ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl	Ether (MTB	E)	ND	1.0	1	
Toluene Toluene	ND	1.0	1		TPPH	•	,	ND	50	1	
Surrogates:	REC (%)	Control Limits		<u>Qual</u>	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	109	74-140			1,2-Dichloroet	thane-d4		107	74-146		
Toluene-d8	99	88-112			Toluene-d8-T			99	88-112		
1,4-Bromofluorobenzene	90	74-110									
B-7 (GW@9-13')			09-02-	2548-2-A	02/27/09 09:39	Aqueous	GC/MS RR	03/09/09	03/10/ 08:1		090309L02
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)	1		17	1.0	1	
Ethylbenzene	5.6	1.0	1		Methyl-t-Butyl		F)	ND	1.0	1	
Foluene	ND.	1.0	1		TPPH		_,	240	50	1	
Surrogates:	<u>REC (%)</u>	Control	•	Qual	Surrogates:			REC (%)	Control	•	Qual
Dibromofluoromethane	109	<u>Limits</u> 74-140			1,2-Dichloroet	thane-d4		105	<u>Limits</u> 74-146		
Foluene-d8	109	88-112			Toluene-d8-T			100	88-112		
1.4-Bromofluorobenzene	95	74-110			roidene-do-ri			100	00-112		
B-8 (GW@9-13')			09-02-	2548-3-A	02/27/09 11:50	Aqueous	GC/MS RR	03/09/09	03/10/ 08:3		090309L02
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	DF	Qual
Benzene	ND	0.50	<u> </u>	~~~	Xylenes (total)	١		2.6	1.0	1	~~~
Ethylbenzene	2.5	1.0	1		Methyl-t-Butyl		E)	ND	1.0	1	
-oluene	ND	1.0	1		TPPH	Euloi (IVIID	_,	60	50	1	
Surrogates:	<u>REC (%)</u>	Control Limits	'	<u>Qual</u>	Surrogates:			REC (%)	Control Limits	'	<u>Qual</u>
Dibromofluoromethane	111	74-140			1,2-Dichloroet	thane-d4		110	74-146		
oluene-d8	102	88-112			Toluene-d8-T			101	88-112		
,4-Bromofluorobenzene	92	74-110			. 3.000 00 11			. • .	55 1 IL		
,	٥ <u>ـ</u>	7 - 110									

DF - Dilution Factor





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: 02/28/09
Work Order No: 09-02-2548
Preparation: EPA 5030B
Method: LUFT GC/MS / EPA 8260B

Units: ug/L

Project: 2301-2307 Lincoln Ave., Alameda, CA

Page 2 of 2

Client Sample Number				ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Ti d Analyz		QC Batch ID
Method Blank			099-12	2-767-1,277	N/A	Aqueous	GC/MS RR	03/09/09	03/10/ 04:0		090309L02
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	0.50	1		Xylenes (total)			ND	1.0	1	
Ethylbenzene	ND	1.0	1		Methyl-t-Butyl	Ether (MTB	E)	ND	1.0	1	
Toluene	ND	1.0	1		TPPH			ND	50	1	
Surrogates:	REC (%)	Control		Qual	Surrogates:			REC (%)	Control		Qual
		<u>Limits</u>							<u>Limits</u>		
Dibromofluoromethane	109	74-140			1,2-Dichloroet	hane-d4		107	74-146		
Toluene-d8	100	88-112			Toluene-d8-TI	PPH		99	88-112		
1,4-Bromofluorobenzene	91	74-110									





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/28/09 09-02-2548 EPA 5030B LUFT GC/MS / EPA 8260B

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
09-02-2423-3	Aqueous	s GC/MS RR	03/09/09		03/10/09	090309S02
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	95	94	88-118	1	0-7	
Carbon Tetrachloride	94	91	67-145	2	0-11	
Chlorobenzene	93	93	88-118	0	0-7	
1,2-Dibromoethane	97	97	70-130	0	0-30	
1,2-Dichlorobenzene	93	92	86-116	1	0-8	
1,1-Dichloroethene	102	99	70-130	3	0-25	
Ethylbenzene	95	94	70-130	1	0-30	
Toluene	99	99	87-123	0	0-8	
Trichloroethene	90	89	79-127	1	0-10	
Vinyl Chloride	116	125	69-129	8	0-13	
Methyl-t-Butyl Ether (MTBE)	102	99	71-131	2	0-13	
Tert-Butyl Alcohol (TBA)	102	96	36-168	6	0-45	
Diisopropyl Ether (DIPE)	112	110	81-123	2	0-9	
Ethyl-t-Butyl Ether (ETBE)	106	105	72-126	0	0-12	
Tert-Amyl-Methyl Ether (TAME)	97	96	72-126	2	0-12	
Ethanol	125	114	53-149	9	0-31	







Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2548 EPA 5030B

LUFT GC/MS / EPA 8260B

Project: 2301-2307 Lincoln Ave., Alameda, CA

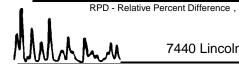
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed		LCS/LCSD   Numbe	
099-12-767-1,277	Aqueous	GC/MS RR	03/09/09	03/10	/09	090309L	02
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	95	91	84-120	78-126	4	0-8	
Carbon Tetrachloride	95	91	63-147	49-161	4	0-10	
Chlorobenzene	96	96	89-119	84-124	0	0-7	
1,2-Dibromoethane	99	95	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	94	93	89-119	84-124	1	0-9	
1,1-Dichloroethene	102	97	77-125	69-133	5	0-16	
Ethylbenzene	97	94	80-120	73-127	2	0-20	
Toluene	104	103	83-125	76-132	1	0-9	
Trichloroethene	96	91	89-119	84-124	5	0-8	
Vinyl Chloride	118	116	63-135	51-147	2	0-13	
Methyl-t-Butyl Ether (MTBE)	103	100	82-118	76-124	3	0-13	
Tert-Butyl Alcohol (TBA)	89	98	46-154	28-172	10	0-32	
Diisopropyl Ether (DIPE)	113	110	81-123	74-130	3	0-11	
Ethyl-t-Butyl Ether (ETBE)	106	105	74-122	66-130	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	99	95	76-124	68-132	4	0-10	
Ethanol	99	118	60-138	47-151	18	0-32	
TPPH	102	106	65-135	53-147	3	0-30	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed:

LCS ME CL validation result : Pass





# **Glossary of Terms and Qualifiers**



Work Order Number: 09-02-2548

Qualifier	<u>Definition</u>
*	See applicable analysis comment.
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 or 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 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 with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
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.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

#### Philip Sanelle

Schaefer, Peter [pschaefer@craworld.com] Tuesday, March 31, 2009 2:39 PM From:

Sent:

Philip Sanelle To:

060204-2301-2307 Linclon Ave., Alameda, CA - 09-02-2548: report MTBE for B-7 (GW@ Subject:

9-13')

Philip,

Would it be possible to report MTBE for this sample? We forgot to check it on the COC. Thanks for your help.

Regards,

Peter Schaefer, CEG, CHG **Conestoga-Rovers & Associates** 5900 Hollis Avenue, Suite A Emeryville, California 94608-2008

Telephone: (510) 420-3319 Fax: (510) 420-9170 pschaefer@craworld.com

TEMPERATURE ON RECEIPT C° Container PID Readings or Laboratory Notes INCIDENT # (ENV SERVICES) (CLICK IF NO INCIDENT # APPLIES 375-20-1 DATE: 2/27/09 060204 00:10 PAGE: T0617971459 7 70 4 9 4 4 6 **LCBs (8085)** 2 5 5 5-58-08 100cs (85e0) SVOCs (8270C) REQUESTED ANALYSIS Shell Oil Products Chain Of Custody Record (0109) IstoT - zlateM \text{TIMAC} TPH - MO (8015M) Methanol (8015M) δ Ethanol (8260B) Reinhart - Koulle 510-420-3343 A Jameda EDB (8560B) 1,2 DCA (8260B) (809Z8) 38T3 2301-2307 Lincoln Ave, (809S8) **3MAT** Print Bill To Contact Name. DIPE (8260B) # 0d Brenda Carter, CRA, Emeryville Sampler: (80928) A8T にこれ (80928) 38TM Bill Merchant Oxygenates (8260B) BTEX (8260B) TPH - Extractable (8015M) <u>ر</u> لا) (8560B) **E**H9T NO. OF CONT. RESULTS NEEDED
ON WEEKEND MOTIVA RETAIL CO SHELL RETAIL 3 Z SHELL CONTRACT RATE APPLIES STATE SEMENT RATE APPLIES RECEIPT VERIFICATION REQUESTED ☐ LUBES 分長  $\succ$ TECH SERVICES Please Check Appropriate Box: pschaefer@craworld.com CONSULTANT CLEDD NOT NEEDED ☑ OTHER CRAW 24 HOURS MATRIX 1/27/01 10:52 GW 127649:39+ = 8 3-27-59-1730 TIME MOTIVA SD&CM ENV. SERVICES SHELL PIPELINE Z DAYS 4/23/60 DATÈ 510-420-9170 3 DAYS 5900 Hollis Street, Suite A, Emeryville, CA 94608 UST AGENCY: Field Sample Identification 8-8 (6we 9-13) SPECIAL INSTRUCTIONS OR NOTES: I (GW@ 9-13 6we9-13' TURNAROUND TIME (CALENDAR DAYS):

☑ STANDARD (14 DAY)

☐ 5 DAYS £ (13PV 8 } } Conestoga-Rovers & Associates ■ LA - RWQCB REPORT FORMAT LAB (LOCATION) 510-420-3319 TEST AMERICA ( 8-5 6 CALSCIENCE (\_ Peter Schaefer OTHER (\_ XENCO (\_ □ SPL (\_\_ ¥ S 25 5

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Page 8 of 9



WORK ORDER #: **09-** □ □ □ □ □ □ □

\_aboratorles, Inc. SAMPLE RECEIPT FORM Cooler \_\_\_ of \_\_\_

CLIENT: Conestaga-Rover DA	TE: _	2128109
TEMPERATURE: (Criteria: 0.0 °C - 6.0 °C, not frozen)  Temperature		g. Initial: <u>Y</u> C
CUSTODY SEALS INTACT:  □ Cooler □ □ □ No (Not Intact) □ Not Present □ □ Sample □ □ No (Not Intact) □ Not Present	N/A	Initial: YU
SAMPLE CONDITION: Yes	No	N/A —
Chain-Of-Custody (COC) document(s) received with samples		⊔ _
COC document(s) received complete		
Sampler's name indicated on COC		
Sample container label(s) consistent with COC		
Sample container(s) intact and good condition		
Correct containers and volume for analyses requested		
Analyses received within holding time		
Proper preservation noted on COC or sample container		
Volatile analysis container(s) free of headspace		
Tedlar bag(s) free of condensation		abla
CONTAINER TYPE:		
Solid: □4ozCGJ □8ozCGJ □16ozCGJ □Sleeve □EnCores® □TerraC	ores®	
Water: □VOA ☑VOAh □VOAna₂ □125AGB □125AGBh □125AGB	ро₄ □	1AGB □1AGBna₂
□1AGBs □500AGB □500AGBs □250CGB □250CGBs □1PB □500F	В □	500PBna □250PB
□250PBn □125PB □125PBznna □100PBsterile □100PBna₂ □	Ĺ o <u></u>	
Air: ☐Tedlar® ☐Summa® ☐ Ch  Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle  Preservative: h:HCL n:HNO3 na2:Na2S2O3 na:NaOH po4:H3PO4 s:H2SO4 znna:ZnAc2+NaOH	R	Labeled by: 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 Secure 20 S





March 16, 2009

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

Subject: Calscience Work Order No.: 09-02-2549

Client Reference: 2301-2307 Lincoln Ave., Alameda, CA

#### **Dear Client:**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/28/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental

Philip Samelle for

Laboratories, Inc.

Jessie Kim Project Manager

CA-ELAP ID: 1230 · NELAP ID: 03220CA · CSDLAC ID: 10109 · SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 · TEL:(714) 895-5494 · FAX: (714) 894-7501





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received:
Work Order No:
Preparation:

Method: LUFT GC/MS / EPA 8260B Units: mg/kg

Project: 2301-2307 Lincoln Ave., Alameda, CA

Page 1 of 3

02/28/09

09-02-2549

**EPA 5030B** 

	,										
Client Sample Number				ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Ti Analyz		QC Batch ID
B-5-5.5'			09-02-	2549-1-A	02/27/09 10:29	Solid	GC/MS UU	03/09/09	03/09/ 19:40		090309L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl E	ther (MTB	E)	ND	0.0050	1	
Toluene	ND	0.0050	1		TPPH			ND	0.50	1	
Surrogates:	<u>REC (%)</u>	Control Limits		Qual	Surrogates:			REC (%)	Control Limits		Qual
Dibromofluoromethane	106	73-139			1,2-Dichloroeth	ane-d4		114	73-145		
Toluene-d8	100	90-108			1,4-Bromofluor	obenzene		88	71-113		
Toluene-d8-TPPH	101	88-112									
B-5-8.5'			09-02-	2549-2-A	02/27/09 10:33	Solid	GC/MS UU	03/09/09	03/09/ 22:32		090309L01
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	DF	Qual
Benzene	ND	0.0050	1	<u> </u>	Xylenes (total)				0.0050	1	<u> </u>
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl E	ther (MTR	ιF)		0.0050	1	
Toluene	ND	0.0050	1		TPPH	Luioi (ivii D	· <b>-</b> /		0.50	1	
Surrogates:	REC (%)	Control	•	Qual	Surrogates:			REC (%)	Control		Qual
<u>Janoganos.</u>		Limits		<u> </u>	<u>ourrogatoor</u>		•		Limits		<del>Q G G G</del>
Dibromofluoromethane	102	73-139			1,2-Dichloroeth	ane-d4		109	73-145		
Toluene-d8	99	90-108			1,4-Bromofluor	obenzene		89	71-113		
Toluene-d8-TPPH	100	88-112									
B-7-5.5'			09-02-	2549-3-A	02/27/09 09:08	Solid	GC/MS UU	03/09/09	03/09/ 22:5		090309L01
Parameter	Result	<u>RL</u>	DF	Qual	Parameter			Result	<u>RL</u>	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)				0.0050	1	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl E	ther (MTR	ιF)		0.0050	1	
Toluene	ND	0.0050	1		TPPH	or (IIII D	-,		0.50	1	
Surrogates:	REC (%)	Control	•	Qual	Surrogates:			REC (%)	Control		Qual
	·· (10)	Limits					•	<del>- \/</del>	Limits		
Dibromofluoromethane	102	73-139			1,2-Dichloroeth	ane-d4		109	73-145		
Toluene-d8	98	90-108			1,4-Bromofluor	obenzene		87	71-113		
Toluene-d8-TPPH	99	88-112									

Muha

DF - Dilution Factor , Qual - Qualifiers





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

Date Received: Work Order No: 09-02-2549 Preparation: **EPA 5030B** Method:

LUFT GC/MS / EPA 8260B Units:

mg/kg

Project: 2301-2307 Lincoln Ave., Alameda, CA

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02/28/09

110,000. 2001 2001		Marrice	<i>i</i> a, 0/ (	1						agc	2 01 0
Client Sample Number				b Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Tim Analyze		C Batch ID
B-7-8.5'			09-02-2	2549-4-A	02/27/09 09:09	Solid	GC/MS UU	03/09/09	03/09/09 21:43	9 09	90309L02
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>
Benzene	ND	0.50	100		Xylenes (total)			ND	0.50	100	
Ethylbenzene	ND	0.50	100		Methyl-t-Butyl I	Ether (MTB	BE)	ND	0.50	100	
Toluene	ND	0.50	100		TPPH			87	50	100	
Surrogates:	<u>REC (%)</u>	Control Limits		<u>Qual</u>	Surrogates:			REC (%)	Control Limits	<u>(</u>	<u>Qual</u>
Dibromofluoromethane	98	73-139			1,2-Dichloroeth	nane-d4		109	73-145		
Toluene-d8	105	90-108			1,4-Bromofluor	robenzene			71-113		
Toluene-d8-TPPH	107	88-112			•						
B-8-5.5'			09-02-2	2549-5-A	02/27/09 11:38	Solid	GC/MS UU	03/09/09	03/09/09 23:21	9 09	90309L01
Parameter Parameter	Result	<u>RL</u>	DF	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl I	Ether (MTB	BE)	ND	0.0050	1	
Toluene	ND	0.0050	1		TPPH	,	•	ND	0.50	1	
Surrogates:	REC (%)	Control		Qual	Surrogates:			REC (%)	Control	(	<u>Qual</u>
		<u>Limits</u>							<u>Limits</u>		
Dibromofluoromethane	101	73-139			1,2-Dichloroeth				73-145		
Toluene-d8	99	90-108			1,4-Bromofluor	robenzene		86	71-113		
Toluene-d8-TPPH	101	88-112									
B-8-8.5'			09-02-2	2549-6-A	02/27/09 11:42	Solid	GC/MS UU	03/09/09	03/09/09 22:08	9 09	90309L02
Parameter	Result	<u>RL</u>	DF	Qual	Parameter			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	20	4000		Xylenes (total)			150		4000	
Ethylbenzene	120	20	4000		Methyl-t-Butyl	Ether (MTR	SE)	ND		4000	
Foluene	ND	20	4000		TPPH		,			4000	
Surrogates:	<u>REC (%)</u>	Control Limits	.550	<u>Qual</u>	Surrogates:			REC (%)	Control Limits		Qual
Dibromofluoromethane	98	73-139			1.2-Dichloroeth	nane-d4		107	73-145		
Foluene-d8	105	90-108			1,4-Bromofluor				71-113		
Foluene-d8-TPPH	107	88-112			,			<del>-</del> -			
		50 11 <u>2</u>									

DF - Dilution Factor Qual - Qualifiers



Method:

Units:



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: 02/28/09 09-02-2549 EPA 5030B

LUFT GC/MS / EPA 8260B mg/kg

Da == 0 = f 0

Project: 2301-2307 Lincoln Ave., Alameda, CA

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Client Sample Number				b Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Ti d Analyz		QC Batch ID
Method Blank			099-12	-798-317	N/A	Solid	GC/MS UU	03/09/09	03/09/ 18:20		090309L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		Methyl-t-Butyl	Ether (MTB	E)	ND	0.0050	1	
Toluene	ND	0.0050	1		TPPH	`	,	ND	0.50	1	
Surrogates:	REC (%)	Control Limits		<u>Qual</u>	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	100	73-139			1,2-Dichloroetl	hane-d4		108	73-145		
Toluene-d8	97	90-108			1,4-Bromofluo	robenzene		89	71-113		
Toluene-d8-TPPH	98	88-112									
Method Blank			099-12	-798-318	N/A	Solid	GC/MS UU	03/09/09	03/09/ 19:1		090309L02
Parameter	Result	RL	<u>DF</u>	Qual	<u>Parameter</u>			Result	RL	DF	Qual
Benzene	ND	0.50	100		Xylenes (total)			ND	0.50	10	0
Ethylbenzene	ND	0.50	100		Methyl-t-Butyl		E)	ND	0.50	10	=
Toluene	ND	0.50	100		TPPH	,	,	ND	50	10	=
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	99	73-139			1,2-Dichloroetl	hane-d4		111	73-145		
Toluene-d8	100	90-108			1,4-Bromofluo	robenzene		92	71-113		
Toluene-d8-TPPH	101	88-112									

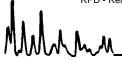




Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/28/09 09-02-2549 EPA 5030B LUFT GC/MS / EPA 8260B

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number	
B-5-5.5'	Solid	GC/MS UU	03/09/09		03/09/09	090309S01	
						<u>'</u>	
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	<u>Qualifiers</u>	
Benzene	99	99	79-115	1	0-13		
Carbon Tetrachloride	110	106	55-139	4	0-15		
Chlorobenzene	101	100	79-115	1	0-17		
1,2-Dibromoethane	99	100	70-130	1	0-30		
1,2-Dichlorobenzene	98	98	63-123	0	0-23		
1,1-Dichloroethene	106	104	69-123	2	0-16		
Ethylbenzene	107	106	70-130	1	0-30		
Toluene	101	100	79-115	1	0-15		
Trichloroethene	99	98	66-144	2	0-14		
Vinyl Chloride	99	100	60-126	1	0-14		
Methyl-t-Butyl Ether (MTBE)	101	95	68-128	6	0-14		
Tert-Butyl Alcohol (TBA)	94	93	44-134	1	0-37		
Diisopropyl Ether (DIPE)	110	110	75-123	0	0-12		
Ethyl-t-Butyl Ether (ETBE)	107	107	75-117	0	0-12		
Tert-Amyl-Methyl Ether (TAME)	104	105	79-115	1	0-12		
Ethanol	89	99	42-138	10	0-28		







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

Date Received: Work Order No: Preparation: Method:

N/A 09-02-2549 **EPA 5030B** 

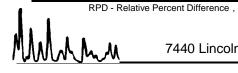
LUFT GC/MS / EPA 8260B

Project: 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date ument Prepared		ate yzed	LCS/LCSD   Numbe	
099-12-798-317	Solid	GC/MS UU	03/09/09	03/09	/09	090309L	01
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	101	98	84-114	79-119	3	0-7	
Carbon Tetrachloride	111	106	66-132	55-143	5	0-12	
Chlorobenzene	104	100	87-111	83-115	4	0-7	
1,2-Dibromoethane	105	101	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	103	102	79-115	73-121	1	0-8	
1,1-Dichloroethene	109	104	73-121	65-129	5	0-12	
Ethylbenzene	109	106	80-120	73-127	3	0-20	
Toluene	104	101	78-114	72-120	3	0-7	
Trichloroethene	104	102	84-114	79-119	1	0-8	
Vinyl Chloride	97	97	63-129	52-140	0	0-15	
Methyl-t-Butyl Ether (MTBE)	109	106	77-125	69-133	3	0-11	
Tert-Butyl Alcohol (TBA)	96	91	47-137	32-152	5	0-27	
Diisopropyl Ether (DIPE)	117	114	76-130	67-139	3	0-8	
Ethyl-t-Butyl Ether (ETBE)	116	112	76-124	68-132	4	0-12	
Tert-Amyl-Methyl Ether (TAME)	111	108	82-118	76-124	3	0-11	
Ethanol	87	86	59-131	47-143	1	0-21	
TPPH	98	91	65-135	53-147	8	0-30	

Total number of LCS compounds: 17 Total number of ME compounds: 0 Total number of ME compounds allowed :

LCS ME CL validation result: Pass







Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method:

09-02-2549 EPA 5030B

N/A

LUFT GC/MS / EPA 8260B

Project: 2301-2307 Lincoln Ave., Alameda, CA

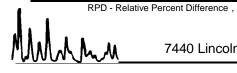
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed		LCS/LCSD I Numbe	
099-12-798-318	Solid	GC/MS UU	03/09/09	03/09	/09	090309L	02
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	101	98	84-114	79-119	3	0-7	
Carbon Tetrachloride	111	106	66-132	55-143	5	0-12	
Chlorobenzene	104	100	87-111	83-115	4	0-7	
1,2-Dibromoethane	105	101	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	103	102	79-115	73-121	1	0-8	
1,1-Dichloroethene	109	104	73-121	65-129	5	0-12	
Ethylbenzene	109	106	80-120	73-127	3	0-20	
Toluene	104	101	78-114	72-120	3	0-7	
Trichloroethene	104	102	84-114	79-119	1	0-8	
Vinyl Chloride	97	97	63-129	52-140	0	0-15	
Methyl-t-Butyl Ether (MTBE)	109	106	77-125	69-133	3	0-11	
Tert-Butyl Alcohol (TBA)	96	91	47-137	32-152	5	0-27	
Diisopropyl Ether (DIPE)	117	114	76-130	67-139	3	0-8	
Ethyl-t-Butyl Ether (ETBE)	116	112	76-124	68-132	4	0-12	
Tert-Amyl-Methyl Ether (TAME)	111	108	82-118	76-124	3	0-11	
Ethanol	87	86	59-131	47-143	1	0-21	
TPPH	98	91	65-135	53-147	8	0-30	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed:

LCS ME CL validation result: Pass





# **Glossary of Terms and Qualifiers**



Work Order Number: 09-02-2549

Qualifier	<u>Definition</u>
*	See applicable analysis comment.
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 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 with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
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.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

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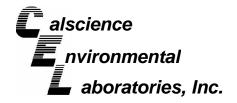


WORK ORDER #: **09-** □ □ □ □ □ □ □

SAMPLE RECEIPT FORM

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Cooler	(	of	- (

CLIENT: Conestaga-Rover DATE: > 12810	7
TEMPERATURE: (Criteria: 0.0 °C - 6.0 °C, not frozen)  Temperature	
CUSTODY SEALS INTACT:  Cooler	
SAMPLE CONDITION: Yes No N/A   Chain-Of-Custody (COC) document(s) received with samples. Image: Coccument container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container. Image: Coccument container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container container containe	
CONTAINER TYPE:  Solid:	3





March 17, 2009

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

Subject: Calscience Work Order No.: 09-02-2187

Client Reference: 2301-2307 Lincol Ave, Alameda

#### **Dear Client:**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/25/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental

Philip Samelle for

Laboratories, Inc.

Jessie Kim

Project Manager

CA-ELAP

NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 ·

TEL:(714) 895-5494 ·

FAX: (714) 894-7501





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

Date Received: Work Order No:

02/25/09 09-02-2187

Preparation: Method:

EPA 3050B / EPA 7471A Total EPA 6010B / EPA 7471A

mg/kg

Units:

Project: 2301-2307 Lincol Ave, Alameda

Result

ND

ND

ND

Page 1 of 1

Client Sample Nu	mber		Lab Sample Number		Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Ba	tch ID
CRA-A			09-02-2187-5-A		02/24/09 00:00	Solid	ICP 5300	03/03/09	03/04/09 13:31	09030	3L02A
Comment(s):	-Mercury was analyze	ed on 3/4/2009 1	:08:59 PM with batc	h 090	303L03						
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u> (	<u>Qual</u>	<u>Parameter</u>		Result	<u>RL</u>		<u>DF</u>	Qual
Antimony	ND	0.750	1		Mercury		ND	0.08	35	1	
Arsenic	2.15	0.750	1		Molybdenum	1	ND	0.25	0	1	
Barium	65.6	0.500	1		Nickel		20.6	0.25	0	1	
Beryllium	0.265	0.250	1		Selenium		ND	0.75	0	1	
Cadmium	ND	0.500	1		Silver		ND	0.25	0	1	
Chromium	30.0	0.250	1		Thallium		ND	0.75	0	1	
Cobalt	4.08	0.250	1		Vanadium		19.1	0.25	0	1	
Copper	7.27	0.500	1		Zinc		46.3	1.00		1	
Lead	40.2	0.500	1								
Method Blank			099-04-007-6,1	55	N/A	Solid	Mercury	03/03/09	03/03/09 14:11	09030	3L03

Mercury	ND	0.0835	1							
Method Blank			097-01-002-12,090	N/A	Solid	ICP 5300	03/03/09	03/03/09 20:21	09030	3L02A
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u> Qua	<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>	Qual
Antimony	ND	0.750	1	Lead		ND	0.500		1	
Arsenic	ND	0.750	1	Molybdenum		ND	0.250		1	
Barium	ND	0.500	1	Nickel		ND	0.250		1	
Beryllium	ND	0.250	1	Selenium		ND	0.750		1	
Cadmium	ND	0.500	1	Silver		ND	0.250		1	

Thallium

Zinc

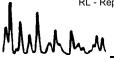
Vanadium

Qual

<u>DF</u>

1

1



<u>Parameter</u>

Chromium

Cobalt

Copper

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

<u>RL</u>

0.250

0.250

0.500

ND

ND

0.750

0.250

1.00

1

1





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/25/09 09-02-2187 EPA 3550B EPA 8015B

Project: 2301-2307 Lincol Ave, Alameda

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-A	09-02-2187-5-A	02/24/09 00:00	Solid	GC 46	03/02/09	03/02/09 23:05	090302B03

Comment(s): -The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation

of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

ParameterResultRLDFQualUnitsDiesel Range Organics185.01mg/kg

Surrogates: REC (%) Control Limits Qual

Decachlorobiphenyl 131 61-145

Method Blank		099-12-025-641	N/A	Solid	GC 46	03/02/09	03/02/09 20:14	090302B03	
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>				
Diesel Range Organics	ND	5.0	1		mg/kg				
Surrogates:	<u>REC (%)</u>	Control Limits		Qual					
Decachlorobiphenyl	97	61-145							





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/25/09 09-02-2187 EPA 3550B EPA 8015B (M)

Project: 2301-2307 Lincol Ave, Alameda

Page 1 of 1

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Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-A		09-02-2187-5-A	02/24/09 00:00	Solid	GC 46	03/02/09	03/02/09 23:05	090302B04
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
TPH as Motor Oil	120	25	1		mg/kg			
<u>Surrogates:</u>	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	131	61-145						
Method Blank		099-12-254-693	N/A	Solid	GC 46	03/02/09	03/02/09 20:14	090302B04
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
TPH as Motor Oil	ND	25	1		mg/kg			
Surrogates:	REC (%)	Control Limits		<u>Qual</u>				
Decachlorobiphenyl	97	61-145						





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method:

09-02-2187 DHS LUFT DHS LUFT

02/25/09

Project: 2301-2307 Lincol Ave, Alameda

Page 1 of 1

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Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-A		09-02-2187-5-A	02/24/09 00:00	Solid	FLAA	03/06/09	03/06/09 15:50	090306L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
Organic Lead	ND	1.00	1		mg/kg			
Method Blank		099-10-020-1,151	N/A	Solid	FLAA	03/06/09	03/06/09 15:50	090306L01
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
Organic Lead	ND	1.00	1		mg/kg			



Units:



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/25/09 09-02-2187

EPA 5030B LUFT GC/MS / EPA 8260B

mg/kg

Project: 2301-2307 Lincol Ave, Alameda

Page 1 of 1

Client Sample Number				ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Ti Analyz		QC Batch ID
CRA-A			09-02-	2187-5-A	02/24/09 00:00	Solid	GC/MS UU	03/02/09	03/03/0 05:35		090302L03
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		TPPH			ND	0.50	1	
Toluene	ND	0.0050	1								
Surrogates:	<u>REC (%)</u>	Control Limits		<u>Qual</u>	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	99	73-139			1,2-Dichloroetha	ane-d4		101	73-145		
Toluene-d8	98	90-108			1,4-Bromofluoro	benzene		88	71-113		
Toluene-d8-TPPH	99	88-112									
Method Blank			099-12	-798-305	N/A	Solid	GC/MS UU	03/02/09	03/03/0 01:31		090302L03
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		TPPH			ND	0.50	1	
Toluene	ND	0.0050	1								
Surrogates:	<u>REC (%)</u>	Control Limits		Qual	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	100	73-139			1,2-Dichloroetha	ane-d4		101	73-145		
Tal., a.a. a.d0	98	90-108			1,4-Bromofluoro	henzene		86	71-113		
Toluene-d8	90	90-100			1,4 Diomondore	DOILECTIC		00	7 1 1 10		





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/25/09 09-02-2187 EPA 3050B EPA 6010B

Project 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
09-03-0039-1	Solid	ICP 5300	03/03/09		03/05/09	090303S02
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	8	5	80-120	45	0-20	3
Arsenic	118	109	80-120	6	0-20	
Barium	4X	4X	80-120	4X	0-20	Q
Beryllium	105	105	80-120	0	0-20	
Cadmium	101	100	80-120	1	0-20	
Chromium	108	99	80-120	4	0-20	
Cobalt	107	103	80-120	3	0-20	
Copper	115	103	80-120	6	0-20	
Lead	104	95	80-120	7	0-20	
Molybdenum	88	88	80-120	1	0-20	
Nickel	108	102	80-120	3	0-20	
Selenium	100	97	80-120	3	0-20	
Silver	105	106	75-120	0	0-20	
Thallium	91	92	80-120	1	0-20	
Vanadium	115	104	80-120	4	0-20	
Zinc	108	86	80-120	6	0-20	

Mulling.





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/25/09 09-02-2187 EPA 3550B EPA 8015B

#### Project 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-02-2190-4	Solid	GC 46	03/02/09	03/02/09	090302S03
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD R	PD CL Qualifiers
Diesel Range Organics	85	87	64-130	2	0-15

All Marie

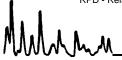




Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/25/09 09-02-2187 EPA 3550B EPA 8015B (M)

#### Project 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-02-2190-4	Solid	GC 46	03/02/09	03/02/09	090302\$04
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD RPD CI	_ Qualifiers
TPH as Motor Oil	93	93	64-130	0 0-15	







Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/25/09 09-02-2187 DHS LUFT DHS LUFT

#### Project 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date alyzed	MS/MSD Batch Number
09-03-0427-1	Solid	FLAA	03/06/09	03	8/06/09	090306S01
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
Organic Lead	56	54	22-148	3	0-18	

RPD - Rel





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/25/09 09-02-2187 EPA 7471A Total EPA 7471A

Project 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-03-0039-1	Solid	Mercury	03/03/09	03/03/09	090303803
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD RPD	CL Qualifiers
Mercury	107	116	80-120	8 0-	16



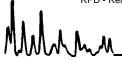




Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/25/09 09-02-2187 EPA 5030B LUFT GC/MS / EPA 8260B

Project 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number	
09-02-2191-1	Solid	GC/MS UU	03/02/09		03/02/09	090302S01	
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers	
Benzene	99	97	79-115	2	0-13		
Carbon Tetrachloride	104	96	55-139	8	0-15		
Chlorobenzene	100	100	79-115	1	0-17		
1,2-Dibromoethane	95	99	70-130	4	0-30		
1,2-Dichlorobenzene	97	99	63-123	2	0-23		
1,1-Dichloroethene	106	98	69-123	7	0-16		
Ethylbenzene	109	104	70-130	4	0-30		
Toluene	102	99	79-115	3	0-15		
Trichloroethene	99	95	66-144	4	0-14		
Vinyl Chloride	107	103	60-126	4	0-14		
Methyl-t-Butyl Ether (MTBE)	94	98	68-128	4	0-14		
Tert-Butyl Alcohol (TBA)	78	93	44-134	18	0-37		
Diisopropyl Ether (DIPE)	101	102	75-123	1	0-12		
Ethyl-t-Butyl Ether (ETBE)	101	105	75-117	4	0-12		
Tert-Amyl-Methyl Ether (TAME)	100	105	79-115	4	0-12		
Ethanol	72	90	42-138	22	0-28		







Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2187 EPA 3050B EPA 6010B

Project: 2301-2307 Lincol Ave, Alameda

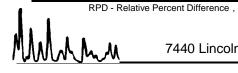
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed				LCS/LCSD Numbe	
097-01-002-12,090	Solid	ICP 5300	03/03/09	03/03	/09	090303L0	2A		
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers		
Antimony	97	97	80-120	73-127	0	0-20			
Arsenic	95	94	80-120	73-127	1	0-20			
Barium	102	102	80-120	73-127	0	0-20			
Beryllium	93	94	80-120	73-127	0	0-20			
Cadmium	98	97	80-120	73-127	0	0-20			
Chromium	95	95	80-120	73-127	0	0-20			
Cobalt	105	104	80-120	73-127	1	0-20			
Copper	102	102	80-120	73-127	0	0-20			
Lead	101	100	80-120	73-127	1	0-20			
Molybdenum	100	99	80-120	73-127	2	0-20			
Nickel	100	100	80-120	73-127	0	0-20			
Selenium	90	90	80-120	73-127	0	0-20			
Silver	99	99	80-120	73-127	0	0-20			
Thallium	100	99	80-120	73-127	1	0-20			
Vanadium	96	96	80-120	73-127	0	0-20			
Zinc	98	97	80-120	73-127	1	0-20			

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass







Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2187 EPA 3550B EPA 8015B

Project: 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyze	ed	LCS/LCSD Batc Number	h
099-12-025-641	Solid	GC 46	03/02/09	03/02/09	)	090302B03	
<u>Parameter</u>	LCS %	REC LCSD	%REC %	REC CL	<u>RPD</u>	RPD CL	Qualifiers
Diesel Range Organics	91	87		75-123	4	0-12	

MM.\_\_\_\_





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2187 EPA 3550B EPA 8015B (M)

Project: 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da Analy		LCS/LCSD Batc Number	h
099-12-254-693	Solid	GC 46	03/02/09	03/02	/09	090302B04	
<u>Parameter</u>	LCS %	REC LCSD	%REC 9	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	90	91		75-123	0	0-12	

MM. ....

# alscience nvironmental Quality Control - Laboratory Control Sample aboratories, Inc.



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method:

09-02-2187 DHS LUFT DHS LUFT

N/A

Project: 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
099-10-020-1,151	Solid	FLAA	03/06/09	NONE	090306L01
<u>Parameter</u>		Conc Added	Conc Recovered	LCS %Rec	%Rec CL Qualifiers
Organic Lead		25.0	27.1	108	72-126

RPD - Relative Percent Difference ,
7440 Lincoln

, CL - Control Limit





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2187 EPA 7471A Total EPA 7471A

Project: 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyz		LCS/LCSD Batc Number	h
099-04-007-6,155	Solid	Mercury	03/03/09	03/03/0	)9	090303L03	
<u>Parameter</u>	LCS %	6REC LCSD	<u>%REC</u> <u>%</u>	REC CL	<u>RPD</u>	RPD CL	Qualifiers
Mercury	106	106		85-121	0	0-10	

MM. RPD - RBI





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

Date Received: Work Order No: Preparation: Method:

09-02-2187 EPA 5030B

N/A

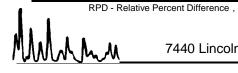
LUFT GC/MS / EPA 8260B

Project: 2301-2307 Lincol Ave, Alameda

Quality Control Sample ID	Matrix	Instrument	Date Prepared		ate yzed	LCS/LCSD E Number	
099-12-798-305	Solid	GC/MS UU	03/02/09	03/03	/09	090302L0	)3
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	<u>RPD</u>	RPD CL	Qualifiers
Benzene	96	96	84-114	79-119	0	0-7	
Carbon Tetrachloride	96	94	66-132	55-143	1	0-12	
Chlorobenzene	98	99	87-111	83-115	1	0-7	
1,2-Dibromoethane	103	105	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	98	100	79-115	73-121	2	0-8	
1,1-Dichloroethene	98	98	73-121	65-129	0	0-12	
Ethylbenzene	103	104	80-120	73-127	1	0-20	
Toluene	97	97	78-114	72-120	0	0-7	
Trichloroethene	97	98	84-114	79-119	2	0-8	
Vinyl Chloride	102	102	63-129	52-140	0	0-15	
Methyl-t-Butyl Ether (MTBE)	101	96	77-125	69-133	5	0-11	
Tert-Butyl Alcohol (TBA)	100	98	47-137	32-152	1	0-27	
Diisopropyl Ether (DIPE)	103	101	76-130	67-139	2	0-8	
Ethyl-t-Butyl Ether (ETBE)	105	103	76-124	68-132	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	105	104	82-118	76-124	0	0-11	
Ethanol	102	102	59-131	47-143	0	0-21	
TPPH	92	90	65-135	53-147	3	0-30	

Total number of LCS compounds: 17 Total number of ME compounds: 0 Total number of ME compounds allowed :

LCS ME CL validation result: Pass





# **Glossary of Terms and Qualifiers**



Work Order Number: 09-02-2187

Qualifier	<u>Definition</u>
*	See applicable analysis comment.
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 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 with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
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.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

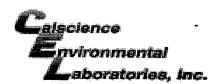
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	,,,																															



## Contingent analyses

- Organic lead required if TTLC lead ≥ 13 mg/kg
- Aquatic bioassay required if any TPH (gasoline, diesel, or motor oil) ≥ 5,000 mg/kg
- TCLP benzene required if benzene ≥ 10 mg/kg
- TCLP and STLC required for metals per table below

	Trigger level	
Metal	Trigger level TTLC	Dogwinama aut
	(mg/kg)	Requirement
Antimony		CONT
7 Hitimony	150 ·	STLC required if TTLC ≥ 150 mg/kg
Arsenic	50/100	STLC required if TTLC ≥ 50 mg/kg;
Aisenic	50/100	STLC and TCLP required if TTLC ≥ 100 mg/kg
Barium	1 000/2 000	STLC required if TTLC > 1.000 mg/kg.
	1,000/2,000	STLC and TCLP required if TTLC > 2.000 mg/kg
Beryllium	7.5	STLC required if TTLC ≥ 7.5 mg/kg
Cadust		STLC required if TTLC > 10 mg/kg
Cadmium	10/20	STLC and TCLP required if TTLC > 20 mg/kg
CI.		STLC required if TTLC $\geq$ 50 mg/kg:
Chromium	50/100	STLC and TCLP required if TTLC > 100 mg/kg
Cobalt	800	STLC required if TTLC ≥ 800 mg/kg
Copper	250	STLC required if TTLC ≥ 250 mg/kg
•		STLC required if TTLC ≥ 50 mg/kg;
Lead	50/100	STLC and TCLP required if TTLC ≥ 100 mg/kg
		STLC required if TTLC ≥ 2 mg/kg;
Mercury	2/4	STLC and TCLP required if TTLC ≥ 4 mg/kg
Molybdenum	350	STLC required if TTLC $\geq$ 350 mg/kg
Nickel	200	STLC required if TTLC ≥ 200 mg/kg
		STLC required if TTLC ≥ 10 mg/kg;
Selenium	10/20	STLC and TCLP required if TTLC \ge 20 mg/kg
		STLC required if TTLC \ge 50 mg/kg;
Silver	50/100	STLC and TCLP required if TTLC ≥ 100 mg/kg
Thallium	70	STLC required if TTLC ≥ 70 mg/kg
Vanadium	240	STLC required if TTLC ≥ 70 mg/kg  STLC required if TTLC ≥ 240 mg/kg
Zinc	2,500	STI C required if TTI C > 2.500 g
	2,500	STLC required if TTLC ≥ 2,500 mg/kg



WORK ORDER #: **09-** □ **2- 2 1 8 7** 

# saboratories, Inc. SAMPLE RECEIPT FORM

Cooler <u>'</u> of <u>'</u>

CLIENT: DATE: DATE:										
TEMPERATURE: (Criteria: 0.0 °C - 6.0 °C, not frozen)  Temperature										
CUSTODY SEALS INTACT:										
COSTODY SEALS INTACT:  Cooler										
SAMPLE CONDITION: Yes No N/A										
Chain-Of-Custody (COC) document(s) received with samples										
COC document(s) received complete										
Sampler's name indicated on COC										
Sample container label(s) consistent with COC										
Sample container(s) intact and good condition										
Correct containers and volume for analyses requested										
Analyses received within holding time										
Proper preservation noted on COC or sample container										
Volatile analysis container(s) free of headspace										
Tedlar bag(s) free of condensation										
CONTAINER TYPE:										
Solid: □4ozCGJ □8ozCGJ □16ozCGJ ☑Sleeve □EnCores® □TerraCores® □										
Water: □VOA □VOAh □VOAna₂ □125AGB □125AGBh □125AGBpo₄ □1AGB □1AGBna₂										
□1AGBs □500AGB □500AGBs □250CGB □250CGBs □1PB □500PB □500PBna □250PB										
□250PBn □125PB □125PBznna □100PBsterile □100PBna₂ □ □ □ □										
Air: Tedlar® Summa® — Checked/Labeled by: Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle  Preservative: h:HCL n:HNO3 na2:Na2S2O3 na:NaOH po4:H3PO4 s:H2SO4 znna:ZnAc2+NaOH Scanned by:										

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March 18, 2009

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

Subject: Calscience Work Order No.: 09-02-2414

Client Reference: 2301-2307 Lincoln Ave., Alameda, CA

#### **Dear Client:**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/27/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental Laboratories, Inc.

Philip Samelle for

Jessie Kim

Project Manager

CA-ELAP ID: 1230 · NELAP ID: 03220CA · CSDLAC ID: 10109 · SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 · TEL:(714) 895-5494 · FAX: (714) 894-7501





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

Date Received: Work Order No:

02/27/09 09-02-2414

Preparation:

EPA 3050B / EPA 7471A Total

Method:

EPA 6010B / EPA 7471A

Units:

mg/kg

Project: 2301-2307 Lincoln Ave., Alameda, CA

Result

<u>RL</u>

Page 1 of 1

Client Sample Nu	mber		Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Ba	tch ID
CRA-B			09-02-2414-5-A	02/25/09 00:00	Solid	ICP 5300	03/06/09	03/07/09 16:56	09030	6L01
Comment(s):	-Mercury was analyze	ed on 3/6/2009 9	:51:08 PM with batch 0	90306L05						
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u> Qua	al Parameter		Result	<u>RL</u>		<u>DF</u>	Qual
Antimony	ND	0.750	1	Mercury		0.119	0.083	35	1	
Arsenic	2.12	0.750	1	Molybdenun	า	ND	0.250	)	1	
Barium	45.5	0.500	1	Nickel		25.7	0.250	)	1	
Beryllium	ND	0.250	1	Selenium		ND	0.750	)	1	
Cadmium	ND	0.500	1	Silver		ND	0.250	)	1	
Chromium	30.5	0.250	1	Thallium		ND	0.750	)	1	
Cobalt	4.41	0.250	1	Vanadium		19.2	0.250	)	1	
Copper	6.07	0.500	1	Zinc		28.4	1.00		1	
Lead	16.8	0.500	1							
Method Blank			099-04-007-6,162	N/A	Solid	Mercury	03/06/09	03/06/09 21:20	09030	6L05

Mercury	ND	0.0835	1								
Method Blank			097-01-002-	12,101	N/A	Solid	ICP 5300	03/06/09	03/07/09 16:29	090306	6L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>		Result	<u>RL</u>		<u>DF</u>	<u>Qual</u>
Antimony	ND	0.750	1		Lead		ND	0.500		1	
Arsenic	ND	0.750	1		Molybdenum		ND	0.250		1	
Barium	ND	0.500	1		Nickel		ND	0.250		1	
Beryllium	ND	0.250	1		Selenium		ND	0.750		1	
Cadmium	ND	0.500	1		Silver		ND	0.250		1	
Chromium	ND	0.250	1		Thallium		ND	0.750		1	
Cobalt	ND	0.250	1		Vanadium		ND	0.250		1	
Copper	ND	0.500	1		Zinc		ND	1.00		1	

Qual

DF

RL - Reporting Limit ,

<u>Parameter</u>

DF - Dilution Factor ,

Qual - Qualifiers





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

Date Received: Work Order No: Preparation: Method:

09-02-2414 EPA 3550B EPA 8015B

02/27/09

Project: 2301-2307 Lincoln Ave., Alameda, CA Page 1 of 1											
Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID			
CRA-B		09-02-2414-5-A	02/25/09 00:00	Solid	GC 46	03/02/09	03/02/09 22:49	090302B03			
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>						
Diesel Range Organics	ND	5.0	1		mg/kg						
Surrogates:	REC (%)	Control Limits		Qual							
Decachlorobiphenyl	133	61-145									
Method Blank		099-12-025-641	N/A	Solid	GC 46	03/02/09	03/02/09 20:14	090302B03			
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>						
Diesel Range Organics	ND	5.0	1		mg/kg						
Surrogates:	REC (%)	Control Limits		<u>Qual</u>							

Decachlorobiphenyl

97

61-145





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/27/09 09-02-2414 EPA 3550B EPA 8015B (M)

Project: 2301-2307 Lincoln Ave., Alameda, CA

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Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-B		09-02-2414-5-A	02/25/09 00:00	Solid	GC 46	03/02/09	03/02/09 22:49	090302B04
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
TPH as Motor Oil	ND	25	1		mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	133	61-145						
Method Blank		099-12-254-693	N/A	Solid	GC 46	03/02/09	03/02/09 20:14	090302B04
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
TPH as Motor Oil	ND	25	1		mg/kg			
Surrogates:	REC (%)	Control Limits		<u>Qual</u>				
Decachlorobiphenyl	97	61-145						





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method:

09-02-2414 DHS LUFT DHS LUFT

02/27/09

Project: 2301-2307 Lincoln Ave., Alameda, CA

Client Sample Number     Lab Sample Number     Date/Time Collected     Matrix     Instrument     Date Prepared       CRA-B     09-02-2414-5-A     02/25/09 00:00     Solid     FLAA     03/11/09       Parameter     Result     RL     DF     Qual     Units       Organic Lead     ND     1.00     1     mg/kg	Date/Time Analyzed 03/11/09 15:50	QC Batch ID 090311L01
Parameter Result RL DF Qual Units		090311L01
Organic Lead ND 1.00 1 mg/kg		
Method Blank 099-10-020-1,148 N/A Solid FLAA 03/11/09	03/11/09 15:50	090311L01
<u>Parameter</u> <u>Result</u> <u>RL</u> <u>DF</u> <u>Qual</u> <u>Units</u>		
Organic Lead ND 1.00 1 mg/kg		





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: 02/27/09
Work Order No: 09-02-2414
Preparation: EPA 5030B
Method: LUFT GC/MS / EPA 8260B

Units: mg/kg

Project: 2301-2307 Lincoln Ave., Alameda, CA

Page 1 of 1

<u>Limits</u>

73-145

71-113

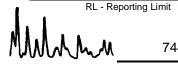
109

98

Client Sample Number				b Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Tim Analyzed	_	C Batch ID
CRA-B			09-02-2	2414-5-A	02/25/09 00:00	Solid	GC/MS PP	03/07/09	03/07/09 16:33	0	90307L02
<u>Parameter</u>	Result	<u>RL</u>	DF	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	2.0	400		Xylenes (total)			ND	2.0	400	
Ethylbenzene	ND	2.0	400		TPPH			210	200	400	
Toluene	ND	2.0	400								
Surrogates:	<u>REC (%)</u>	Control Limits		<u>Qual</u>	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	112	73-139			1,2-Dichloroetha	ane-d4		113	73-145		
Toluene-d8	106	90-108			1,4-Bromofluoro	benzene		102	71-113		
Toluene-d8-TPPH	105	88-112									
Method Blank			099-12	-798-315	N/A	Solid	GC/MS PP	03/07/09	03/07/09 14:25	0	90307L02
<u>Parameter</u>	Result	<u>RL</u>	DF	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	0.50	100		Xylenes (total)			ND	0.50	100	
Ethylbenzene	ND	0.50	100		TPPH			ND	50	100	
Toluene	ND	0.50	100								
Surrogates:	REC (%)	Control		Qual	Surrogates:			REC (%)	Control		Qual

1,2-Dichloroethane-d4

1,4-Bromofluorobenzene



Dibromofluoromethane

Toluene-d8-TPPH

Toluene-d8

DF - Dilution Factor , Qual - Qualifiers

<u>Limits</u>

73-139

90-108

88-112

108

101

101

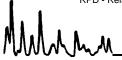




Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/27/09 09-02-2414 EPA 3050B EPA 6010B

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
09-03-0363-11	Solid	ICP 5300	03/06/09	03/07/09		090306S01
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	22	24	50-115	13	0-20	3
Arsenic	96	98	75-125	2	0-20	
Barium	98	103	75-125	1	0-20	
Beryllium	99	99	75-125	1	0-20	
Cadmium	96	97	75-125	1	0-20	
Chromium	97	99	75-125	1	0-20	
Cobalt	99	101	75-125	2	0-20	
Copper	101	104	75-125	2	0-20	
Lead	99	100	75-125	1	0-20	
Molybdenum	82	84	75-125	2	0-20	
Nickel	89	92	75-125	1	0-20	
Selenium	84	82	75-125	2	0-20	
Silver	96	97	75-125	1	0-20	
Thallium	89	88	75-125	1	0-20	
Vanadium	94	97	75-125	1	0-20	
Zinc	93	100	75-125	2	0-20	



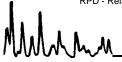




Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/27/09 09-02-2414 EPA 3550B EPA 8015B

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		ate I yzed	MS/MSD Batch Number
09-02-2190-4	Solid	GC 46	03/02/09	03/0	2/09	090302S03
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
Diesel Range Organics	85	87	64-130	2	0-15	



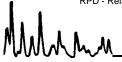




Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/27/09 09-02-2414 EPA 3550B EPA 8015B (M)

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date alyzed	MS/MSD Batch Number
09-02-2190-4	Solid	GC 46	03/02/09	03/	/02/09	090302S04
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
TPH as Motor Oil	93	93	64-130	0	0-15	







Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/27/09 09-02-2414 DHS LUFT DHS LUFT

#### Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date nalyzed	MS/MSD Batch Number
CRA-B	Solid	FLAA	03/11/09	0:	3/11/09	090311S01
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
Organic Lead	77	78	22-148	2	0-18	

MMM\_





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/27/09 09-02-2414 EPA 7471A Total EPA 7471A

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CRA-B	Solid	Mercury	03/06/09	03/06/09	090306S05
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD RPD C	CL Qualifiers
Mercury	87	88	71-137	1 0-14	

MMM\_

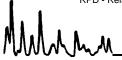




Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/27/09 09-02-2414 EPA 5030B LUFT GC/MS / EPA 8260B

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	,	Date Analyzed	MS/MSD Batch Number
09-02-2320-1	Solid	GC/MS PP	03/07/09		03/07/09	090307S01
						•
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	99	100	79-115	1	0-13	
Carbon Tetrachloride	97	107	55-139	10	0-15	
Chlorobenzene	92	90	79-115	2	0-13	
1,2-Dibromoethane	94	86	70-130	9	0-30	
1,2-Dichlorobenzene	89	82	63-123	8	0-23	
1,1-Dichloroethene	109	111	69-123	2	0-16	
Ethylbenzene	93	93	70-130	1	0-30	
Toluene	99	100	79-115	0	0-15	
Trichloroethene	95	97	66-144	2	0-14	
Vinyl Chloride	137	122	60-126	12	0-14	3
Methyl-t-Butyl Ether (MTBE)	107	99	68-128	8	0-14	
Tert-Butyl Alcohol (TBA)	96	64	44-134	41	0-37	4
Diisopropyl Ether (DIPE)	111	105	75-123	5	0-12	
Ethyl-t-Butyl Ether (ETBE)	106	101	75-117	5	0-12	
Tert-Amyl-Methyl Ether (TAME)	97	92	79-115	5	0-12	
Ethanol	87	29	42-138	101	0-28	4,3







Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2414 EPA 3050B EPA 6010B

Project: 2301-2307 Lincoln Ave., Alameda, CA

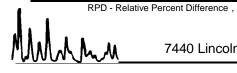
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da Anal		LCS/LCSD F Number	
097-01-002-12,101	Solid	ICP 5300	03/06/09	03/07/	/09	090306L0	01
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Antimony	104	104	80-120	73-127	0	0-20	
Arsenic	102	101	80-120	73-127	0	0-20	
Barium	104	104	80-120	73-127	1	0-20	
Beryllium	97	97	80-120	73-127	1	0-20	
Cadmium	104	104	80-120	73-127	0	0-20	
Chromium	101	101	80-120	73-127	0	0-20	
Cobalt	109	109	80-120	73-127	0	0-20	
Copper	102	103	80-120	73-127	0	0-20	
Lead	109	109	80-120	73-127	0	0-20	
Molybdenum	108	108	80-120	73-127	0	0-20	
Nickel	107	108	80-120	73-127	0	0-20	
Selenium	103	103	80-120	73-127	0	0-20	
Silver	101	101	80-120	73-127	1	0-20	
Thallium	105	105	80-120	73-127	1	0-20	
Vanadium	99	99	80-120	73-127	0	0-20	
Zinc	105	105	80-120	73-127	0	0-20	

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass



CL - Control Limit





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2414 EPA 3550B EPA 8015B

Project: 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyz		LCS/LCSD Batc Number	h
099-12-025-641	Solid	GC 46	03/02/09	03/02/	09	090302B03	
<u>Parameter</u>	LCS %	6REC LCSD	<u>%REC</u>	REC CL	<u>RPD</u>	RPD CL	Qualifiers
Diesel Range Organics	91	87		75-123	4	0-12	

MANA\_





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2414 EPA 3550B EPA 8015B (M)

Project: 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Dat Analy		LCS/LCSD Bato Number	h
099-12-254-693	Solid	GC 46	03/02/09	03/02/	/09	090302B04	
<u>Parameter</u>	LCS %	6REC LCSD	%REC	6REC CL	<u>RPD</u>	RPD CL	Qualifiers
TPH as Motor Oil	90	91		75-123	0	0-12	

MM. RPD - RBI

# alscience nvironmental Quality Control - Laboratory Control Sample aboratories, Inc.



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method:

09-02-2414 DHS LUFT DHS LUFT

N/A

Project: 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File I	LCS Batch Numbe	÷r
099-10-020-1,148	Solid	FLAA	03/11/09	NONE	090311L01	
<u>Parameter</u>		Conc Added	Conc Recovered	LCS %Rec	%Rec CL Quality	fiers
Organic Lead		25.0	25.5	102	72-126	

RPD - Relative Percent Difference ,
7440 Lincoln

CL - Control Limit





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2414 EPA 7471A Total EPA 7471A

Project: 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed		LCSD Batch Number	n
099-04-007-6,162	Solid	Mercury	03/06/09	03/06/09	0:	90306L05	
Parameter	LCS %	AREC LOSD	%REC %F	REC CL F	PD F	RPD CL	Qualifiers
Mercury	106			85-121	1	0-10	Qualificis

Mulling.





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2414 EPA 5030B

LUFT GC/MS / EPA 8260B

Project: 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da Anal	ate yzed	LCS/LCSD I Numbe	
099-12-798-315	Solid	GC/MS PP	03/07/09	03/07	/09	090307L	)2
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	103	103	84-114	79-119	1	0-7	
Carbon Tetrachloride	108	116	66-132	55-143	7	0-12	
Chlorobenzene	97	97	87-111	83-115	0	0-7	
1,2-Dibromoethane	98	100	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	95	94	79-115	73-121	1	0-8	
1,1-Dichloroethene	110	111	73-121	65-129	1	0-12	
Ethylbenzene	99	99	80-120	73-127	0	0-20	
Toluene	103	104	78-114	72-120	1	0-7	
Trichloroethene	102	103	84-114	79-119	1	0-8	
Vinyl Chloride	120	121	63-129	52-140	1	0-15	
Methyl-t-Butyl Ether (MTBE)	111	115	77-125	69-133	3	0-11	
Tert-Butyl Alcohol (TBA)	94	98	47-137	32-152	4	0-27	
Diisopropyl Ether (DIPE)	114	116	76-130	67-139	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	112	116	76-124	68-132	3	0-12	
Tert-Amyl-Methyl Ether (TAME)	105	107	82-118	76-124	3	0-11	
Ethanol	98	97	59-131	47-143	2	0-21	
TPPH	113	106	65-135	53-147	6	0-30	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed:

LCS ME CL validation result: Pass





#### **Glossary of Terms and Qualifiers**



Work Order Number: 09-02-2414

Qualifier	<u>Definition</u>
*	See applicable analysis comment.
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 or 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 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 with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
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.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

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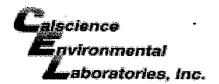


### Contingent analyses

Organic lead required if TTLC lead  $\geq$  13 mg/kg

- Aquatic bioassay required if any TPH (gasoline, diesel, or motor oil) ≥ 5,000 mg/kg
- TCLP benzene required if benzene ≥ 10 mg/kg
- TCLP and STLC required for metals per table below

Metal	Trigger level TTLC (mg/kg)	Requirement
Antimony	150	CTI C required if TTI C > 150 d
1 minority	130	STLC required if TTLC ≥ 150 mg/kg
Arsenic	50/100	STLC required if TTLC \geq 50 mg/kg;
	20/100	STLC and TCLP required if TTLC ≥ 100 mg/kg  STLC required if TTLC ≥ 1,000 mg/kg;
Barium	1,000/2,000	STLC required if TTLC ≥ 1,000 mg/kg; STLC and TCLP required if TTLC ≥ 2,000 mg/kg
Beryllium	7.5	STLC required if TTLC $\geq$ 2,000 mg/kg
		STLC required if TTLC ≥ 1.5 mg/kg;
Cadmium	10/20	STLC and TCLP required if TTLC ≥ 20 mg/kg
		STLC required if TTLC ≥ 50 mg/kg;
Chromium	50/100	STLC and TCLP required if TTLC ≥ 100 mg/kg
Cobalt	800	STLC required if TTLC ≥ 800 mg/kg
Copper	250	STLC required if TTLC ≥ 250 mg/kg
		STLC required if TTLC ≥ 50 mg/kg;
Lead	50/100	STLC and TCLP required if TTLC ≥ 100 mg/kg
		STLC required if TTLC ≥ 2 mg/kg;
Mercury	2/4	STLC and TCLP required if TTLC ≥ 4 mg/kg
Molybdenum	350	STLC required if TTLC ≥ 350 mg/kg
Nickel	200	STLC required if TTLC ≥ 200 mg/kg
		STLC required if TTLC ≥ 10 mg/kg;
Selenium	10/20	STLC and TCLP required if TTLC ≥ 20 mg/kg
au au		STLC required if TTLC ≥ 50 mg/kg;
Silver	50/100	STLC and TCLP required if TTLC ≥ 100 mg/kg
Thallium	70	STLC required if TTLC ≥ 70 mg/kg
Vanadium	240	STLC required if TTLC ≥ 240 mg/kg
Zinc	2,500	STLC required if TTLC ≥ 2,500 mg/kg



WORK ORDER #: **09- 2-2 4 1 4** 

# SAMPLE RECEIPT FORM

Cooler \_\_\_ of \_\_\_

CLIENT:CRA	DATE: C	127 109
☐ Sample(s) outside temperature criteria (PM/APM contacted by:). ☐ Sample(s) outside temperature criteria but received on ice/chilled on same		☐ <b>Sample</b> g.
Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs	Only	Initial: NC
CUSTODY SEALS INTACT:  Cooler		Initial: NC
SAMPLE CONDITION: Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples		
COC document(s) received complete		
Sampler's name indicated on COC		
Sample container label(s) consistent with COC		
Sample container(s) intact and good condition		
Correct containers and volume for analyses requested		
Analyses received within holding time		
Proper preservation noted on COC or sample container		Ø
Volatile analysis container(s) free of headspace		Ø
Tedlar bag(s) free of condensation.		
CONTAINER TYPE:		
Solid: □4ozCGJ □8ozCGJ □16ozCGJ ☑Sleeve □EnCores® □	TerraCores®	
Water: □VOA □VOAh □VOAna <sub>2</sub> □125AGB □125AGBh □125	5AGBpo₄ □	1AGB □1AGBna₂
□1AGBs □500AGB □500AGBs □250CGB □250CGBs □1PB □		500PBna □250PB
□250PBn □125PB □125PBznna □100PBsterile □100PBna₂ □		
Air:     Tedlar@   Summa@		Labeled by:
Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle  Preservative: h:HCL n:HNO <sub>3</sub> na <sub>2</sub> :Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> na:NaOH po <sub>4</sub> :H <sub>3</sub> PO <sub>4</sub> s:H <sub>2</sub> SO <sub>4</sub> znna:ZnAc <sub>2</sub>	Re	eviewed by: <u>く</u>





March 16, 2009

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

Subject: Calscience Work Order No.: 09-02-2550

Client Reference: 2301-2307 Lincoln Ave., Alameda, CA

#### **Dear Client:**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/28/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental

Philip Samelle for

Laboratories, Inc.

Jessie Kim

Project Manager

CA-ELAP

NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 ·

TEL:(714) 895-5494 ·

FAX: (714) 894-7501





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A

Emeryville, CA 94608-2008

Date Received:

02/28/09

Work Order No: Preparation:

09-02-2550 EPA 3050B / EPA 7471A Total

Method:

EPA 6010B / EPA 7471A

Units:

mg/kg

Project: 2301-2307 Lincoln Ave., Alameda, CA

Page 1	of 1

Client Sample Nu	mber		Lab Sample Number		Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Ba	tch ID
CRA-C			09-02-2550-3	3-A	02/27/09 00:00	Solid	ICP 5300	03/03/09	03/04/09 13:24	09030	3L02A
Comment(s):	-Mercury was analyze	d on 3/4/2009 12	2:53:18 PM with	batch 09	90303L03						
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>	Qual
Antimony	ND	0.750	1		Mercury		ND	0.083	35	1	
Arsenic	1.89	0.750	1		Molybdenum	1	ND	0.250	0	1	
Barium	51.0	0.500	1		Nickel		28.5	0.250	0	1	
Beryllium	ND	0.250	1		Selenium		ND	0.750	0	1	
Cadmium	ND	0.500	1		Silver		ND	0.250	0	1	
Chromium	31.8	0.250	1		Thallium		ND	0.750	0	1	
Cobalt	4.58	0.250	1		Vanadium		20.0	0.250	0	1	
Copper	7.86	0.500	1		Zinc		32.6	1.00		1	
Lead	17.5	0.500	1								
Method Blank			099-04-007-6	5,155	N/A	Solid	Mercury	03/03/09	03/03/09 14:11	09030	3L03
Parameter	Result	<u>RL</u>	<u>DF</u>	Qual							
Mercury	ND ND	0.0835	1								

Mercury	ND	0.0835	1								
Method Blank			097-01-002-	12,090	N/A	Solid	ICP 5300	03/03/09	03/03/09 20:21	09030	3L02A
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>		Result	<u>RL</u>		<u>DF</u>	<u>Qual</u>
Antimony	ND	0.750	1		Lead		ND	0.500		1	
Arsenic	ND	0.750	1		Molybdenum		ND	0.250		1	
Barium	ND	0.500	1		Nickel		ND	0.250		1	
Beryllium	ND	0.250	1		Selenium		ND	0.750		1	
Cadmium	ND	0.500	1		Silver		ND	0.250		1	
Chromium	ND	0.250	1		Thallium		ND	0.750		1	
Cobalt	ND	0.250	1		Vanadium		ND	0.250		1	
Copper	ND	0.500	1		Zinc		ND	1.00		1	





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/28/09 09-02-2550 EPA 3550B EPA 8015B

Project: 2301-2307 Lincoln Ave., Alameda, CA

Project: 2301-2307 Lincoln Ave., Alameda, CA								
Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-C		09-02-2550-3-A	02/27/09 00:00	Solid	GC 47	03/05/09	03/05/09 21:41	090305B09
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
Diesel Range Organics	ND	5.0	1		mg/kg			
Surrogates:	REC (%)	Control Limits		<u>Qual</u>				
Decachlorobiphenyl	102	61-145						
Method Blank		099-12-025-645	N/A	Solid	GC 47	03/05/09	03/05/09 19:05	090305B09
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
Diesel Range Organics	ND	5.0	1		mg/kg			
Surrogates:	REC (%)	Control Limits		<u>Qual</u>				
Decachlorobiphenyl	101	61-145						





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/28/09 09-02-2550 EPA 3550B EPA 8015B (M)

Project: 2301-2307 Lincoln Ave., Alameda, CA

Project. 2301-2307 Lincoln Ave., Alameda, CA								age i oi i
Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-C		09-02-2550-3-A	02/27/09 00:00	Solid	GC 47	03/05/09	03/05/09 21:41	090305B10
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
TPH as Motor Oil	ND	25	1		mg/kg			
Surrogates:	<u>REC (%)</u>	Control Limits		Qual				
Decachlorobiphenyl	102	61-145						
Method Blank		099-12-254-695	N/A	Solid	GC 47	03/05/09	03/05/09 19:05	090305B10
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
TPH as Motor Oil	ND	25	1		mg/kg			
Surrogates:	<u>REC (%)</u>	Control Limits		Qual				
Decachlorobiphenyl	101	61-145						





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method:

09-02-2550 DHS LUFT DHS LUFT

02/28/09

Project: 2301-2307 Lincoln Ave., Alameda, CA

Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-C		09-02-2550-3-A	02/27/09 00:00	Solid	FLAA	03/06/09	03/06/09 15:50	090306L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
Organic Lead	1.10	1.00	1		mg/kg			
Method Blank		099-10-020-1,149	N/A	Solid	FLAA	03/06/09	03/06/09 15:50	090306L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
Organic Lead	ND	1.00	1		mg/kg			





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received:
Work Order No:
Preparation:

09-02-2550 EPA 5030B

02/28/09

Method: Units: LUFT GC/MS / EPA 8260B

mg/kg

Project: 2301-2307 Lincoln Ave., Alameda, CA

Page 1 of 1

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Client Sample Number				ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Ti I Analyz		QC Batch II
CRA-C			09-02-	2550-3-A	02/27/09 00:00	Solid	GC/MS PP	03/09/09	03/09/ 20:0		090309L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		TPPH			ND	0.50	1	
Toluene	ND	0.0050	1								
Surrogates:	<u>REC (%)</u>	Control Limits		<u>Qual</u>	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	106	73-139			1,2-Dichloroeth	ane-d4		111	73-145		
Toluene-d8	102	90-108			1,4-Bromofluoro	benzene		95	71-113		
Toluene-d8-TPPH	103	88-112									
Method Blank			099-12	2-798-316	N/A	Solid	GC/MS PP	03/09/09	03/09/ 13:0		090309L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		TPPH			ND	0.50	1	
Toluene	ND	0.0050	1								
Surrogates:	<u>REC (%)</u>	Control Limits		<u>Qual</u>	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
Dibromofluoromethane	102	73-139			1,2-Dichloroeth	ane-d4		106	73-145		
Toluene-d8	99	90-108			1,4-Bromofluoro	benzene		97	71-113		

Manu RL-Rep

Toluene-d8-TPPH

DF - Dilution Factor

100

88-112

Qual - Qualifiers

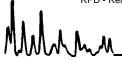




Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/28/09 09-02-2550 EPA 3050B EPA 6010B

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
09-03-0039-1	Solid	ICP 5300	03/03/09		03/05/09	090303S02
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Authoriza	0	-	00.400	45	0.00	0
Antimony	8	5	80-120	45	0-20	3
Arsenic	118	109	80-120	6	0-20	
Barium	4X	4X	80-120	4X	0-20	Q
Beryllium	105	105	80-120	0	0-20	
Cadmium	101	100	80-120	1	0-20	
Chromium	108	99	80-120	4	0-20	
Cobalt	107	103	80-120	3	0-20	
Copper	115	103	80-120	6	0-20	
Lead	104	95	80-120	7	0-20	
Molybdenum	88	88	80-120	1	0-20	
Nickel	108	102	80-120	3	0-20	
Selenium	100	97	80-120	3	0-20	
Silver	105	106	75-120	0	0-20	
Thallium	91	92	80-120	1	0-20	
Vanadium	115	104	80-120	4	0-20	
Zinc	108	86	80-120	6	0-20	



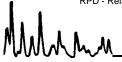




Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/28/09 09-02-2550 EPA 3550B EPA 8015B

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyze		MSD Batch Number
CRA-C	Solid	GC 47	03/05/09	03/05/0	9 09	0305S09
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD E	RPD CL	Qualifiers
Diesel Range Organics	94	90	64-130	5	0-15	







Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/28/09 09-02-2550 EPA 3550B EPA 8015B (M)

#### Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CRA-C	Solid	GC 47	03/05/09	03/05/09	090305S10
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD RPD CL	Qualifiers
TPH as Motor Oil	109	106	64-130	3 0-15	

All Marie

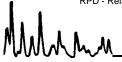




Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/28/09 09-02-2550 DHS LUFT DHS LUFT

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Δ	Date Analyzed	MS/MSD Batch Number
09-03-0427-1	Solid	FLAA	03/06/09	(	03/06/09	090306S01
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
Organic Lead	56	54	22-148	3	0-18	







Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/28/09 09-02-2550 EPA 7471A Total EPA 7471A

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed		MS/MSD Batch Number
09-03-0039-1	Solid	Mercury	03/03/09		03/03/09	090303S03
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
Mercury	107	116	80-120	8	0-16	





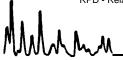
#### **Quality Control - Spike/Spike Duplicate**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 02/28/09 09-02-2550 EPA 5030B LUFT GC/MS / EPA 8260B

Project 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number	
09-02-2535-1	Solid	GC/MS PP	03/09/09		03/09/09	090309S01	
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers	
Benzene	110	109	79-115	0	0-13		
Carbon Tetrachloride	104	112	55-139	7	0-15		
Chlorobenzene	107	108	79-115	1	0-17		
1,2-Dibromoethane	112	116	70-130	3	0-30		
1,2-Dichlorobenzene	109	109	63-123	0	0-23		
1,1-Dichloroethene	110	111	69-123	1	0-16		
Ethylbenzene	111	111	70-130	1	0-30		
Toluene	110	109	79-115	2	0-15		
Trichloroethene	110	112	66-144	1	0-14		
Vinyl Chloride	103	106	60-126	3	0-14		
Methyl-t-Butyl Ether (MTBE)	117	118	68-128	1	0-14		
Tert-Butyl Alcohol (TBA)	103	108	44-134	5	0-37		
Diisopropyl Ether (DIPE)	119	119	75-123	0	0-12		
Ethyl-t-Butyl Ether (ETBE)	117	117	75-117	0	0-12		
Tert-Amyl-Methyl Ether (TAME)	117	115	79-115	1	0-12	3	
Ethanol	104	112	42-138	8	0-28		



RPD - Relative Percent Difference , CL - Control Limit





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2550 EPA 3050B EPA 6010B

Project: 2301-2307 Lincoln Ave., Alameda, CA

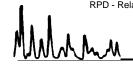
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da Anal		LCS/LCSD I Numbe	
097-01-002-12,090	Solid	ICP 5300	03/03/09	03/03/	/09	090303L0	2A
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Antimony	97	97	80-120	73-127	0	0-20	
Arsenic	95	94	80-120	73-127	1	0-20	
Barium	102	102	80-120	73-127	0	0-20	
Beryllium	93	94	80-120	73-127	0	0-20	
Cadmium	98	97	80-120	73-127	0	0-20	
Chromium	95	95	80-120	73-127	0	0-20	
Cobalt	105	104	80-120	73-127	1	0-20	
Copper	102	102	80-120	73-127	0	0-20	
Lead	101	100	80-120	73-127	1	0-20	
Molybdenum	100	99	80-120	73-127	2	0-20	
Nickel	100	100	80-120	73-127	0	0-20	
Selenium	90	90	80-120	73-127	0	0-20	
Silver	99	99	80-120	73-127	0	0-20	
Thallium	100	99	80-120	73-127	1	0-20	
Vanadium	96	96	80-120	73-127	0	0-20	
Zinc	98	97	80-120	73-127	1	0-20	

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed:

LCS ME CL validation result: Pass







Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2550 EPA 3550B EPA 8015B

Project: 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Dat Analy		LCS/LCSD Bato Number	h
099-12-025-645	Solid	GC 47	03/05/09	03/05/	09	090305B09	
<u>Parameter</u>	LCS %	6REC LCSD	<u>%REC</u>	REC CL	RPD	RPD CL	Qualifiers
Diesel Range Organics	95	101		75-123	6	0-12	

MANA\_





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2550 EPA 3550B EPA 8015B (M)

Project: 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da Analy		LCS/LCSD Batc Number	h
099-12-254-695	Solid	GC 47	03/05/09	03/05	/09	090305B10	
<u>Parameter</u>	LCS %	6REC LCSD	<u>%REC</u>	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
TPH as Motor Oil	100	96		75-123	3	0-12	

MM. RPD - RBI

RPD - Relative Percent Difference , CL - Control Limit

# alscience nvironmental Quality Control - Laboratory Control Sample aboratories, Inc.



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2550 DHS LUFT DHS LUFT

Project: 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File I	LCS Batch Number
099-10-020-1,149	Solid	FLAA	03/06/09	NONE	090306L01
<u>Parameter</u>		Conc Added	Conc Recovered	LCS %Rec	%Rec CL Qualifier
Organic Lead		25.0	27.1	108	72-126

MMM\_





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2550 EPA 7471A Total EPA 7471A

Project: 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyz		LCS/LCSD Batcl Number	1
099-04-007-6,155	Solid	Mercury	03/03/09	03/03/0	9	090303L03	
<u>Parameter</u>	LCS %	6REC LCSD	<u>%REC</u> <u>%</u>	REC CL	<u>RPD</u>	RPD CL	Qualifiers
Mercury	106	106	i	85-121	0	0-10	

MM. ....

RPD - Relative Percent Difference , CL - Control Limit





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-02-2550 EPA 5030B

LUFT GC/MS / EPA 8260B

Project: 2301-2307 Lincoln Ave., Alameda, CA

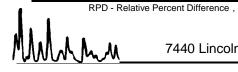
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da Anal		LCS/LCSD I Numbe		
099-12-798-316	Solid	GC/MS PP	03/09/09	03/09	/09	090309L	)1	
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers	
Benzene	106	107	84-114	79-119	1	0-7		
Carbon Tetrachloride	113	119	66-132	55-143	5	0-12		
Chlorobenzene	104	106	87-111	83-115	1	0-7		
1,2-Dibromoethane	107	110	80-120	73-127	3	0-20		
1,2-Dichlorobenzene	106	106	79-115	73-121	0	0-8		
1,1-Dichloroethene	107	110	73-121	65-129	4	0-12		
Ethylbenzene	109	110	80-120	73-127	1	0-20		
Toluene	106	107	78-114	72-120	1	0-7		
Trichloroethene	108	107	84-114	79-119	0	0-8		
Vinyl Chloride	99	104	63-129	52-140	5	0-15		
Methyl-t-Butyl Ether (MTBE)	111	116	77-125	69-133	4	0-11		
Tert-Butyl Alcohol (TBA)	103	105	47-137	32-152	1	0-27		
Diisopropyl Ether (DIPE)	115	120	76-130	67-139	4	0-8		
Ethyl-t-Butyl Ether (ETBE)	113	119	76-124	68-132	5	0-12		
Tert-Amyl-Methyl Ether (TAME)	111	115	82-118	76-124	4	0-11		
Ethanol	103	98	59-131	47-143	5	0-21		
TPPH	100	98	65-135	53-147	2	0-30		

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed:

LCS ME CL validation result: Pass





#### **Glossary of Terms and Qualifiers**



Work Order Number: 09-02-2550

Qualifier	<u>Definition</u>
*	See applicable analysis comment.
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 or 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 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 with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
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.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

7	

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### Contingent analyses

Organic lead required if TTLC lead ≥ 13 mg/kg

- Aquatic bioassay required if any TPH (gasoline, diesel, or motor oil) ≥ 5,000 mg/kg
- TCLP benzene required if benzene ≥ 10 mg/kg
- TCLP and STLC required for metals per table below

N 4-4-1	Trigger level	
Metal	TTLC	Requirement
	(mg/kg)	
Antimony	150	STLC required if TTLC ≥ 150 mg/kg
	· ·	STLC required if TTLC > 50 mg/kg:
Arsenic	50/100	STLC and TCLP required if TTLC ≥ 100 mg/kg
		STLC required if TTLC ≥ 1.000 mg/kg:
Barium	1,000/2,000	STLC and TCLP required if TTLC > 2.000 mg/kg
Beryllium	7.5	STLC required if TTLC ≥ 7.5 mg/kg
		STLC required if TTLC > 10 mg/kg
Cadmium	10/20	STLC and TCLP required if TTLC > 20 mg/kg
CT .		STLC required if TTLC > 50 mg/kg:
Chromium	50/100	STLC and TCLP required if TTLC ≥ 100 mg/kg
Cobalt	800	STLC required if TTLC ≥ 800 mg/kg
Copper	250	STLC required if TTLC ≥ 250 mg/kg
- ·		STLC required if TTLC > 50 mg/kg:
Lead	50/100	STLC and TCLP required if TTLC > 100 mg/kg
X -		STLC required if TTLC $\geq 2 \text{ mg/kg}$ :
Mercury	2/4	STLC and TCLP required if TTLC > 4 mg/kg
Molybdenum	350	STLC required if TTLC ≥ 350 mg/kg
Nickel	200	STLC required if TTLC ≥ 200 mg/kg
•		STLC required if TTLC > 10 mg/kg
Selenium	10/20	STLC and TCLP required if TTLC ≥ 20 mg/kg
		STLC required if TTLC > 50 mg/kg
Silver	50/100	STLC and TCLP required if TTLC ≥ 100 mg/kg
Thallium	70	STLC required if TTLC ≥ 70 mg/kg
Vanadium	240	STLC required if TTLC ≥ 240 mg/kg
Zinc	2,500	STLC required if TTLC ≥ 2,500 mg/kg



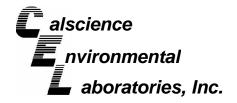


WORK ORDER #: **09**-回 **2- 2 5 5 6** 

## aboratories, Inc. SAMPLE RECEIPT FORM

Cooler <u>l</u> of <u>l</u>

CLIENT: Con es loga-Rover DA	TE:	2128104
TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)		
Temperature	ank	☑ Sample
☐ Sample(s) outside temperature criteria (PM/APM contacted by:).		
$\square$ Sample(s) outside temperature criteria but received on ice/chilled on same day of	sampling	g.
$\square$ Received at ambient temperature, placed on ice for transport by Courie	ļ. [-	./1
Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only		Initial:
CUSTODY SEALS INTACT:		
☐ Cooler ☐ ☐ No (Not Intact) ☑ Not Present ☐	N/A	Initial:
□ Sample □ □ No (Not Intact) ☑ Not Present		Initial:
SAMPLE CONDITION: Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples		
COC document(s) received complete		
Sampler's name indicated on COC		
Sample container label(s) consistent with COC		
Sample container(s) intact and good condition		
Correct containers and volume for analyses requested		
Analyses received within holding time		
Proper preservation noted on COC or sample container		
Volatile analysis container(s) free of headspace		otag
Tedlar bag(s) free of condensation		Z
CONTAINER TYPE:		
Solid: □4ozCGJ □8ozCGJ □16ozCGJ ☑Sleeve □EnCores® □TerraC	Cores®	
Water: □VOA □VOAh □VOAna₂ □125AGB □125AGBh □125AGB	po₄ □′	1AGB □1AGBna₂
□1AGBs □500AGB □500AGBs □250CGB □250CGBs □1PB □500F	B □5	00PBna □250PB
□250PBn □125PB □125PBznna □100PBsterile □100PBna₂ □	<u> </u>	
Air: Tedlar® Summa® — Ch		abeled by: <del>SO</del>
Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle  Preservative: h:HCL n:HNO <sub>3</sub> na <sub>2</sub> :Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> na:NaOH po <sub>4</sub> :H <sub>3</sub> PO <sub>4</sub> s:H <sub>2</sub> SO <sub>4</sub> znna:ZnAc <sub>2</sub> +NaOH		viewed by: 1,3,5,6,6 canned by: 50





March 24, 2009

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

Subject: Calscience Work Order No.: 09-03-1192

Client Reference: 2301-2307 Lincoln Ave., Alameda, CA

#### **Dear Client:**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 3/13/2009 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental

Philip Samelle for

Laboratories, Inc.

Jessie Kim Project Manager

CA-ELAP ID: 1230 · NELAP ID: 03220CA · CSDLAC ID: 10109 · SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 · TEL:(714) 895-5494 · FAX: (714) 894-7501





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 03/13/09 09-03-1192 N/A EPA TO-3M

Project: 2301-2307 Lincoln Ave., Alameda, CA

Page 1 of 2

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Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1		09-03-1192-1-A	03/11/09 12:24	Air	GC 39	N/A	03/13/09 12:31	090313L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
TPH as Gasoline	ND	8900	1.55		ug/m3			
SVP-2		09-03-1192-2-A	03/11/09 13:03	Air	GC 39	N/A	03/13/09 12:40	090313L01
Parameter	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
ΓPH as Gasoline	ND	9200	1.6		ug/m3			
SVP-3		09-03-1192-3-A	03/11/09 13:33	Air	GC 39	N/A	03/13/09 12:49	090313L01
Parameter_	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
FPH as Gasoline	ND	11000	1.93		ug/m3			
SVP-5		09-03-1192-4-A	03/11/09 14:53	Air	GC 39	N/A	03/13/09 13:25	090313L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
TPH as Gasoline	10000000	98000	17		ug/m3			
SVP-5 DUP		09-03-1192-5-A	03/11/09 15:01	Air	GC 39	N/A	03/13/09 13:39	090313L01
Parameter_	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
TPH as Gasoline	11000000	90000	15.7		ug/m3			
TRIP BLANK		09-03-1192-6-A	03/11/09 15:10	Air	GC 39	N/A	03/13/09 12:19	090313L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
ΓPH as Gasoline	ND	5700	1		ug/m3			

RL - Reporting Limit

DF - Dilution Factor

Qual - Qualifiers





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 03/13/09 09-03-1192 N/A EPA TO-3M

Project: 2301-2307 Lincoln Ave., Alameda, CA

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Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix			Date/Time Analyzed	QC Batch ID
Method Blank		098-01-005-1,719	N/A	Air	GC 39	N/A	03/13/09 09:26	090313L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
TPH as Gasoline	ND	5700	1		ug/m3			





Units:



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received:
Work Order No:
Preparation:
Method:

03/13/09 09-03-1192 N/A EPA TO-15 ug/m3

Project: 2301-2307 Lincoln Ave., Alameda, CA

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Client Sample Number				b Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Tim Analyzed	000.00
SVP-1			09-03-1	I192-1-A	03/11/09 12:24	Air	GC/MS AA	N/A	03/16/09 22:10	090316L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF Qual
Benzene	5.4	2.5	1.55		Toluene			ND	2.9	1.55
Ethylbenzene	ND	3.4	1.55		Propane			ND	42	1.55
Methyl-t-Butyl Ether (MTBE)	ND	11	1.55		Butane			ND	18	1.55
Xylenes (total)	ND	13	1.55		Isobutane			110	18	1.55
Surrogates:	<u>REC (%)</u>	Control Limits		Qual	Surrogates:		<u> </u>	REC (%)	Control Limits	<u>Qual</u>
1,4-Bromofluorobenzene	90	57-129			1,2-Dichloroeth	hane-d4		97	47-137	
Toluene-d8	96	78-156			•					
SVP-2			09-03-1	1192-2-A	03/11/09 13:03	Air	GC/MS AA	N/A	03/16/09 22:59	090316L01
Parameter	Result	<u>RL</u>	DF	Qual	Parameter			Result	<u>RL</u>	DF Qual
Benzene	7.3	2.6	1.6		Toluene			ND	3.0	1.6
Ethylbenzene	ND	3.5	1.6		Propane			ND	43	1.6
Methyl-t-Butyl Ether (MTBE)	ND	12	1.6		Butane			ND	19	1.6
Xylenes (total)	ND	14	1.6		Isobutane			ND	19	1.6
Surrogates:	REC (%)	Control	1.0	Qual	Surrogates:		F	REC (%)	Control	Qual
		Limits					<del>-</del>		Limits	
1,4-Bromofluorobenzene	91	57-129			1,2-Dichloroeth	nane-d4		97	47-137	
Toluene-d8	97	78-156								
SVP-3			09-03-1	1192-3-A	03/11/09 13:33	Air	GC/MS AA	N/A	03/17/09 19:04	090317L01
Parameter	Result	<u>RL</u>	DF	Qual	Parameter			Result	<u>RL</u>	DF Qual
Benzene	5.5	3.1	1.93		Toluene			ND		1.93
Ethylbenzene	ND	4.2	1.93		Propane			ND		1.93
Methyl-t-Butyl Ether (MTBE)	ND	14	1.93		Butane			ND		1.93
Xylenes (total)	ND	17	1.93		Isobutane			ND		1.93
Surrogates:	REC (%)	Control	1.00	Qual	Surrogates:		F	REC (%)	Control	Qual
		Limits					-		Limits	
1,4-Bromofluorobenzene	94	57-129			1,2-Dichloroeth	hane-d4		102	47-137	
Toluene-d8	96	78-156								

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DF - Dilution Factor





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: 03/13/09
Work Order No: 09-03-1192
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: 2301-2307 Lincoln Ave., Alameda, CA

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F10ject. 2301-2307 Lii	ilcoili Ave.,	Alame	Ja, CA	1					Г	aye	2 2 01 3
Client Sample Number				b Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Tim Analyzed		QC Batch ID
SVP-5			09-03-	1192-4-A	03/11/09 14:53	Air	GC/MS AA	N/A	03/17/09 00:42	0	)90316L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>
Benzene	11000	1100	680		Toluene			1800	1300	680	
Ethylbenzene	21000	1500	680		Propane			ND	18000	680	
Methyl-t-Butyl Ether (MTBE)	ND	4900	680		Butane			ND	8100	680	
Xylenes (total)	ND	5900	680		Isobutane			ND	8100	680	
Surrogates:	REC (%)	Control		Qual	Surrogates:		<u> </u>	REC (%)	Control		Qual
_		<u>Limits</u>							<u>Limits</u>		
1,4-Bromofluorobenzene	90	57-129			1,2-Dichloroetl	hane-d4		95	47-137		
Toluene-d8	101	78-156									
SVP-5 DUP			09-03-	1192-5-A	03/11/09 15:01	Air	GC/MS AA	N/A	03/17/09 01:32	0	)90316L01
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	<u>DF</u>	Qual
Benzene	12000	1000	628		Toluene			1600	1200	<u></u> 628	<u> </u>
Ethylbenzene	23000	1400	628		Propane			ND	17000	628	
Methyl-t-Butyl Ether (MTBE)	ND	4500	628		Butane			ND	7500	628	
Xylenes (total)	ND ND	5500 5500	628		Isobutane			ND	7500 7500	628	
Surrogates:	REC (%)	Control	028	Qual	Surrogates:			REC (%)	Control		Qual
Surrogates.	NEC (70)	Limits		Qual	Surrogates.		<u> </u>	<u> </u>	Limits		Qual
1,4-Bromofluorobenzene	87	57-129			1,2-Dichloroetl	hane-d4		80	47-137		
Toluene-d8	89	78-156			1,2-Diciliorocti	iano u+		00	47-137		
TRIP BLANK			09-03-	1192-6-A	03/11/09 15:10	Air	GC/MS AA	N/A	03/17/09 15:58	0	)90317L01
Parameter	Result	RL	DF	Qual	Parameter			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	ND	1.6	1		Toluene			ND	1.9	1	
Ethylbenzene	ND	2.2	1		Propane			ND	27	1	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	1		Butane			ND	12	1	
Xylenes (total)	ND ND	7.2 8.7	1		Isobutane			ND	12	1	
Surrogates:	REC (%)	Control	1	Qual	Surrogates:			REC (%)	Control		Qual
<u>Surroyales.</u>	NEC (70)	<u>Limits</u>		<u>Qual</u>	<u>ourrogates.</u>		<u>r</u>	<u> </u>	<u>Limits</u>		<u>uuai</u>
1,4-Bromofluorobenzene Toluene-d8	92 95	57-129 78-156			1,2-Dichloroetl	hane-d4		97	47-137		

DF - Dilution Factor

Qual - Qualifiers





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received:
Work Order No:
Preparation:
Method:
Units:

03/13/09 09-03-1192 N/A EPA TO-15 ug/m3

Project: 2301-2307 Lincoln Ave., Alameda, CA

Page 3 of 3

Client Sample Number				ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Ti Analyz		QC Batch ID
Method Blank			095-01	-021-7,358	B N/A	Air	GC/MS AA	N/A	03/16/ 14:50		090316L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	<u>Qual</u>
Benzene	ND	1.6	1		Toluene			ND	1.9	1	
Ethylbenzene	ND	2.2	1		Propane			ND	27	1	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	1		Butane			ND	12	1	
Xylenes (total)	ND	8.7	1		Isobutane			ND	12	1	
Surrogates:	REC (%)	Control		Qual	Surrogates:		<u> </u>	REC (%)	Control		Qual
1,4-Bromofluorobenzene Toluene-d8	92 94	<u>Limits</u> 57-129 78-156			1,2-Dichloroet	hane-d4		98	<u>Limits</u> 47-137		
Method Blank			095-01	-021-7,369	) N/A	Air	GC/MS AA	N/A	03/17/ 15:0		090317L01
Parameter	Result	RL	<u>DF</u>	Qual	Parameter			Result	RL	DF	Qual
Benzene	ND	1.6	1		Toluene			ND	1.9	1	
Ethylbenzene	ND	2.2	1		Propane			ND	27	1	
Methyl-t-Butyl Ether (MTBE)	ND	7.2	1		Butane			ND	12	1	
Xylenes (total)	ND	8.7	1		Isobutane			ND	12	1	
Surrogates:	REC (%)	Control		Qual	Surrogates:		<u> </u>	REC (%)	Control		Qual
1,4-Bromofluorobenzene	91	<u>Limits</u> 57-129			1.2-Dichloroet	hane-d4		96	<u>Limits</u> 47-137		
Toluene-d8	93	78-156			,						

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#### **Quality Control - Duplicate**



Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: 03/13/09 09-03-1192 N/A EPA TO-3M

Project: 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
SVP-5 DUP	Air	GC 39	N/A	03/13/09	090313D01
<u>Parameter</u>	Sample Conc	DUP Conc	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
TPH as Gasoline	11000000	11000000	1	0-20	



RPD - Relative Percent Difference , CL - Control Limit





Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-03-1192 N/A EPA TO-15

Project: 2301-2307 Lincoln Ave., Alameda, CA

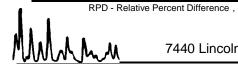
Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da Anal		LCS/LCSD I Numbe	
095-01-021-7,358	Air	GC/MS AA	N/A	03/16/09		090316L	01
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	108	109	60-156	44-172	1	0-40	
Carbon Tetrachloride	106	102	64-154	49-169	3	0-32	
1,2-Dibromoethane	109	106	54-144	39-159	2	0-36	
1,2-Dichlorobenzene	123	119	34-160	13-181	3	0-47	
1,2-Dichloroethane	110	105	69-153	55-167	5	0-30	
1,2-Dichloropropane	120	120	67-157	52-172	0	0-35	
1,4-Dichlorobenzene	120	115	36-156	16-176	4	0-47	
c-1,3-Dichloropropene	118	116	61-157	45-173	1	0-35	
Ethylbenzene	109	105	52-154	35-171	4	0-38	
o-Xylene	108	103	52-148	36-164	4	0-38	
p/m-Xylene	105	101	42-156	23-175	4	0-41	
Tetrachloroethene	113	111	56-152	40-168	2	0-40	
Toluene	102	100	56-146	41-161	2	0-43	
Trichloroethene	106	106	63-159	47-175	0	0-34	
1,1,2-Trichloroethane	112	110	65-149	51-163	2	0-37	
Vinyl Chloride	119	126	45-177	23-199	6	0-36	

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass







Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received: Work Order No: Preparation: Method: N/A 09-03-1192 N/A EPA TO-15

Project: 2301-2307 Lincoln Ave., Alameda, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da Anal	ate yzed	LCS/LCSD I Numbe	
095-01-021-7,369	Air	GC/MS AA	N/A	03/17	/09	090317L	01
<u>Parameter</u>	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	107	112	60-156	44-172	4	0-40	
Carbon Tetrachloride	93	96	64-154	49-169	3	0-32	
1,2-Dibromoethane	105	107	54-144	39-159	3	0-36	
1,2-Dichlorobenzene	109	114	34-160	13-181	4	0-47	
1,2-Dichloroethane	97	102	69-153	55-167	5	0-30	
1,2-Dichloropropane	120	125	67-157	52-172	4	0-35	
1,4-Dichlorobenzene	107	110	36-156	16-176	3	0-47	
c-1,3-Dichloropropene	112	117	61-157	45-173	4	0-35	
Ethylbenzene	103	106	52-154	35-171	3	0-38	
o-Xylene	100	105	52-148	36-164	4	0-38	
p/m-Xylene	97	100	42-156	23-175	3	0-41	
Tetrachloroethene	110	113	56-152	40-168	3	0-40	
Toluene	98	102	56-146	41-161	4	0-43	
Trichloroethene	102	106	63-159	47-175	4	0-34	
1,1,2-Trichloroethane	110	113	65-149	51-163	3	0-37	
Vinyl Chloride	113	111	45-177	23-199	1	0-36	

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass





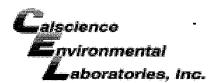
#### **Glossary of Terms and Qualifiers**



Work Order Number: 09-03-1192

Qualifier	<u>Definition</u>
*	See applicable analysis comment.
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 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 with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
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.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

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WORK ORDER #: **09-03-** ☐ ☐ ☐ ☐

SAMPLE RECEIPT FORM

BOX			
C <del>oole</del> r	1	of	/

CLIENT: CRA		DATE: <u>03</u>	1 13 1 09							
TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)										
Temperature °C - 0.2 °C (CF) = °C		Blank 🗆	Sample							
☐ Sample(s) outside temperature criteria (PM/APM contacted by:	).									
$\square$ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.										
☐ Received at ambient temperature, placed on ice for transport by Courier.										
Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ F	PCBs O	nly	Initial:							
CUSTODY SEALS INTACT:										
□ Cooler □ □ No (Not Intact) ☑ Not Pr	esent	□ N/A	Initial:							
□ Sample □ □ No (Not Intact) ☑ Not Pr	esent		Initial: <u>JD</u>							
SAMPLE CONDITION:	Yes	No	N/A							
Chain-Of-Custody (COC) document(s) received with samples	Ø									
COC document(s) received complete	Ø									
Sampler's name indicated on COC	$\square$									
Sample container label(s) consistent with COC	$\square$									
Sample container(s) intact and good condition	Ø									
Correct containers and volume for analyses requested	$\square$									
Analyses received within holding time	Z									
Proper preservation noted on COC or sample container										
Volatile analysis container(s) free of headspace										
Tedlar bag(s) free of condensation										
CONTAINER TYPE:										
Solid: □4ozCGJ □8ozCGJ □16ozCGJ □Sleeve □EnCores®	□Te	rraCores® [	<u> </u>							
<b>Water:</b> □VOA □VOAh □VOAna₂ □125AGB □125AGBh	□125A	.GBpo₄ □1A	GB □1AGBna₂							
□1AGBs □500AGB □500AGBs □250CGB □250CGBs □1	PB □5	500PB □500	PBna □250PB							
□250PBn □125PB □125PBznna □100PBsterile □100PBna	₂ □		<u> </u>							
Air: □Tedlar® ⊿Summa® □		Checked/Lab	eled by:							
Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle  Preservative: h:HCL n:HNO <sub>3</sub> na <sub>2</sub> :Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> na:NaOH po <sub>4</sub> :H <sub>3</sub> PO <sub>4</sub> s:H <sub>2</sub> SO <sub>4</sub> znna	a:ZnAc₂+N		ewed by:							

#### APPENDIX E

SOIL VAPOR PROBE SAMPLING PROCEDURE

#### SOIL VAPOR PROBE SAMPLING PROCEDURE

A soil vapor sample will be collected from sampling point SVP-5 in a Tedlar bag. Since sampling is affected by rain, it is CRA standard procedure to allow two days or more after a heavy rain event prior to collecting soil vapor samples.

*Probe Sampling:* Sampling of soil vapor probe SVP-5 will be performed using a vacuum pump and Tedlar bags. Prior to sampling, the probe will be purged of at least three tubing volumes of air using a vacuum pump. A sealed "lung sampler" containing a 1-liter Tedlar bag will be attached to the probe and the vacuum pump will be attached to the box. The vacuum pump will lower the pressure in the "lung sampler" and draw air from the probe into the Tedlar bag. To avoid breakage, bags will be filled no more than two-thirds full. Each sample will be labeled, documented on a chain-of-custody, placed in a protective box at room temperature, and submitted to a California State-Certified laboratory for analysis within 72 hours.

Leak Testing: To check the system for leaks, a containment unit (or shroud) will be placed to cover the soil gas probe surface casing and sampling equipment. Prior to soil gas probe purging, helium will be introduced into the containment unit to obtain a minimum 50 percent helium content level. The helium content within the containment unit will be confirmed using a helium meter. The helium meter readings will be recorded in CRA's field notes. Helium will continue to be introduced to the containment unit during soil gas probe purging and sampling.

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

*Chemical Analysis:* Vapor samples will be analyzed for benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B and for helium by ASTM D Method 1946 (M).