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**TRANSMITTAL** DATE: June 7, 2011 REFERENCE NO.: 060204 **PROJECT NAME:** 2301-2307 Lincoln Avenue, Alameda To: Jerry Wickham **RECEIVED** Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 1:33 pm, Jun 10, 2011 Alameda County Alameda, California 94502-6577 Environmental Health Please find enclosed: Draft Final Originals Other **Prints** Sent via: Mail Same Day Courier **Overnight Courier** Other GeoTracker and Alameda County FTP QUANTITY **DESCRIPTION** Remedial Action and Subsurface Investigation Report 1 As Requested For Review and Comment For Your Use **COMMENTS:** If you have any questions regarding the contents of this document, please call Peter Schaefer at (510) 420-3319. Denis Brown, Shell Oil Products US (electronic copy) Copy to: Alan A. and Beverly M. Sebanc, Trustees, 2805 Ralston Avenue, Hillsborough, CA 94010 Jake Torrens, AMEC Geomatrix, Inc., 2101 Webster Street, 12th Floor, Oakland, CA 94612 Signed: Just Completed by: Peter Schaefer



Mr. Jerry Wickham Alameda County Environmental Health 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.1.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

Senior Program Manager



# REMEDIAL ACTION AND SUBSURFACE INVESTIGATION REPORT

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

SAP CODE INCIDENT NO. AGENCY NO.

165255 97767044

RO0002971

JUNE 7, 2011 REF. NO. 060204 (20) This report is printed on recycled paper. Prepared by: Conestoga-Rovers & Associates

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#### **EXECUTIVE SUMMARY**

- One groundwater monitoring well (MW-4) and two soil vapor probes (SVP-5 and SVP-5A) were destroyed because they were located in an excavation area.
- Two excavations were completed to remove petroleum hydrocarbon and lead soil impacts identified during previous investigations.
- One soil vapor probe (SVP-9) was installed and sampled.
- All COC detections in soil samples collected from the petroleum hydrocarbon and lead excavations are below RWQCB ESLs for commercial land use. The remedial actions have adequately addressed impacted areas identified during previous investigations.
- No COCs exceed RWQCB ESLs for commercial land use in the soil vapor samples collected from SVP-9 during this investigation, and no additional soil vapor sampling is warranted.
- Based on the site conditions and analytical data presented herein, on behalf of Shell,
   CRA requests case closure.

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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 remedial actions and subsurface investigation at this site. CRA followed the scope of work and procedures presented in CRA's November 17, 2010 Remedial Action Plan and Well Survey Work Plan, which was approved in Alameda County Environmental Health's (ACEH's) December 13, 2010 letter, and CRA's February 8, 2011 Subsurface Investigation Work Plan. ACEH's April 21, 2011 electronic correspondence approved extending the due date for this report from May 5, 2011 to June 9, 2011.

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 WELL AND SOIL VAPOR PROBE DESTRUCTION

#### 2.1 PERMIT

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

#### 2.2 FIELD DATES

January 2, 2011 (well MW-4) and April 12, 2011 (soil vapor probes SVP-5 and SVP-5A).

#### 2.3 PERSONNEL PRESENT

Geologist Erica Namba directed the well destruction and geologist Margareta Wolf directed the soil vapor probe destruction under the supervision of California Professional Geologist Peter Schaefer.

#### 2.4 <u>DESTRUCTION METHOD</u>

After removing the well box, well MW-4 was destroyed by pressure grouting. Soil vapor probes SVP-5 and SVP-5A were removed in their entirety during the excavation detailed below.

#### 2.5 WASTE DISPOSAL

Construction debris generated by the well destruction activities was transported by Vapor Tech Services (VTS) of Berkeley, California to Commercial Waste and Recycling of Oakland, California for recycling.

#### 3.0 SOIL EXCAVATION

In order to address residual petroleum hydrocarbon and lead impacts identified during previous investigations, CRA directed two excavations at the locations shown on Figure 2, as detailed below.

#### 3.1 PERMIT

American Integrated Services, Inc. (AIS) obtained a building permit from the City of Alameda (Appendix B).

#### 3.2 FIELD DATES

April 11, 2011 through April 19, 2011.

#### 3.3 EXCAVATION COMPANY

AIS.

#### 3.4 PERSONNEL PRESENT

Geologist Margareta Wolf directed the excavation under the supervision of California Professional Geologist Peter Schaefer.

#### 3.5 PETROLEUM HYDROCARBON EXCAVATION SOIL SAMPLING

CRA collected 2 soil samples from the bottom of the petroleum hydrocarbon excavation at depths of 13 and 13.5 feet below grade (fbg) and 11 soil samples from the sidewalls of the excavation at depths ranging from 3 to 12 fbg using a backhoe. Figures 2 and 3 show the sampling locations. The soil sampling locations were chosen to target each area or horizon with visible soil discoloration in the excavation. The soil was removed from the backhoe bucket and packed into clean stainless steel sample tubes; the tube ends were covered with Teflon® tape and plastic end caps. Soil samples were labeled, placed into a cooler with ice, entered onto a chain-of-custody record, and transported to a California-certified analytical laboratory.

#### 3.6 <u>LEAD EXCAVATION SOIL SAMPLING</u>

CRA collected one soil sample from the bottom of the lead excavation at a depth of 3 fbg and four soils samples from the sidewalls of the excavation at 2 fbg using a shovel. Figures 2 and 3 show the sampling locations. The soil was removed from the shovel and packed into clean stainless steel sample tubes; the tube ends were covered with Teflon® tape and plastic end caps. Soil samples were labeled, placed into a cooler with ice, entered onto a chain-of-custody record, and transported to a California-certified analytical laboratory.

#### 3.7 CHEMICAL ANALYSES

State-certified Accutest Laboratories of San Jose, California analyzed the soil samples for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8260B. In addition, samples from the lead excavation were analyzed for total lead by EPA Method 6010B, and samples collected from the petroleum hydrocarbon excavation on April 14, 2011 (HC-S-7, HC-SW-7, and HC-W-7) were analyzed for methyl tertiary-butyl ether (MTBE) by EPA Method 8260B. Appendix C includes the laboratory reports.

#### 3.8 WASTE DISPOSAL

CRA drilled two soil borings (COMP-1 and COMP-2) to obtain composite samples from the excavation areas in order to pre-profile excavated soils for disposal. Boring logs for the soil borings are presented in Appendix D, and the laboratory report is included in Appendix C. AIS excavated and transported approximately 56 tons of soil on April 12 and April 14, 2011 to Allied Waste Industries' Keller Canyon Landfill in Pittsburg, California for disposal as non-hazardous waste. Appendix E presents the manifests.

#### 4.0 SOIL VAPOR PROBE INSTALLATION AND SAMPLING

#### 4.1 PERMIT

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

#### 4.2 FIELD DATE

March 7, 2011.

#### 4.3 DRILING COMPANY

VTS.

#### 4.4 PERSONNEL PRESENT

Geologist Oliver Yan directed the probe installation working under the supervision of California Professional Geologist Aubrey Cool.

#### 4.5 DRILLING METHOD

Air-knife.

#### 4.6 NUMBER OF PROBES

CRA installed one nested soil vapor probe (SVP-9). The probe specifications and soil types encountered are described on the boring log contained in Appendix D. The probe location is shown on Figure 2.

#### 4.7 VAPOR POINT MATERIALS

The nested vapor probe was constructed using ¼-inch diameter Teflon® tubing attached to 1-inch length stainless steel screen intervals, and #2/12 Monterey sand filter pack. A probe diagram is provided with boring log in Appendix D.

#### 4.8 SCREENED INTERVALS

1.9-2.0 fbg and 4.4 to 4.5 fbg.

#### 4.9 <u>SOIL VAPOR SAMPLING</u>

On March 30, 2011, CRA sampled soil vapor probe SVP-9 at 2 fbg and 4.5 fbg. The soil vapor samples were collected using a lung box and Tedlar<sup>®</sup> bag.

Prior to sampling, CRA purged at least three tubing volumes of air from each vapor probe using a vacuum pump. Immediately after purging, CRA collected a soil vapor sample using a laboratory-supplied Tedlar® bag. During sampling, CRA connected the Teflon® tubing for each vapor probe to a lung box containing the Tedlar® bag, and the lung box chamber was connected to the vacuum pump. CRA then drew the sample into the Tedlar® bag by reducing the pressure in the lung box with the vacuum pump. Each sample was labeled, documented on a chain-of-custody, and submitted to Calscience Environmental Laboratories, Inc. of Garden Grove, California for analysis within 72 hours.

To check the system for leaks, CRA placed a containment unit (or shroud) over the soil vapor probe surface casing and sampling manifold. Prior to soil vapor probe purging, CRA introduced helium into the containment unit to obtain a minimum 50 percent helium content level. CRA confirmed the helium content within the containment unit using a helium meter. The helium meter readings are presented in Section 5.2.1. All samples were analyzed by the laboratory for helium, and CRA presents the results in Section 5.2.1 and on Table 1.

060204 (20)

#### 4.10 CHEMICAL ANALYSES

Soil vapor samples were analyzed for TPHg by EPA Method TO-3 (modified); for BTEX and naphthalene by EPA Method 8260B (modified); for oxygen and argon, carbon dioxide, and methane by ASTM D-1946; and for helium by ASTM D-1946 (modified).

#### 4.11 WASTE DISPOSAL

Soil generated during field activities was stored on site in 55-gallon drums and disposed with the excavations spoils as detailed above. Construction debris generated by the soil vapor probe installation activities was transported by VTS to Commercial Waste and Recycling of Oakland, California for recycling.

#### 5.0 FINDINGS

#### 5.1 **SOIL**

The soil chemical analytical data are summarized in Table 2, and TPHg, BTEX, and lead analytical results are presented on Figure 3. Laboratory analytical reports are presented in Appendix C.

The soil samples from the petroleum hydrocarbon excavation contained up to 166 milligrams per kilogram (mg/kg) TPHg, 0.0535 mg/kg benzene, and 2.24 mg/kg ethylbenzene. Toluene, xylenes, and MTBE were not detected in soil samples from the petroleum hydrocarbon excavation.

The soil samples from the lead excavation contained lead at concentrations ranging from 15.0 to 150 mg/kg. TPHg and BTEX were not detected in soil samples from the lead excavation.

#### 5.2 SOIL VAPOR

Table 1 summarizes the soil vapor analytical data. TPHg and BTEX results are shown on Figure 4, and the laboratory analytical report is presented in Appendix C.

#### 5.2.1 LEAK TESTING

CRA performed leak testing as described above, and helium was not detected in any of the samples. As shown in the following table, the reporting limit for helium (0.0100 percent by volume [%v]) is less than 10 percent of the concentration detected in the shroud, and the samples are considered valid.

Sample ID	Helium concentration in sample (%v)	Minimum helium concentration detected in shroud (%v)	Maximum acceptable helium concentration in sample (%v)
SVP-9-2'	<0.0100	68	6.8
SVP-9-4.5'	<0.0100	67	6.7

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

#### 6.0 CONCLUSIONS

All constituent of concern (COC) detections in soil samples collected from the petroleum hydrocarbon and lead excavations are below San Francisco Bay Regional Water Quality Control Board (RWQCB) environmental screening levels (ESLs) for commercial land use. The remedial actions have adequately addressed impacted areas identified during previous investigations.

No COCs exceed RWQCB ESLs in any of the soil vapor samples collected during this investigation, and no additional soil vapor sampling is warranted.

#### 7.0 **RECOMMENDATIONS**

Based on the site conditions and analytical data presented herein, on behalf of Shell, CRA requests case closure.

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

Peter Schaefer, CEG, CHG

Aubrey K. Cool, PG



**FIGURES** 

**Former Shell Service Station** 

2301-2307 Lincoln Avenue Alameda, California



**Vicinity Map** 

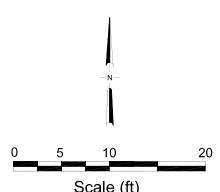
**Former Shell Service** 

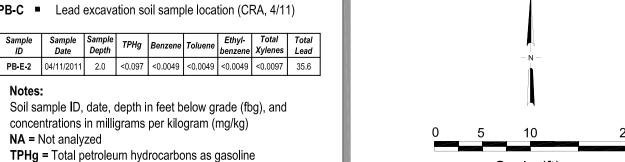
2301-2307 Lincoln Avenue Alameda, California

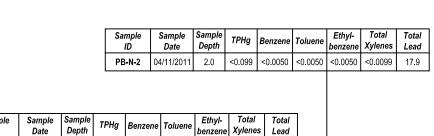
# Concentrations Map Soil Chemical

# Former Shell Service Station

**FIGURE** 



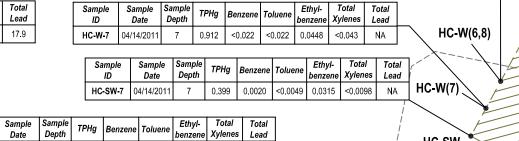




**EXPLANATION** 

**HC-CN** • Hydrocarbon excavation soil sample location (CRA, 4/11)

<X = Not detected at reporting limit X



HC-SW

1			ı	Ethyl-	Total	Total
ı	TPHg	Benzene	Toluene	honzono	Yvlenes	Lead
ı		l		Delizelle	Aylenes	Leau

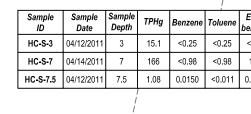
Sample ID	Sample Date	Sample Depth	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Total Lead
PB-E-2	04/11/2011						<0.0097	

	Sample ID	Sample Date	Sample Depth	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Total Lead
	HC-S-3	04/12/2011	3	15.1	<0.25	<0.25	<0.25	<0.50	NΑ
	HC-S-7	04/14/2011	7	166	<0.98	<0.98	1.54	<2.0	NA
	HC-S-7.5	04/12/2011	7.5	1.08	0.0150	<0.011	0.0044	<0.021	NA
			j						

	ID	Date	Depth	TPHg	Benzene	Toluene	benzene	Xylenes	Lead
	HC-S-3	04/12/2011	3	15.1	<0.25	<0.25	<0.25	<0.50	NA
	HC-S-7	04/14/2011	7	166	<0.98	<0.98	1.54	<2.0	NA
	HC-S-7.5	04/12/2011	7.5	1.08	0.0150	<0.011	0.0044	<0.021	NA
			j						

ID	Date	Depth	TPHg	Benzene	Toluene	benzene	Xylenes	Lea
HC-S-3	04/12/2011	3	15.1	<0.25	<0.25	<0.25	<0.50	NΑ
HC-S-7	04/14/2011	7	166	<0.98	<0.98	1.54	<2.0	NΑ
HC-S-7.5	04/12/2011	7.5	1.08	0.0150	<0.011	0.0044	<0.021	NΑ
		i						

Sample ID	Sample Date	Sample Depth	TPHg	Benzene	Toluene	Ethy benze
HC-S-3	04/12/2011	3	15.1	<0.25	<0.25	<0.2
HC-S-7	04/14/2011	7	166	<0.98	<0.98	1.54
HC-S-7.5	04/12/2011	7.5	1.08	0.0150	<0.011	0.004
	I	,		l .		<u> </u>



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

Sample

PB-C-3

04/11/2011

3.0

Ethylbenzene Xylenes Lead (mg/kg) (mg/kg) (mg/kg)

<0.0049 <0.0049 <0.0049 <0.0098

Sample ID PB-E PB-S Excavation

PB-N

PB-C

PB-W

Scale (ft)

Sample ID

HC-W-6

HC-W-8

Sample Date

04/12/2011

04/12/2011

Sample Depth

6

25.2

17.0

TPHg Benzene Toluene

< 0.25

< 0.25

Ethyl- Total Total benzene Xylenes Lead Sample Date Sample Depth HC-CN-13.5 04/12/2011 13.5 2.27 0.0230 <0.026 0.0215 <0.053

Sample ID	Sample Date	Sample Depth	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Total Lead
HC-N-6	04/12/2011	6	0.951	<0.0050	<0.0050	0.0302	<0.010	NA
HC-N-8	04/12/2011	8	127	<1.2	<1.2	2.24	<2.5	NA

HC-N-8	04/12/2011	8	127	<1.2	<1.2

110-11-0	0-1/12/2011	Ü	127	11.2	11.2

Sample ID

HC-E-6

HC-E

Sample Depth

13

TPHg

27.1

0.0535

Former USTs

(installed in 1970s)

<0.023

Sample Date

HC-CS-13 04/12/2011

Sample Date

04/12/2011

HC-E-12 04/12/2011

Sample Depth

12

Petroleum Hydrocarbon

Excavation

0.141

Ethyl- Total Total benzene Xylenes Lead

<0.046

TPHg

20.4

1.31

<0.25

< 0.023

<0.25

<0.023

Ethyl-

0.182

< 0.023

Total Total

NΑ

<0.50

< 0.047

<0.49	NA	\		,
<0.50	NA	\		
		\		
		\	HC-CN	/

HC-CS

Sample

HC-W(6,8)	1
X \	1

HC-S

Ethyl- Total Total benzene Xylenes Lead

0.966

0.173

< 0.25

< 0.25

enzene	Toluene	benzene	Xylenes	Lead
0.0049	<0.0049	<0.0049	<0.0099	150

nzene	Toluene	Ethyl-	Total Yylenes	Total	

enzene	Toluene	Ethyl- benzene	Total Xylenes	Total Lead
			<0.0097	

					_ !			/
Sample ID	Sample Date	Sample Depth	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	
HC-S-3	04/12/2011	3	15.1	<0.25	<0.25	<0.25	<0.50	
HC-S-7	04/14/2011	7	166	<0.98	<0.98	1.54	<2.0	

TPHg Benzene Toluene (mg/kg) (mg/kg) <0.099 <0.0050 <0.0050 <0.0050 <0.0099

ΙĎ

**PB-W-2** 04/11/2011 2.0

Lead

Sample Date

04/11/2011

2.0

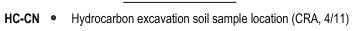
<0.098

2301-2307 Lincoln Avenue Alameda, California

CONESTOGA-ROVERS & ASSOCIATES







**PB-C** ■ Lead excavation soil sample location (CRA, 4/11)

**EXPLANATION** 

**COMP-1 ⑤** Soil boring location (CRA, 4/11)

Destroyed monitoring well location

Destroyed soil vapor probe location

**MW-1** ◆ Monitoring well location

Soil boring location (CRA, 7/10)

**SVP-1** Soil vapor probe location (CRA, 2/09, 3/10, 4/11)

Geoprobe boring location (CRA, 2/09)

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:

Former Building

(circa 1950)

SVP-2

MW-6

Former Oil Sump

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

Former Station

Building

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

HC-CN HC-N

HC-E

SVP-7

HC-W

HC-S/HC-CS

HC-W(7)

EB-6 **⑤** 

HC-SW

benzene

<19

<19

<16

52

7-11 Store Building

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

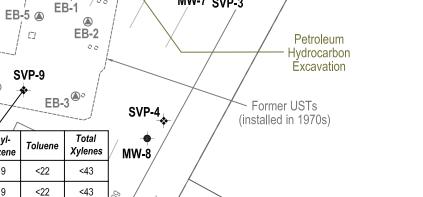
Sample ID	Sample Date	Sample Depth	ТРНд	Benzene	Ethyl- benzene	Toluene	Total Xylenes
SVP-9-2'	03/30/2011	2	<7,000	<16	<19	<22	<43
SVP-9-4.5'	03/30/2011	4.5	18,000	52	<19	<22	<43

Soil vapor sample ID, date, depth in feet below grade (fbg), and concentrations in micrograms per cubic meter (µg/m³)

NA = Not available

**TPHg =** Total petroleum hydrocarbons as gasoline

<X = Not detected at reporting limit X



COMP-1<sup>™</sup>

MW-7 SVP-3

LINCOLN AVENUE Basemap modified from data from Virgil Chavez Land Surveying and drawing provided by Geomatrix

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

SB-2

MW-3

SB-4 (e)

SB-5

EB-8

PB-N

EB-10

B-8

Sample

SVP-9-2'

SVP-9-4.5'

COMP-2

EB-1

SVP-6

PB-S

PB-E

MW-9

PB-C

SVP-1

MW-2

SB-6

B-7

Sample

Date

03/30/201

03/30/201

Sample

Depth

4.5

TPHg

<7,000

18,000

Former Shell Station

2301-2307 Lincoln Avenue

Former Gasoline & Oil USTs

(installed in 1920s)

Former Building

(circa 1950)1

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

MW-1

SB-3

Lead

Excavation

Former 76 Station

2267 Lincoln Avenue

Scale (ft)

B-6

# **FIGURE**

**TABLES** 

TABLE 1

Sample ID	Date	Depth (fbg)	ТРНg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	МТВЕ			Dichloro- difluoro- methane	chloro-	Butane	Iso- butane	Propane	Methane (%v)	Carbon Dioxide (%v)	Oxygen + Argon (%v)	Helium (%v)
SVP-1	3/11/2009	5	<8,900	5.4 <sup>b</sup>	<2.9 <sup>b</sup>	<3.4 <sup>b</sup>	<13 <sup>b</sup>	<11					<18	110	<42				
SVP-2	3/11/2009	5	<9,200	7.3 <sup>b</sup>	<3.0 <sup>b</sup>	<3.5 <sup>b</sup>	<14 <sup>b</sup>	<12					<19	<19	<43	·			
SVP-3	3/11/2009	5	<11,000	5.5 <sup>b</sup>	<3.6 <sup>b</sup>	<4.2 <sup>b</sup>	<17 <sup>b</sup>	<14					<23	<23	<52				
SVP-4-2ft SVP-4-5ft	6/16/2010 6/16/2010	2 5	<5,700 <5,700	<16 <16	<19 <19	<22 <22	<43 <43		<52 <52							<0.500 <0.500	1.62 1.74	20.0 20.0	<0.0100 <0.0100
SVP-5	3/11/2009	5	10,000,000	11,000 <sup>b</sup> 12,000 <sup>b</sup>	1,800 <sup>b</sup>	21,000 <sup>b</sup> 23,000 <sup>b</sup>	<5,900 <sup>b</sup>	<4,900 <4,500					<8,100 <7,500	<8,100 <7,500	<18,000 <17,000				
SVP-5 DUP <sup>a</sup> , SVP-5	3/11/2009 7/29/2010	5 5	11,000,000 8,400,000	<10,000	<12,000	14,000	<27,000	<b></b>	<33,000					~7,500 		1.73	0.147	0.741	<0.0100
SVP-5A-2ft	6/16/2010	2	<5,700	<16	<19	<22	<43	<del></del>	<52		· · <del></del>	·				<0.500	6.20	14.6	<0.0100
SVP-6-2ft SVP-6-5ft	6/16/2010 6/16/2010	2 5	<5,700 <5,700	<16 <16	<19 <19	<22 <22	<43 <43		<52 <52	·	v					<0.500 <0.500	4.12 4.70	17.7 17.3	<0.0100 <0.0100
SVP-7-2ft <sup>d</sup> SVP-7-5ft <sup>d</sup>	6/16/2010 6/16/2010	2 5	<5,700 <5,700	<1.6 <sup>b</sup>	<19 <sup>b</sup> <19 <sup>b</sup>	<2.2 <sup>b</sup> <2.2 <sup>b</sup>	<8.7 <sup>b</sup> <8.7 <sup>b</sup>	<7.2 <7.2	<52 <sup>b</sup> <52 <sup>b</sup>	4.9 <2.4	2.5 <2.5	15 26				<0.500 <0.500	1.91 4.27	19.8 17.5	<0.0100 <0.0100
SVP-8-2ft SVP-8-5ft	6/16/2010 6/16/2010	.2 .5	<5,700 <5,700	<16 <16	<19 <19	<22 <sup>-</sup> <22	<43 <43		<52 <52		<del></del>					<0.500 <0.500	2.38 3.38	19.6 18.0	<0.0100 <0.0100
SVP-9-2' SVP-9-4.5'	3/30/2011 3/30/2011	2 4.5	<7,000 18,000	<16 52	<19 <19	<22 <22	<43 <43		<52 <52							<0.500 <0.500	5.90 8.34	8.83 8.68	<0.0100 <0.0100
Residential   ESL°:	Land Use		10,000	84	63,000	980	21,000	9,400	72	460	NA	<u>41</u> 0	NA.	NA	NA.	NA.	NA .	NA	NA.
Commercial, Land Use E			29,000	280	180,000	3,300	58,000	31,000	240	1,500	NA.	1,400	NA	NA	NA.	NA.	NA.	NA	NA .

#### Notes:

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

%v = Percent by volume

fbg = Feet below grade

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

Benzene, toluene, ethylbenzene and total xylenes analyzed by EPA Method 8260B (M) unless otherwise noted.

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

Naphthalene analyzed by EPA Method EPA Method 8260B (M) unless otherwise noted

Chloroform, dichlorodifluoromethane, and tetrachloroethene analyzed by EPA TO-15M.

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

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

< x =Not detected at reporting limit x

--- = Not analyzed

ESL = Environmental screening level

NA = No applicable ESL

Results in bold equal or exceed ESL

a = Field duplicate

b = Analyzed by modified EPA Method TO-15M

c = 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])

d = Sample analyzed for full volatile organic compound scan by EPA Method 8260B (M). All detected compounds tabulated.

Sample ID	Date	Depth (fbg)	ТРНто	TPHd	ТРНд	Benzene	Toluene	Ethyl- benzene	Total Xylenes	МТВЕ	DIPE	ЕТВЕ	TAME	ТВА	1,2-DCA	EDB	Total Lead
SB-1	7/24/1999	7.5			<1.0	<0.005	<0.005	<0.005	<0.005	<0.05							
SB-2	7/24/1999	7.5			<1.0	<0.005	<0.005	<0.005	<0.005	<0.05							
SB-3	7/24/1999	7.5			40 <sup>a</sup>	<0.005	<0.005	0.012	<0.005	<0.05							
SB-4	7/24/1999	7.5			<1.0	<0.005	<0.005	<0.005	<0.005	<0.05							
SB-5	7/24/1999	7.5	· · ·		<1.0	<0.005	<0.005	<0.005	<0.005	<0.05					<del></del> -		
SB-6	7/24/1999	5			<1.0	<0.005	<0.005	<0.005	<0.005	<0.05							
MW-1-3.0 MW-1-8.5	8/15/2007 8/15/2007				<0.18 <b>1,600</b>	<0.0042 <2.0	<0.0042 <2.0	<0.0042 <2.0	<0.0084 <4.0	<0.0042 <2.0	<0.0042 <2.0	<0.0042 <2.0	<0.0042 <2.0	<0.085 <40	<0.0042 <2.0	<0.0042 <2.0	
MW-1-12.0	8/15/2007		<u></u>		2.4	< 0.0037	< 0.0037	< 0.0037	< 0.0074	< 0.0037	< 0.0037	< 0.0037	< 0.0037	< 0.075	< 0.0037	< 0.0037	
MW-1-14.5	8/15/2007				<0.16	<0.0052	<0.0052	<0.0052	<0.0104	<0.0052	<0.0052	<0.0052	<0.0052	<0.10	<0.0052	<0.0052	
MW-2-10.5	8/15/2007	10.5			5.0	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004	<0.004	<0.004	<0.079	<0.004	<0.004	
EB-1-10.5	8/16/2007	10.5			470	<6.6	<6.6	100	<13.2	<6.6	<6.6	<6.6	<6.6	<130	<6.6	<6.6	4.5
EB-1-14.0	8/16/2007			·	<0.82	< 0.004	< 0.004	<0.004	<0.008	<0.004	<0.004	<0.004	<0.004	<0.081	<0.004	<0.004	1.4
EB-2-9.0	8/16/2007	9.0			24	0.44	< 0.27	3.7	< 0.54	< 0.27	< 0.27	< 0.27	< 0.27	<5.3	< 0.27	< 0.27	21
EB-2-13	8/16/2007				<0.150	<0.0045	<0.0045	<0.0045	<0.009	<0.0045	<0.0045	<0.0045	<0.0045	<0.091	<0.0045	<0.0045	1.2
EB-3-9.0	8/16/2007	9.0			68	0.99	< 0.73	12	1.0	< 0.73	<0.73	< 0.73	< 0.73	<15	< 0.73	< 0.73	2.0
EB-3-11.8	8/16/2007				<0.18	<0.0042	<0.0042	<0.0042	<0.0084	<0.0042	<0.0042	<0.0042	<0.0042	<0.085	<0.0042	<0.0042	1.8
EB-4-6.5	8/16/2007	6.5			<0.19	< 0.0043	< 0.0043	< 0.0043	<0.0086	< 0.0043	< 0.0043	< 0.0043	< 0.0043	< 0.086	< 0.0043	< 0.0043	2.3
EB-4-10.2	8/16/2007				<0.18	< 0.0045	< 0.0045	< 0.0045	< 0.009	< 0.0045	< 0.0045	< 0.0045	< 0.0045	< 0.091	< 0.0045	< 0.0045	1.8
EB-4-13.0	8/16/2007				<0.16	< 0.0041	< 0.0041	< 0.0041	<0.0082	< 0.0041	< 0.0041	< 0.0041	<0.0041	<0.082	<0.0041	<0.0041	1.7

Sample ID	Date	Depth (fbg)	ТРНто	ТРН	трнд	Benzene	Toluene	Ethyl- benzene	Total Xylenes	МТВЕ	DIPE	ETBE	TAME	TBA	1,2-DCA	EDB	Total Lead
EB-5-2.5 EB-5-9.0 EB-5-12.5	8/16/2007 8/16/2007 8/16/2007	9.0	·		<0.18 2.4 <1.1	<0.0071 <0.21 <0.0045	<0.0071 <0.21 <0.0045	<0.0071 3.7 <0.0045	<0.0142 1.1 <0.0090	<0.0071 <0.21 <0.0045	<0.0071 <0.21 <0.0045	<0.0071 <0.21 <0.0045	<0.0071 <0.21 <0.0045	<0.14 <4.2 <0.089	<0.0071 <0.21 <0.0045	<0.0071 <0.21 <0.0045	48 2.6 1.5
EB-6-9.5 EB-6-14.0	8/16/2007 8/16/2007	9.5			4.3 <0.18	<0.12 <0.0036	<0.12 <0.0036	1.8 < 0.0036	<2.4 <0.0072	<0.12 <0.0036	<0.12 <0.0036	<0.12 <0.0036	<0.12 <0.0036	<2.4 <0.072	<0.12 <0.0036	<0.12 <0.0036	2.5 2.0
EB-8-1.5	8/15/2007	1.5			<0.98	<0.0049	<0.0049	<0.0049	<0.0098	<0.020						,	40
EB-9-2.0	8/15/2007	2.0	+ ;	. · <del></del>	<0.96	<0.0048	<0.0048	<0.0048	<0.0096	<0.019			<b></b>				2.0
EB-10-2.0	8/16/2007	2.0	. <u></u>		<1.5	<0.0051	<0.0051	<0.0051	<0.012	<0.0051	<0.0051	<0.0051	<0.0051	<0.10	<0.0051	<0.0051	550
EB-11-2.0	8/16/2007	2.0	·		<1.2	<0.0048	<0.0048	<0.0048	<0.0096	<0.0048	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	3.3
B-5-5.5' B-5-8.5'	2/27/2009 2/27/2009				<0.50 <0.50	<0.0050 <0.0050	<0.0050 <0.0050	<0.0050 <0.0050	<0.0050 <0.0050	<0.0050 <0.0050						 	
B-7-5.5' B-7-8.5'	2/27/2009 2/27/2009				<0.50 87	<0.0050 <0.50	<0.0050 <0.50	<0.0050 <0.50	<0.0050 <0.50	<0.0050 <0.50	<u>.</u>						
B-8-5.5' B-8-8.5'	2/27/2009 2/27/2009		<u></u>		<0.50 <b>7,900</b>	<0.0050 <20	<0.0050 <20	<0.0050 <b>120</b>	<0.0050 <b>150</b>	<0.0050 <20							
MW-4-5' MW-4-8'	2/25/2009 2/25/2009	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					 		
MW-5-5' MW-5-8'	2/24/2009 2/24/2009	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				 			<del></del>

Sample ID	Date	Depth (fbg)	ТРНто	TPHd	ТРНд	Benzene	Toluene	Ethyl- benzene	Total Xylenes	МТВЕ	DIPE	ЕТВЕ	TAME	TBA	1,2-DCA	EDB	Total Lead
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		. <del></del>					
MW-7-8'	2/25/2009	8			< 0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050							
MW-8-5'	2/23/2009	. 5			<0.50	<0.0050	< 0.0050	<0.0050	<0.0050	<0.0050							
MW-8-8'	2/23/2009	8	: . <u></u>		< 0.50	<0.0050	< 0.0050	<0.0050	< 0.0050	<0.0050							
			3														
MW-9-5.5'	3/25/2010	5.5	81	9.7 <sup>b</sup>	< 0.50	<0.0050	< 0.0050	<0.0050	< 0.0050								3.36
MW-9-8.5 <sup>1</sup>	3/25/2010	8.5	<25	<5.0	< 0.50	< 0.0050	< 0.0050	< 0.0050	< 0.0050								2.45
MW-9-12'	3/25/2010	12	450	54 <sup>b</sup>	< 0.50	< 0.0050	<0.0050	<0.0050	< 0.0050							·	17.1
MW-9-17.5 <sup>1</sup>	3/25/2010	17.5	<25	<5.0	< 0.50	<0.0050	<0.0050	<0.0050	<0.0050								1.85
B-6-5.25	7/13/2010	5.25	<25	< 5.0	< 0.50	< 0.0050	<0.0050	< 0.0050	< 0.0050	< 0.0050	<0.010	<0.010	<0.010	< 0.050	< 0.0050	< 0.0050	2.18
B-6-8.0	7/13/2010	8	<25	< 5.0	< 0.50	< 0.0050	< 0.0050	< 0.0050	<0.0050	< 0.0050	< 0.010	<0.010	<0.010	< 0.050	< 0.0050	< 0.0050	2.72
B-6-9.5	7/13/2010	9.5	<25	< 5.0	< 0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	< 0.050	<0.0050	<0.0050	2.68
						0.0040	2 22 12	-0.0040	-0.0007			÷					35.6
PB-E-2	4/11/2011	2			<0.097	<0.0049	<0.0049	<0.0049	<0.0097			<del></del>	,		/		33.6
PB-W-2	4/11/2011	2			<0.098	<0.0049	<0.0049	<0.0049	<0.0098								19.2
· · -	-// <b>-</b>	-															
PB-S-2	4/11/2011	2			<0.099	< 0.0050	<0.0050	<0.0050	<0.0099								15.0
											•						
PB-N-2	4/11/2011	2			<0.099	< 0.0050	<0.0050	<0.0050	<0.0099								17.9

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TABLE 2

Sample ID	Date	Depth (fbg)	ТРНто	TPHd	ТРНд	Benzene	Toluene	Ethyl- benzene	Total Xylenes	МТВЕ	DIPE	ЕТВЕ	ТАМЕ	ТВА	1,2-DCA	EDB	Total Lead
PB-C-3	4/11/2011	3			<0.099	<0.0049	<0.0049	<0.0049	<0.0099								150
HC-CN-13.5	4/12/2011	13.5			2.27	0.0230 <sup>e</sup>	<0.026	0.0215 <sup>e</sup>	<0.053								
HC-CS-13	4/12/2011	13	*** <u></u>		27.1 <sup>f</sup>	0.0535	<0.023	0.141	<0.046								
HC-E-6 HC-E-12	4/12/2011 4/12/2011		· · · · · · · · · · · · · · · · · · ·		20.4 1.31	<0.25 <0.023	<0.25 <0.023	0.182 <sup>e</sup> <0.023	<0.50 <0.047								
HC-W-6	4/12/2011		· <del></del>		25.2	<0.25	<0.25	0.966	<0.49								
HC-W-8	4/12/2011				17.0	<0.25	<0.25	0.173 <sup>e</sup>	<0.50							***	
HC-W-7	4/14/2011	7		·	0.912	<0.022	<0.022	0.0448	< 0.043	<0.022							
HC-N-6	4/12/2011	6	· . <u></u>		0.951	<0.0050	<0.0050	0.0302	<0.010						·		<del></del>
HC-N-8	4/12/2011	. 8	·		127	<1.2	<1.2	2.24	<2.5								
HC-S-3	4/12/2011	. 3			15.1	<0.25	<0.25	<0.25	<0.50								
HC-S-7.5	4/12/2011	7.5			1.08	0.0150	<0.011	$0.0044^{\mathrm{e}}$	<0.021								
HC-S-7	4/14/2011	7			166	<0.98	<0.98	1.54	<2.0	<0.98							
HC-SW-7	4/14/2011	. 7			0.399	0.0020 <sup>e</sup>	<0.0049	0.0315	<0.0098	<0.0049			<u></u>				
Shallow So	il (≤10 fbg) <b>E</b>	SL°:	2,500	180	180	0.27	9.3	4.7	11	8.4	NA.		NA	110	0.48	0.044	750
Deep Soil (>	•10 fbg) ESL	d:	5,000	180	180	2.0	9.3	4.7	11	8.4	NA	NA	NA	110	1.8	1.0	<i>7</i> 50

Depth Ethyl- Total Total Sample ID Date (fbg) TPHmo TPHd TPHg Benzene Toluene benzene Xylenes MTBE DIPE ETBE TAME TBA 1,2-DCA EDB Lead

Notes:

All results in milligrams per kilogram (mg/kg) unless otherwise indicated.

fbg = feet below grade

TPHmo = Total petroleum hydrocarbons as motor oil analyzed by EPA Method 8015B (M)

TPHd = Total petroleum hydrocarbons as diesel analyzed by EPA Method 8015B

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; before February 27, 2009, analyzed by EPA 8015M.

Benzene, toluene, ethylbenzene and total xylenes analyzed by EPA Method 8260B; before August 15, 2007, analyzed by EPA Method 8020.

MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8260B, before August 15, 2007, analyzed by EPA Method 8020.

TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B

DIPE = Di-isopropyl ether analyzed by EPA Method 8260B

ETBE = Ethyl tertiary-butyl ether analyzed by EPA Method 8260B

TAME = Tertiary-amyl methyl ether analyzed by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane analyzed by EPA Method

EDB = 1,2-Dibromoethane analyzed by EPA

Lead analyzed by EPA Method 6010B

< x =Not detected at reporting limit x

--- = Not analyzed

ESL = Environmental screening level

NA = No applicable ESL

- a = Strongly aged gasoline or diesel range compounds are significant.
- b = The sample chromatographic pattern for TPHd 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.
- c = 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]).

d = 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 D 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]).

e = Estimated value

f = Analyte found in associated method blank

APPENDIX A
SITE HISTORY

#### **SITE HISTORY**

July 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 ( $\mu g/l$ ) TPHg,  $4.4 \mu g/l$  toluene,  $10 \, \mu g/l$ n-butylbenzene, ethylbenzene,  $4.0 \,\mu\mathrm{g}/1$ xylenes, sec-butylbenzene, 45 µg/l isopropyl benzene, 60 µg/l n-propylbenzene, and 26 µg/l vinyl acetate. Basics' August 12, 1999 Limited Phase II Environmental Site Investigation report presents details of this investigation.

August 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 results are presented in Toxichem's May 1, 2000 Site Assessment Report.

February 2007 Site Investigation: Geomatrix installed three groundwater monitoring wells (MW-1 through MW-3, Figure 2) in the western former UST (USTs originally installed in the 1920's) area and drilled 11 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 hydrocarbons 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 mg/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 μg/l toluene, and 19 μg/l xylenes. Groundwater was gauged at 8.37 to 9.26 fbg, and flow direction was calculated to be to the east-northeast. Geomatrix's December 2007 Subsurface Investigation Summary Report presents details of this investigation.

February 2009 Subsurface Investigation: Conestoga-Rovers & Associates (CRA) installed five groundwater monitoring wells (MW-4, MW-5, MW-6, MW-7, and MW-8), installed five soil vapor probes (SVP-1 through SVP-5), and drilled three soil borings

(B-5, B-7, and B-8). No benzene, toluene, or MTBE was 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 soil sample B-8-8.5' exceeded 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 water1. 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 grab groundwater 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 micrograms per cubic meter  $[\mu g/m^3]$ ), benzene (up to 12,000  $\mu g/m^3$ ), and ethylbenzene (up to 23,000 µg/m³), which exceeded ESLs. TPHg and benzene, toluene, ethylbenzene, and xylenes 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. Soil vapor probe SVP-4 could not be sampled due to an obstruction in the sample line. CRA's April 9, 2009 Subsurface Investigation Report presents investigation details.

March 2010 Subsurface Investigation: CRA installed one groundwater monitoring well (MW-9), installed four soil vapor probes (SVP-5A and SVP-6 through SVP-8), and reinstalled one soil vapor probe (SVP-4). No TPHg or benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in soil samples collected from well boring MW-9. Up to 450 mg/kg total petroleum hydrocarbons as motor oil (TPHmo), 54 mg/kg total petroleum hydrocarbons as diesel (TPHd), and 17.1 mg/kg lead were detected (in sample MW-9-12'). None of the detections exceeded the ESLs. CRA's May 12, 2010 Subsurface Investigation Report provides details of this investigation.

June 2010 Soil Vapor Sampling: CRA sampled five soil vapor probes (SVP-4, SVP-5A, and SVP-6 through SVP-8), and in July 2010, CRA sampled one soil vapor probe (SVP-5). Only the TPHg (8,400,000  $\mu$ g/m³) and ethylbenzene (14,000  $\mu$ g/m³) detections from SVP-5 (at 5 fbg) exceeded ESLs. Soil vapor concentrations are defined below ESLs vertically by SVP-5A (at 2 fbg) and horizontally by SVP-2 through SVP-4 and SVP-6 through SVP-8. CRA's August 24, 2010 Soil Vapor Sampling Report summarizes this investigation.

*July 2010 Subsurface Investigation:* CRA drilled one off-site boring B-6 at 2267 Lincoln Avenue to further assess the extent of petroleum hydrocarbons in soil and groundwater. No TPHmo, TPHd, TPHg, BTEX, fuel oxygenates, 1,2-dichloroethane (1,2-DCA), or

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

1,2-dibromoethane (EDB) were detected in soil samples collected from boring B-6. Up to 2.72 mg/kg lead was detected (B-6-8.0). No TPHg, BTEX, fuel oxygenates, 1,2-DCA, or EDB were detected in the grab groundwater sample collected from boring B-6. The grab groundwater sample contained  $56 \,\mu\text{g}/1 \,\text{TPHd}$ . None of the detections exceeded the ESLs. CRA's August 27, 2010 Subsurface Investigation Report provides details of this investigation.

February 2011 Well Survey: CRA reviewed Alameda County Public Works Agency and California Department of Water Resources records for water-producing wells within 2,000 feet of the subject site. One domestic well, five irrigation wells, and two industrial wells were identified. The domestic well is located cross gradient from the site. The current status of these wells is not known. Down-gradient wells are over 1,000 feet from the site, so there is little likelihood that the on-site petroleum hydrocarbon impacts would reach them. CRA's February 10, 2011 Well Survey Report documents the well survey.

Groundwater Monitoring: Geomatrix sampled wells MW-1 through MW-3 in August 2007, and groundwater monitoring was initiated beginning with the first quarter of 2009 in wells MW-1 through MW-8 and the second quarter of 2010 in well MW-9. Fuel oxygenates were not detected in any of the August 2007 groundwater samples and are not included in the groundwater monitoring program, because gasoline station operations ceased at the site prior to the use of MTBE in gasoline. No constituents of concern have been detected above non-drinking water ESLs in wells MW-2, MW-3, and MW-5 through MW-9. Concentrations up to 17,000  $\mu$ g/1 TPHg, 1,700  $\mu$ g/1 TPHd, 280  $\mu$ g/1 benzene, 270  $\mu$ g/1 ethylbenzene, 25  $\mu$ g/1 toluene, and 360  $\mu$ g/1 xylenes have been detected in groundwater samples from MW-1 and MW-4. Groundwater monitoring was suspended following the third quarter of 2010 sampling event.

APPENDIX B

**PERMITS** 

#### Alameda County Public Works Agency - Water Resources Well Permit



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

Application Approved on: 12/28/2010 By vickyh1

Permit Numbers: W2010-1025 to W2010-1026 Permits Valid from 04/11/2011 to 04/12/2011

City of Project Site: Alameda

Application Id:

1293115911146

Site Location:

2301-2307 Lincoln Avenue

Former Shell Service Station

Currently-parking lot, 7-11, Launderland

**Project Start Date:** 

01/07/2011

Assigned Inspector:

**Extension Start Date: Extension Count:** 

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

Extension End Date: 04/12/2011 04/11/2011

Extended By: vickyh1

Completion Date: 01/07/2011

Applicant:

**Property Owner:** 

Conestoga-Rovers and Associates - Erica

Phone: 510-385-0547

Namba

5900 Hollis Street, Suite A, Emeryville, CA 94608 NA Shell/Sabanc Sebank Trustees

2805 Ralson Avenue, Hillsborough, CA 94010

NA Shell Oil Products US

20945 S. Wilmington Avenue, Carson, CA 94810

Contact:

Client:

Peter Schaefer

Phone: --

Phone: --

Phone: 510-420-3319

Cell: --

**Total Due:** 

\$662.00

Receipt Number: WR2010-0436 Total Amount Paid: Payer Name: Conestoga Rovers and Paid By: CHECK

\$662.00

PAID IN FULL

**Associates** 

#### **Works Requesting Permits:**

Well Destruction-Monitoring - 1 Wells

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

Work Total: \$397.00

#### Specifications

Permit #	Issued Date	Expire Date	Owner Well	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth	State Well #	Orig. Permit#	DWR#
W2010- 1025	12/28/2010	04/07/2011	MW-4	10.00 in.	4.00 in.	2.00 ft	20.00 ft	2S/3W7N	W2009- 0109	E0089038

#### Specific Work Permit Conditions

- 1. 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.
- 2. 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.
- 3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and

#### Alameda County Public Works Agency - Water Resources Well Permit

all expense, cost and liability in connection with or resulting from the exercise of this Permit including, but not limited to, property 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. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
- 6. Remove the Christy box or similar structure.

Destroy well by grouting neat cement with a tremie pipe or pressure grouting (25 psi for 5min.) to the bottom of the well and by filling with neat cement to three (3-5) feet below surface grade. Allow the sealing material to spill over the top of the casing to fill any annular space between casing and soil.

After the seal has set, backfill the remaining hole with concrete or compacted material to match existing conditions.

7. 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.

Well Destruction-Vapor monitoring well - 2 Wells

Driller: Conestoga Rovers - Lic #: 00000 - Method: other

Work Total: \$265.00

#### Specifications

a kaamana										
Permit #	Issued Date	Expire Date	Owner Well	Hole Diam.	Casing	Seal Depth	Max. Depth	State Well #	Orig.	DWR#
			ld		Diam.				Permit #	
W2010- 1026	12/28/2010	04/07/2011	SVP-5	3.00 in.	0.25 in.	5.00 ft	5.00 ft			
W2010- 1026	12/28/2010	04/07/2011	SVP-5a	4.00 in.	0.25 in.	2.20 ft	2.20 ft			

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

- 1. Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate state reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days, including permit number and site map.
- 2. 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.
- 3. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no

#### Alameda County Public Works Agency - Water Resources Well Permit

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.

- 4. 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.
- 5. No changes in construction procedures or well type shall change, as described on this permit application. This permit may be voided if it contains incorrect information.
- 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. 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.
- 8. 2 vapor monitoring wells to be excavated below depth by excavation contractor



#### CITY OF ALAMEDA

2263 SANTA CLARA AVENUE, ROOM 190 ALAMEDA, CA 94501

(510) 747-6800 FAX (510) 865-4053

#### **Inspection Card**

Permit # <u>B11-0097</u>

EXPIRES: 3/24/2014

ISSUED: 03/25/2011

**VALUATION: \$25000.00** 

Address: 2301 LINCOLN AVE

Owner: SEBANC ALLAN A & BEVERLY M TRS ETAL 2805 RALSTON AVE HILLSBOROUGH CA 94010-6547 Contractor: AMERICAN INTEGRATED SERVICES INC 1502 EAST OPP STREET WILMINGTON CA 90744

Work Description: EXCAVATE ~ (PREVIOUSLY GASOLINE STATION) EXCAVATION & BACKFILL OF (2) CONTAMINATED AREA: TOTAL 35 CUBIC YARDS

Foundations:	Sheetrock / Interior Lath:					
Ground Plumbing:	-(Required before taping or plastering)					
	Exterior Lath:					
Rough Electric:						
	(Required before Stucco)					
A Transfer of the Control of the Con	DESIGN REVIEW: (YES) (NO) By:					
Roùgh Plumbing:	Final					
	Gas Test:					
Rough Heating & Ventilation:						
	Kelly Test:					
Sub Floor:	Sewer Repair / Replacement:					
	Final Electric:					
Frame:						
	Final - Fire Department:					
Insulation:	Final - Plumbing:					
Certificate:	VALUE AND ADDRESS OF THE PROPERTY OF THE PROPE					
	Final - Heating & Ventilation:					
** Comments **						
	Final - Building: 4-27-11 - Rew Harme					
	Final - Public Works:					

Do not occupy structure until Certification of Occupancy has been issued. For Certificate of Occupancy to be issued, a copy of the inspection card with all Finals needs to be filed with the Permit Center, Room 190, City Hall, Alameda, CA

FOR INSPECTIONS - CALL 7:30 - 8:30 AM ONLY

(510) 747-6830

INSPECTIONS (MUST BE SCHEDULED)

**Building:** 

Fire:

Design Review:

(510) 337-2120

Plumbing & Mechanical:

(510) 747-6830

**Public Works:** 

(510) 747-6850 (510) 749-5840

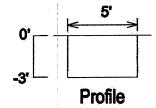
Electrical:

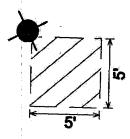
(510) 747-6830

311-0097

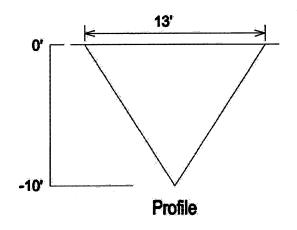
## **Construction Notes**

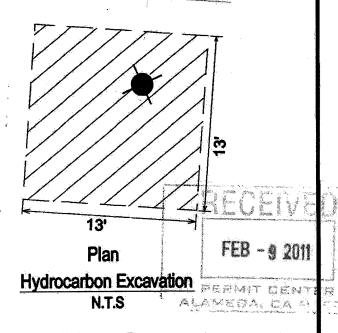
- Contractor to sawcut ashpalt and concrete, remove and recycle.
- Contractor to setup temporary chainlink fence for site control.
- Excavate lead impacted material to a depth of 3 feet below adjacent grade
- Excavate hydrocarbon impacted material to a depth of 10 feet below adjacent grade with non-vertical sidewalls.
- 5) No personnel shall enter any excavation beyond 4' depth.
- 6) Excavation will be backfilled to 95% relative density.
- Excavation areas will be re-surfaced to match existing grade and materials.
- 8) Work per Workplan by Conestoga-Rovers & Associates.
- 9) Existing Monitoring Wells will be addressed by others.





Plan
Lead Excavation
N.T.S







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Former Shell Service Station 2301-2307 Lincoln Avenue Alameda, California DETAILS
Sheet 2 of 2

## Alameda County Public Works Agency - Water Resources Well Permit



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

Application Approved on: 02/23/2011 By jamesy

Permit Numbers: W2011-0095 to W2011-0096 Permits Valid from 03/01/2011 to 03/12/2011

Application Id:

1298499551238

City of Project Site: Alameda

Site Location:

2301-2307 Lincoln Avenue, Alameda, CA

**Project Start Date:** 

03/01/2011

Completion Date: 03/12/2011

**Assigned Inspector:** 

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

Applicant:

Conestoga Rovers & Associates - Oliver Yan

Phone: 916-889-8928

**Property Owner:** 

10969 Trade Center Dr, Ste 107, Rancho Cordova, CA 95670

Denis Brown - Shell Oil Products US 20946 S Wilmington Ave, Carson, CA 90810 Phone: 707-865-0251

Client:

\*\* same as Property Owner \*\*

Total Due:

\$530.00

Receipt Number: WR2011-0048 Total Amount Paid: Payer Name: Conestoga-Rovers & Paid By: CHECK

**Associates** 

#### **Works Requesting Permits:**

Borehole(s) for Investigation-Environmental/Monitorinig Study - 2 Boreholes

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

Work Total: \$265.00

#### **Specifications**

Permit	Issued Dt	Expire Dt	#	Hole Diam	Max Depth
Number W2011-	02/23/2011	05/30/2011	Boreholes 2	3.00 in.	10.00 ft
0095					

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

## Alameda County Public Works Agency - Water Resources Well Permit

waterways or be allowed to move off the property where work is being completed.

- 6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
- 7. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
- 8. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

Remediation Well Destruction-Vapor Remediation Well - 1 Wells

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

Work Total: \$265.00

#### **Specifications**

Permit #	Issued Date	Expire Date	Owner Well	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth	State Well #	Orig. Permit #	DWR#
W2011- 0096	02/23/2011	05/30/2011	SVP9	3.00 in.	0.50 in.	4.50 ft	5.00 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. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
- 3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.
- 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. Remove the Christy box or similar structure. Destroy well by overdrilling & Tremie Grouting with Cement. After the seal has set, backfill the remaining hole with concrete or compacted material to match existing.

## Alameda County Public Works Agency - Water Resources Well Permit

- 7. 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.
- 8. 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.

# APPENDIX C CERTIFIED ANALYTICAL REPORTS



#### LABORATORY REPORT

Prepared For: Conestoga-Rovers & Associates - Emeryville Shell

Project: 2301-2307 Lincoln, Alameda, CA

5900 Hollis St., Suite A Emeryville, CA 94608 Attention: Aubrey Cool

Sampled: 03/07/11 Received: 03/08/11

Issued: 03/16/11 11:20

#### NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. The Chain of Custody, I page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

#### SAMPLE CROSS REFERENCE

 LABORATORY ID
 CLIENT ID
 MATRIX

 IUC0924-01
 Comp-1
 Soil

 IUC0924-02
 Comp-2
 Soil

Reviewed By:

TestAmerica Irvine

Mily Smelle



17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Conestoga-Rovers & Associates - Emeryville Shell

5900 Hollis St., Suite A

Project ID: 2301-2307 Lincoln, Alameda, CA

Emeryville, CA 94608 Attention: Aubrey Cool

Report Number: IUC0924

Sampled: 03/07/11

Received: 03/08/11

#### **EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015B)**

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUC0924-01 (Comp-1 - Soil)				. ;	Sampled:	03/07/11		
Reporting Units: mg/kg								
DRO (C10-C28)	EPA 8015B	11C1197	12	210	2.3	3/9/2011	3/9/2011	
ORO (C29-C40)	EPA 8015B	11C1197	12	240	2.3	3/9/2011	3/9/2011	
Surrogate: n-Octacosane (40-140%)				237 %				ZX
Surrogate: n-Octacosane (40-140%)				237 %				ZX
Sample ID: IUC0924-02 (Comp-2 - Soil)					Sampled:	03/07/11		
Reporting Units: mg/kg						4		
DRO (C10-C28)	EPA 8015B	11C1197	10	ND	1.99	3/9/2011	3/9/2011	
ORO (C29-C40)	EPA 8015B	11C1197	10	17	1.99	3/9/2011	3/9/2011	
Surrogate: n-Octacosane (40-140%)				113%				
Surrogate: n-Octacosane (40-140%)				113 %				



17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Conestoga-Rovers & Associates - Emeryville Shell

5900 Hollis St., Suite A Emeryville, CA 94608

Attention: Aubrey Cool

Sampled: 03/07/11

Report Number: IUC0924

Received: 03/08/11

#### **VOLATILE FUEL HYDROCARBONS BY GC/MS (CA LUFT)**

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUC0924-01 (Comp-1 - Soil)				;	Sampled:	03/07/11		
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C4-C12)	TPH by GC/MS	11C1178	0.95	13	4.76	3/9/2011	3/9/2011	
Surrogate: Dibromofluoromethane (80-125%	5)			114 %				
Surrogate: Toluene-d8 (80-120%)				111 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				109 %				*
Sample ID: IUC0924-02 (Comp-2 - Soil)					Sampled:	03/07/11	*	
Reporting Units: mg/kg								
Volatile Fuel Hydrocarbons (C4-C12)	TPH by GC/MS	11C1178	0.20	ND	0.99	3/9/2011	3/10/2011	
Surrogate: Dibromofluoromethane (80-125%	5)			113 %				
Surrogate: Toluene-d8 (80-120%)				93 %				
Surrogate: 4-Bromofluorobenzene (80-120%)	)			105 %				



17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Conestoga-Rovers & Associates - Emeryville Shell

5900 Hollis St., Suite A

Attention: Aubrey Cool

Emeryville, CA 94608

Report Number: IUC0924

Sampled: 03/07/11

Received: 03/08/11

## **VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)**

Project ID: 2301-2307 Lincoln, Alameda, CA

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUC0924-01 (Comp-1 - Soil)				1	Sampled:	03/07/11		
Reporting Units: mg/kg			•					
Benzene	EPA 8260B	11C1178	0.0048	ND	4.76	3/9/2011	3/9/2011	
Ethylbenzene	EPA 8260B	11C1178	0.0048	0.0065	4.76	3/9/2011	3/9/2011	
Toluene	EPA 8260B	11C1178	0.0048	ND	4.76	3/9/2011	3/9/2011	
Xylenes, Total	EPA 8260B	11C1178	0.0095	ND	4.76	3/9/2011	3/9/2011	
Surrogate: 4-Bromofluorobenzene (80-120%)				109 %			•	
Surrogate: Dibromofluoromethane (80-125%)				114%				
Surrogate: Toluene-d8 (80-120%)				111 %				
Sample ID: IUC0924-02 (Comp-2 - Soil)				;	Sampled:	03/07/11		
Reporting Units: mg/kg								
Benzene	EPA 8260B	11C1178	0.00099	ND	0.99	3/9/2011	3/10/2011	
Ethylbenzene	EPA 8260B	11C1178	0.00099	ND	0.99	3/9/2011	3/10/2011	1.04
Toluene	EPA 8260B	11C1178	0.00099	ND	0.99	3/9/2011	3/10/2011	
Xylenes, Total	EPA 8260B	11C1178	0.0020	ND	0.99	3/9/2011	3/10/2011	
Surrogate: 4-Bromofluorobenzene (80-120%)				105 %				
Surrogate: Dibromofluoromethane (80-125%)				113 %				
Surrogate: Toluene-d8 (80-120%)				93 %			•	

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Conestoga-Rovers & Associates - Emeryville Shell

5900 Hollis St., Suite A

Project ID: 2301-2307 Lincoln, Alameda, CA

Sampled: 03/07/11

Emeryville, CA 94608 Attention: Aubrey Cool Report Number: IUC0924

Received: 03/08/11

		M	ETALS					*
			Reporting	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: IUC0924-01 (Comp-1 - Soil)  Reporting Units: mg/kg					Sampled:	03/07/11		
Mercury	EPA 7471A	11C1473	0.020	0.13	1	3/10/2011	3/10/2011	
Antimony	EPA 6010B	11C1278	9.9	ND	0.99	3/9/2011	3/10/2011	
Arsenic	EPA 6010B	11C1278	2.0	5.4	0.99	3/9/2011	3/10/2011	
Barium	EPA 6010B	11C1278	0.99	72	0.99	3/9/2011	3/10/2011	
Beryllium	EPA 6010B	11C1278	0.50	ND	0.99	3/9/2011	3/10/2011	
Cadmium	EPA 6010B	11C1278	0.50	ND	0.99	3/9/2011	3/10/2011	
Chromium	EPA 6010B	11C1278	0.99	32	0.99	3/9/2011	3/10/2011	
Cobalt	EPA 6010B	11C1278	0.99	4.9	0.99	3/9/2011	3/10/2011	
Copper	EPA 6010B	11C1278	2.0	11	0.99	3/9/2011	3/10/2011	
Lead of the last of the second of the	EPA 6010B	11C1278	2.0	49	0.99	3/9/2011	3/10/2011	
Molybdenum	EPA 6010B	11C1278	2.0	ND	0.99	3/9/2011	3/10/2011	Section 1
Nickel	EPA 6010B	11C1278	2.0	26	0.99	3/9/2011	3/10/2011	
Selenium	EPA 6010B	11C1278	2.0	ND	0.99	3/9/2011	3/10/2011	
Silver	EPA 6010B	11C1278	0.99	ND	0.99	3/9/2011	3/10/2011	
Thallium	EPA 6010B	11C1278	9.9	ND	0.99	3/9/2011	3/10/2011	
Vanadium	EPA 6010B	11C1278	0.99	23	0.99	3/9/2011	3/10/2011	
Zinc	EPA 6010B	11C1278	5.0	60	0.99	3/9/2011	3/10/2011	
Sample ID: IUC0924-02 (Comp-2 - Soil)				;	Sampled:	03/07/11		
Reporting Units: mg/kg								
Mercury	EPA 7471A	11C1473	0.020	0.064	1	3/10/2011	3/10/2011	
Antimony	EPA 6010B	11C1278	10	ND	0.995	3/9/2011	3/10/2011	
Arsenic	EPA 6010B	11C1278	2.0	ND	0.995	3/9/2011	3/10/2011	
Barium	EPA 6010B	11C1278	1.0	41	0.995	3/9/2011	3/10/2011	
Beryllium	EPA 6010B	11C1278	0.50	ND	0.995	3/9/2011	3/10/2011	
Cadmium	EPA 6010B	11C1278	0.50	ND	0.995	3/9/2011	3/10/2011	
Chromium	EPA 6010B	11C1278	1.0	26	0.995	3/9/2011	3/10/2011	
Cobalt	EPA 6010B	11C1278	1.0	3.1	0.995	3/9/2011	3/10/2011	
Copper	EPA 6010B	11C1278	2.0	10	0.995	3/9/2011	3/10/2011	
Lead	EPA 6010B	11C1278	2.0	40	0.995	3/9/2011	3/10/2011	
Molybdenum	EPA 6010B	11C1278	2.0	ND	0.995	3/9/2011	3/10/2011	
Nickel	EPA 6010B	11C1278	2.0	14	0.995	3/9/2011	3/10/2011	
Selenium	EPA 6010B	11C1278	2.0	ND	0.995	3/9/2011	3/10/2011	
Silver	EPA 6010B	11C1278	1.0	ND	0.995	3/9/2011	3/10/2011	
Thallium	EPA 6010B	11C1278	10	ND	0.995	3/9/2011	3/10/2011	
Vanadium	EPA 6010B	11C1278	1.0	19	0.995	3/9/2011	3/10/2011	
Zinc	EPA 6010B	11C1278	5.0	41	0.995	3/9/2011	3/10/2011	

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5900 Hollis St., Suite A

Emeryville, CA 94608 Attention: Aubrey Cool Project ID: 2301-2307 Lincoln, Alameda, CA

Report Number: IUC0924

Sampled: 03/07/11

Received: 03/08/11

#### **ORGANIC LEAD BY GFAA (HML 939-M)**

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IUC0924-01 (Comp-1 - Soil)  Reporting Units: mg/kg				S	ampled:	03/07/11		
Organic Lead	HML 939-M	11C1954	0.025	0.088	1	3/14/2011	3/15/2011	M2
Sample ID: IUC0924-02 (Comp-2 - Soil) Reporting Units: mg/kg				S	ampled:	03/07/11		
Organic Lead	HML 939-M	11C1954	0.025	ND	1	3/14/2011	3/15/2011	



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Report Number: IUC0924

Sampled: 03/07/11

Received: 03/08/11

#### METHOD BLANK/QC DATA

## EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015B)

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 11C1197 Extracted: 03/09/11										
Blank Analyzed: 03/09/2011 (11C1197-	BLK1)									
DRO (C10-C28)	ND	5.0	mg/kg							
ORO (C29-C40)	ND	5.0	mg/kg							
EFH (C10 - C28)	ND	5.0	mg/kg							
EFH (C10 - C28)	ND	5.0	mg/kg							
Surrogate: n-Octacosane	5.72		mg/kg	6.67		86	40-140			
Surrogate: n-Octacosane	5.72		mg/kg	6.67		86	40-140			
LCS Analyzed: 03/09/2011 (11C1197-B	S1)				•					
DRO (C10-C28)	23.7	5.0	mg/kg	33.3		71	45-115			
EFH (C10 - C28)	23.7	5.0	mg/kg	33.3		<b>71</b>	45-115			
EFH (C10 - C28)	23.7	5.0	mg/kg	33.3		71	45-115			
Surrogate: n-Octacosane	5.66		mg/kg	6.67		85	40-140			
Surrogate: n-Octacosane	5.66		mg/kg	6.67		85	40-140			
Matrix Spike Analyzed: 03/09/2011 (110	C1197-MS1)				Source: I	UC0424-0	2			
EFH (C10 - C28)	28.2	5.0	mg/kg	33.3	9.96	55	40-120			
EFH (C10 - C28)	28.2	5.0	mg/kg	33.3	9.96	55	40-120			
Surrogate: n-Octacosane	6.34		mg/kg	6.67		95	40-140			
Surrogate: n-Octacosane	6.34	¥ .	mg/kg	6.67		95	40-140			
Matrix Spike Dup Analyzed: 03/09/2011	l (11C1197-N	ASD1)			Source: I	UC0424-0	2			
EFH (C10 - C28)	26.9	5.0	mg/kg	33.3	9.96	51	40-120	5	30	
EFH (C10 - C28)	26.9	5.0	mg/kg	33.3	9.96	51	40-120	5	30	
Surrogate: n-Octacosane	6.14		mg/kg	6.67		92	40-140			
Surrogate: n-Octacosane	6.14		mg/kg	6.67		92	40-140			

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Emeryville, CA 94608 Attention: Aubrey Cool Project ID: 2301-2307 Lincoln, Alameda, CA

Report Number: IUC0924

Sampled: 03/07/11

Received: 03/08/11

#### METHOD BLANK/QC DATA

## **VOLATILE FUEL HYDROCARBONS BY GC/MS (CA LUFT)**

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 11C1178 Extracted: 03/09/11	-									
Blank Analyzed: 03/09/2011 (11C117	(8-BLK1)	•								
Volatile Fuel Hydrocarbons (C4-C12)	ND	0.20	mg/kg							
Surrogate: Dibromofluoromethane	0.0520		mg/kg	0.0500		104	80-125			100
Surrogate: Toluene-d8	0.0549		mg/kg	0.0500		110	80-120			•
Surrogate: 4-Bromofluorobenzene	0.0519		mg/kg	0.0500		104	80-120			
LCS Analyzed: 03/09/2011 (11C1178	-BS2)									MCP
Volatile Fuel Hydrocarbons (C4-C12)	1.15	0.20	mg/kg	1.00		115	60-135			
Surrogate: Dibromofluoromethane	0.0513		mg/kg	0.0500		103	80-125			
Surrogate: Toluene-d8	0.0558		mg/kg	0.0500		112	80-120			
Surrogate: 4-Bromofluorobenzene	0.0527		mg/kg	0.0500		105	80-120			
Matrix Spike Analyzed: 03/09/2011 (	11C1178-MS1)				Source: I	UC0447-0	1			
Volatile Fuel Hydrocarbons (C4-C12)	2.76	0.20	mg/kg	3.42	ND	81	50-140			
Surrogate: Dibromofluoromethane	0.0601		mg/kg	0.0495		121	80-125			
Surrogate: Toluene-d8	0.0550		mg/kg	0.0495		111	80-120			
Surrogate: 4-Bromofluorobenzene	0.0545		mg/kg	0.0495		110	80-120			* •



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Report Number: IUC0924

Sampled: 03/07/11

Received: 03/08/11

#### MICTHOD BEANK QC DATA

## **VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)**

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 11C1178 Extracted: 03/09/11										
Blank Analyzed: 03/09/2011 (11C1178-	BLK1)									
Benzene	ND	0.0010	mg/kg							*
Ethylbenzene	ND	0.0010	mg/kg							
Toluene	ND	0.0010	mg/kg							
m,p-Xylenes	ND	0.0020	mg/kg							
o-Xylene	ND	0.0010	mg/kg							
Xylenes, Total	ND	0.0020	mg/kg							
Surrogate: 4-Bromofluorobenzene	0.0519		mg/kg	0.0500		104	80-120			
Surrogate: Dibromofluoromethane	0.0520		mg/kg	0.0500		104	80-125			
Surrogate: Toluene-d8	0.0549		mg/kg	0.0500		110	80-120			
LCS Analyzed: 03/09/2011 (11C1178-B	SS1)									MCP
Benzene	0.0515	0.0010	mg/kg	0.0500		103	65-120			
Ethylbenzene	0.0576	0.0010	mg/kg	0.0500		115	70-125			
Toluene	0.0557	0.0010	mg/kg	0.0500		111	70-125			
m,p-Xylenes	0.119	0.0020	mg/kg	0.100		119	70-125			
o-Xylene	0.0575	0.0010	mg/kg	0.0500		115	70-125			
Xylenes, Total	0.177	0.0020	mg/kg	0.150		118	70-125			
Surrogate: 4-Bromofluorobenzene	0.0546		mg/kg	0.0500		109	80-120			
Surrogate: Dibromofluoromethane	0.0524		mg/kg	0.0500		105	80-125			
Surrogate: Toluene-d8	0.0559		mg/kg	0.0500		112	80-120			
Matrix Spike Analyzed: 03/09/2011 (11	C1178-MS1)				Source: I	UC0447-0	1			
Benzene	0.0503	0.00099	mg/kg	0.0495	ND	102	65-130			
Ethylbenzene	0.0533	0.00099	mg/kg	0.0495	ND	108	70-135			
Toluene	0.0547	0.00099	mg/kg	0.0495	ND	- 110	70-130			
m,p-Xylenes	0.112	0.0020	mg/kg	0.0990	ND	113	70-130			
o-Xylene	0.0565	0.00099	mg/kg	0.0495	ND	114	65-130			
Xylenes, Total	0.169	0.0020	mg/kg	0.149	ND	114	70-125			
Surrogate: 4-Bromofluorobenzene	0.0545		mg/kg	0.0495		110	80-120			
Surrogate: Dibromofluoromethane	0.0601		mg/kg	0.0495		121	80-125			
Surrogate: Toluene-d8	0.0550		mg/kg	0.0495		111	80-120			

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Emeryville, CA 94608 Attention: Aubrey Cool Project ID: 2301-2307 Lincoln, Alameda, CA

Report Number: IUC0924

Sampled: 03/07/11

Received: 03/08/11

## METHOD BLANK/QC DATA

#### **METALS**

Analyte	Result	Reporting Limit	T1!4-	Spike	Source	e/ pro	%REC	nnn	RPD	Data
	Resuit	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 11C1278 Extracted: 03/09/11										
Blank Analyzed: 03/11/2011 (11C1278-	·BLK1)									
Antimony	ND	9.8	mg/kg							
Arsenic	ND	2.0	mg/kg							
Barium	ND	0.98	mg/kg				*			
Beryllium	ND	0.49	mg/kg							
Cadmium	ND	0.49	mg/kg							
Chromium	ND	0.98	mg/kg							
Cobalt	ND	0.98	mg/kg							
Copper	ND	2.0	mg/kg							
Lead	ND	2.0	mg/kg							
Molybdenum	ND	2.0	mg/kg							
Nickel	ND	2.0	mg/kg							4.4
Selenium	ND	2.0	mg/kg							
Silver	ND	0.98	mg/kg							
Thallium	ND	9.8	mg/kg				*			
Vanadium	ND	0.98	mg/kg							
Zinc	ND	4.9	mg/kg		-					
LCS Analyzed: 03/11/2011 (11C1278-B	S1)									
Antimony	40.5	9.9	mg/kg	49.3		82	80-120			
Arsenic	41.1	2.0	mg/kg	49.3		83	80-120			100
Barium	41.1	0.99	mg/kg	49.3		83	80-120			
Beryllium	42.0	0.49	mg/kg	49.3		85	80-120			
Cadmium	40.2	0.49	mg/kg	49.3		82	80-120			
Chromium	39.4	0.99	mg/kg	49.3		80	80-120			•
Cobalt	39.4	0.99	mg/kg	49.3		80	80-120			
Copper	49.3	2.0	mg/kg	49.3		100	80-120			
Lead	39.9	2.0	mg/kg	49.3		81	80-120			
Molybdenum	49.5	2.0	mg/kg	49.3		101	80-120			
Nickel	41.8	2.0	mg/kg	49.3		85	80-120			
Selenium	45.2	2.0	mg/kg	49.3		92	80-120			
Silver	20.7	0.99	mg/kg	24.6		84	80-120			
Thallium	40.8	9.9	mg/kg	49.3		83	80-120			
Vanadium	39.8	0.99	mg/kg	49.3		81	80-120			
Zinc	47.9	4.9	mg/kg	49.3		97	80-120			

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Project ID: 2301-2307 Lincoln, Alameda, CA

Emeryville, CA 94608 Attention: Aubrey Cool

Report Number: IUC0924

Sampled: 03/07/11

Received: 03/08/11

## METHOD BLANK/OC DATA

#### **METALS**

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 11C1278 Extracted: 03/09/11										
Matrix Spike Analyzed: 03/11/2011 (11	C1278-MS1)				Source: I	UC0993-0	1			
Antimony	21.6	9.9	mg/kg	49.5	1.08	41	75-125			M2
Arsenic	44.7	2.0	mg/kg	49.5	3.15	84	75-125			
Barium	104	0.99	mg/kg	49.5	66.7	75	75-125			
Beryllium	43.1	0.50	mg/kg	49.5	0.235	87	75-125			
Cadmium	39.8	0.50	mg/kg	49.5	ND	80	75-125			-
Chromium	53.8	0.99	mg/kg	49.5	14.5	. 79	75-125			
Cobalt	44.2	0.99	mg/kg	49.5	6.59	76	75-125			
Copper	63.3	2.0	mg/kg	49.5	30.5	66	75-125			M2
Lead	66.4	2.0	mg/kg	49.5	33.0	67	75-125			M2
Molybdenum	36.8	2.0	mg/kg	49.5	ND	74	75-125			M2
Nickel	52.0	2.0	mg/kg	49.5	12.3	80	75-125			
Selenium	38.9	2.0	mg/kg	49.5	ND	79	75-125			
Silver	20.2	0.99	mg/kg	24.8	ND	82	75-125			
Thallium	40.9	9.9	mg/kg	49.5	ND	83	75-125			
Vanadium	64.5	0.99	mg/kg	49.5	26.1	78	75-125			
Zinc	98.6	5.0	mg/kg	49.5	58.8	80	75-125			
Matrix Spike Dup Analyzed: 03/11/201	1 (11C1278-M	(SD1)			Source: I	UC0993-0	1			
Antimony	19.7	10	mg/kg	50.0	1.08	37	75-125	9	20	M2
Arsenic	47.4	2.0	mg/kg	50.0	3.15	88	75-125	6	20	
Barium	108	1.0	mg/kg	50.0	66.7	82	75-125	3	20	
Beryllium	45.0	0.50	mg/kg	50.0	0.235	89	75-125	4	20	
Cadmium	41.4	0.50	mg/kg	50.0	ND	83	75-125	4	20	
Chromium	54.0	1.0	mg/kg	50.0	14.5	79	75-125	0.3	20	27
Cobalt	46.3	1.0	mg/kg	50.0	6.59	79	75-125	5	20	
Copper	62.1	2.0	mg/kg	50.0	30.5	63	75-125	2	20	M2
Lead	61.1	2.0	mg/kg	50.0	33.0	56	75-125	8	20	M2
Molybdenum	38.0	2.0	mg/kg	50.0	ND	76	75-125	3	20	
Nickel	53.6	2.0	mg/kg	50.0	12.3	83	75-125	3	20	
Selenium	41.6	2.0	mg/kg	50.0	ND	83	75-125	7	20	
Silver	20.9	1.0	mg/kg	25.0	ND	84	75-125	3	20	
Thallium	42.7	10	mg/kg	50.0	ND	85	75-125	4	20	. 67
Vanadium	65.4	1.0	mg/kg	50.0	26.1	79	75-125	1	20	
Zinc	90.9	5.0	mg/kg	50.0	58.8	64	75-125	8	20	M2

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Emeryville, CA 94608 Attention: Aubrey Cool Project ID: 2301-2307 Lincoln, Alameda, CA

Report Number: IUC0924

Sampled: 03/07/11

Received: 03/08/11

#### METHOD BLANK/OC DATA

#### **METALS**

		Reporting		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 11C1473 Extracted: 03/10/11										
Blank Analyzed: 03/10/2011 (11C1473-	BLK1)									
Mercury	ND	0.020	mg/kg							
LCS Analyzed: 03/10/2011 (11C1473-B	SS1)									
Mercury	0.915	0.020	mg/kg	0.800		114	80-120			
Matrix Spike Analyzed: 03/10/2011 (11	C1473-MS1)				Source: I	UC1045-0	1			
Mercury	0.865	0.020	mg/kg	0.800	0.0157	106	70-130			
Matrix Spike Dup Analyzed: 03/10/201	1 (11C1473-M	SD1)		2	Source: I	UC1045-0	1			
Mercury	0.907	0.020	mg/kg	0.800	0.0157	111	70-130	5	20	



17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Conestoga-Rovers & Associates - Emeryville Shell

5900 Hollis St., Suite A

Emeryville, CA 94608 Attention: Aubrey Cool Project ID: 2301-2307 Lincoln, Alameda, CA

Report Number: IUC0924

Sampled: 03/07/11

Received: 03/08/11

## MEHHODEBEANK/QCHDAIPA

## **ORGANIC LEAD BY GFAA (HML 939-M)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Oualifiers
Batch: 11C1954 Extracted: 03/14/			Omis	Devel	Result	70KEC	Limits	KI D	Limit	Quantiers
Blank Analyzed: 03/15/2011 (11C1	1954-BLK1)									,
Organic Lead	ND	0.025	mg/kg							
LCS Analyzed: 03/15/2011 (11C19	954-BS1)									
Organic Lead	0.0862	0.025	mg/kg	0.100		86	80-120			
Matrix Spike Analyzed: 03/15/201	1 (11C1954-MS1)				Source: I	UC0924-0	1			
Organic Lead	0.155	0.050	mg/kg	0.100	0.0882	66	80-120			M2
Matrix Spike Dup Analyzed: 03/15	5/2011 (11C1954-N	(ISD1)			Source: I	UC0924-0	1			
Organic Lead	0.161	0.050	mg/kg	0.100	0.0882	73	80-120	4	20	M2



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Conestoga-Rovers & Associates - Emeryville Shell

5900 Hollis St., Suite A

M2

Emeryville, CA 94608 Attention: Aubrey Cool Project ID: 2301-2307 Lincoln, Alameda, CA

Sampled: 03/07/11

Report Number: IUC0924 Received: 03/08/11

#### DATA QUALIFIERS AND DEFINITIONS

The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

MCP No results were reported for the MS and/or MSD due to a clogged autosampler port. Batch was accepted based on

Blank Spike (LCS) recoveries.

**ZX** Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

#### **ADDITIONAL COMMENTS**

#### For Volatile Fuel Hydrocarbons (C4-C12):

Volatile Fuel Hydrocarbons (C4-C12) are quantitated against a gasoline standard. Quantitation begins immediately before TBA-d9. For Extractable Fuel Hydrocarbons (EFH, DRO, ORO):

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.



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Conestoga-Rovers & Associates - Emeryville Shell

5900 Hollis St., Suite A

Emeryville, CA 94608 Attention: Aubrey Cool Project ID: 2301-2307 Lincoln, Alameda, CA

Report Number: IUC0924

Sampled: 03/07/11

Received: 03/08/11

#### **Certification Summary**

#### **TestAmerica Irvine**

Method	Matrix	Nelac	California
EPA 6010B	Soil	X	X
EPA 7471A	Soil	X	X
EPA 8015B	Soil	X	X
EPA 8260B	Soil	X ·	X
HML 939-M	Soil	N/A	X
TPH by GC/MS	Soil	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

TestAmerica Irvine

# TUCOUN

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ACCRESS: 5900 Hollis Street, Suite A, Emeryville, CA 94608												TO (Name						PHONE	Ю:				E-MAL						CONSULTANT PROJECT NO:
PROJECT CONTACT (Hardsopy or POF Report to): Aubrey Cool:										enda (		ler, CF	KA, E	mery	ville	-		510-4	20-33	43			shel	ledf@	ocrav	vorid.		R INS	060204-2011-11.03 ONLY
TELEPHONE FAX 510-420-3336 510-420-9170	)	E-MAIL:	ac	cool@c	craworld.co	om			Oil	iver Y	'an																		
TURNAROUND TIME (CALENDAR DAYS):  STANDARD (14 DAY) 5 DAYS 3 DAYS		2 DAYS	□ 24 HC			RESULTS		D EEKEND	1										RE	QUE	STEC	AN	ALY	SIS					
☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:					······································				T	Т	Т	T	T	П			$\neg$	Т							Γ	Г	Т	T	TEMPERATURE ON RECEIPT
SPECIAL INSTRUCTIONS OR NOTES:		~	_		ACT RATE A			-	10	(8015M)							1						(6010)						600
cc: kdupler@craworld.com, pschaefer@craworld.com, and Sheli.Lab.			STATE	E REIMB	ursement r Eded	ATE APP	LIES		(8260B)	8	l	(8260B)		1									<u>s</u>						(05) 2 5
Marked TAT except for those contingent tests needed Bioassay determination (5 day TAT or better may app	ily)		· 1		IFICATION R	EQUESTE	ED .		9	흝								<u>@</u>		8	SW)	(8015M)	12	2					
Call composite sample IDs and field point		Comp-1	and Comp	)-2				1	1 8	act.	(8260B)	ates	88	9	90	809	88	8260	99	8260	804	8	etals	2700	8	ଅ			
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USE	DATE	TIME		HCL	HN03 H2SO4	NONE	OTHER	CONT.	Ŧ	TPH - Extractable	BTEX	5 Oxygenates	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	TPH - MO	CAM17 Metals - Total	SVOCs (8270C)	VOCs (8260)	PCBs (8082)			Container PID Readings or Laboratory Notes
Comp-1A	3/7/11	1256	so					1	Х	X	X											X	х						Please call
Comp-1B		1304	so					1	Х	X	X											X	х						composite
Comp-1C		355	so	П				1	X	X	X											X	х			Г			sample
Comp-1D	V	H07	so					1	x	x	x									Ī		Х	х						Comp-1
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Comp-2A	3/4/11	9:08	so	П	7			1	x	Х	x	1					1					X	х			3	18	lu	Please call
Comp-2B			so					1	X	X	х											Х	х			1	5	2	composite
Comp-2C			so				- :	1	х	х	х											Х	х						sample
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08/04





June 03, 2011

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

Subject: Calscience Work Order No.: 11-03-2119

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 3/31/2011 and analyzed in accordance with the attached chain-of-custody.

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

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

Sincerely,

Calscience Environmental Laboratories. Inc.

Xuan Dang

**Project Manager** 

#### **Case Narrative**

## Work Order # 11-03-2119 Modified EPA 8260 in Air

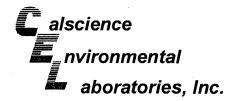
This method is used to determine the concentration of BTEX/Oxygenates/Naphthalene having a vapor pressure greater than 10<sup>-1</sup> torr at 25°C at standard pressure in an air matrix. The method is similar to EPA TO-15 and uses air standards for calibration. Method specifics are listed in the table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

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

स्थिल्याकात्व्राक्षकाः		
invegiantenite	Galsalemae TO (5/(M))	Galsejence EPA 3/250(W) ni Air
BFB Acceptance Criteria	SW846 Protocol	SW846 Protocol
Initial Calibration	Allowable % RSD for each Target Analyte <= 30%, 10% of analytes allowed <=40%	Allowable % RSD for each Target Analyte <= 30%, 10% of analytes allowed <= 40%
Initial Calibration Verification (ICV) - Second Source Standard (LCS)	Analytes contained in the LCS standard evaluated against historical control limits for the LCS	BTEX and MTBE only - <= 30%D
Daily Calibration Verification (CCV)	Full List Analysis: Allowable % Difference for each CCC analyte is <= 30%	BTEX and MTBE only - <= 30%D
	Target List Analysis: Allowable % Difference for each target analytes is <= 30%	
Daily Calibration Verification (CCV) - Internal Standard Area Response	Allowable +/- 50% (Range: 50% to 150%)	Allowable +/- 50% (Range: 50% to 150%)
Method Blank, Laboratory Control Sample and Sample - Internal Standard Area Response	Allowable +/- 50% of the mean area response of most recent Calibration Verification (Range: 50% to 150%)	Allowable +/- 50% of the mean area response of the most recent Calibration Verification (Range: 50% to 150%)
Surrogates	1,4-Bromoflurobenzene, 1,2-Dichloroethane-d4 and Toluene-d8 - % Recoveries based upon historical control limits +/-3S	1,4-Bromoflurobenzene, 1,2-Dichloroethane-d4 and Toluene-d8 - % Recoveries based upon historical control limits +/-3S







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

Date Received: Work Order No:

Preparation: Method:

Units:

03/31/11

11-03-2119

N/A

**ASTM D-1946** 

%v

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

Client Sample Number				ab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/ Analy		QC Batch ID
SVP-9-22			11-03-	2119-1-A	03/30/11 14:50	Air	GC 36	N/A	03/3 11:		110331L01 a
<u>Parameter</u> Methane Carbon Dioxide	Result ND 5.90	<u>RL</u> 0.500 0.500	<u>DF</u> 1 1	Qual	Parameter Oxygen + Argor	1		Result 8.83	<u>RL</u> 0.500	<u>DF</u> 1	<u>Qual</u>
SVP-9-4-5			11-03-	2119-2-A	03/30/11 14:30	Air	GC 36	N/A	03/3 11:		51(0331L01
<u>Parameter</u> Methane Carbon Dioxide	Result ND 8.34	<u>RL</u> 0.500 0.500	<u>DF</u> 1 1	<u>Qual</u>	Parameter Oxygen + Argon	n		Result 8.68	<u>RL</u> 0.500	<u>DF</u> 1	Qual
Method Blank			1099-0	2002-1-269	NA	Air	GC 35	N/A	03/3 08:		103341-01
Parameter Methane Carbon Dioxide	<u>Result</u> ND ND	<u>RL</u> 0.500 0.500	<u>DF</u> 1 1	Qual	Parameter Oxygen + Argor	n		Result ND	<u>RL</u> 0.500	<u>DF</u> 1	<u>Qual</u>





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

03/31/11 11-03-2119 N/A

Method:

EPA TO-3M

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
SVP-9-2'		11-03-2119-1-A	03/30/11 14:50	Air	GC 13	N/A	03/31/11 11:32	110331L01
Parameter TPH as Gasoline	Result ND	<u>RL</u> 7000	<u>DF</u> 1	<u>Qual</u>	<u>Units</u> ug/m3			
SVP-9-4.5		11-03-2119-2-A	03/30/11 14:30	Air	GC 13	N/A	03/31/11 11:42	-110331L01
<u>Parameter</u> TPH as Gasoline	<u>Result</u> 18000	<u>RL</u> 7000	<u>DF</u> 1	<u>Qual</u>	<u>Units</u> ug/m3			
Method Blank		098-01-005-3,030	WA	Air	GC 13	NA .	03/31/11 08:43	110331L01
Parameter TPH as Gasoline	Result ND	<u>RL</u> 7000	<u>DF</u> 1	Qual	<u>Units</u> ug/m3			







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

Date Received:

03/31/11

Work Order No: Preparation:

11-03-2119

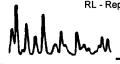
Method:

N/A

od: ASTM D-1946 (M)

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
SVP-9-2'		11-03-2119-1-A	03/30/11 14:50	Air	GC 55	N/A	03/31/11 12:51	110331L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
Helium	ND	0.0100	1		%v			
SVP 9 4.5		.11-03-2119-2-A	03/307/12 14/30	Alr	GC 55	NA	(1876) 	110331101
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
Helium	ND	0.0100	1		%v			
Method Blank		099-12-872-87	NA	Air	GC 55	N/A	03/31/11 12:28	110331L01
Parameter	Result	<u>RL</u>	DF	Qual	<u>Units</u>			
Helium	ND	0.0100	1		%v			





Conestoga-Rovers & Associates

5900 Hollis Street, Suite A Emeryville, CA 94608-2008 Date Received:

Work Order No:

Method:

Preparation: Units:

11-03-2119 N/A EPA 8260B (M)

ug/m3

03/31/11

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

Client Sample Number				o Sample lumber	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/1 Analy		QC Batch ID
SVP.9-2:			11-03-2	119-1-A	03/30/11 14:50	Air	GC/MS ZZ	N/A	03/31 14:4		110331L01
Parameter	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	16	1		Xylenes (total)			ND	43	1	
Toluene	ND	19	1		Naphthalene			ND	52	1	
Ethylbenzene	ND	22	1							14	
Surrogates:	<u>REC (%)</u>	Control Limits	Qua	]	Surrogates:			REC (%)	Control Limits	<u>C</u>	<u>tual</u>
1,4-Bromofluorobenzene	102	47-156			1,2-Dichloroeth	ane-d4		101	47-156		
Toluene-d8	102	47-156			•						
SVP-9-4,5'		7 - 1299) 14 - 15	11-03-2	119-2-A	03/30/11 14:30	Air	GC/MS ZZ	N/A	03/31 15:		1110331L01
Parameter	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
Benzene	52	16	1		Xylenes (total)			ND	43	1	
Toluene	ND	19	1		Naphthalene			ND	52	1	
Ethylbenzene	ND	22	1								
Surrogates:	<u>REC (%)</u>	Control Limits	Qua		Surrogates:			REC (%)	Control Limits	<u>C</u>	<u> </u>
1,4-Bromofluorobenzene	103	47-156			1,2-Dichloroeth	ane-d4		99	47-156		
Toluene-d8	92	47-156									
Method Blank				041:429	, NA	- Air	GC/MS ZZ	NA :	03/3) 15-11(3)		(
Parameter	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
Benzene	ND	16	1		Xylenes (total)			ND	43	1	
Toluene	ND	19	1		Naphthalene			ND	52	1	
Ethylbenzene	ND	22	1	•				D=0 (f.):		_	
Surrogates:	<u>REC (%)</u>	Control Limits	Qua	[	Surrogates:	•		REC (%)	Control Limits	<u>C</u>	<u>Qual</u>
1,4-Bromofluorobenzene	100	47-156			1,2-Dichloroeth	ane-d4		99	47-156		**
Toluene-d8	98	47-156						4			



## **Quality Control - Duplicate**



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

Date Received: Work Order No: Preparation: Method:

03/31/11 11-03-2119 N/A EPA TO-3M

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
11-03-2120-1	Air	F GC 13	i NA	03/31/11	110331D01
Parameter	Sample Conc	DUP Conc	RPD	RPD CL	<u>Qualifiers</u>
TPH as Gasoline	25660000	24980000	3	0-20	



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



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

Date Received: Work Order No: Preparation:

N/A 11-03-2119 N/A

Method:

**ASTM D-1946** 

Quality Control Sample ID	Matrix Ins		-	ate alyzed	LCS/LCSD Bar Number	ch
099-03-002-1 <sub>1</sub> 269	Air C	9C 36 N	I/A 03/:	31/11	110331L01	
Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Methane	95	96	80-120	0	0-30	
Carbon Dioxide	106	106	80-120	0	0-30	
Carbon Monoxide	103	103	80-120	. 0	0-30	
Oxygen + Argon	92	93	80-120	0	0-30	
Nitrogen	98	99	80-120	. 1	0-30	~



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

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

Date Received: Work Order No: N/A

Preparation:

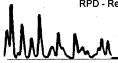
11-03-2119

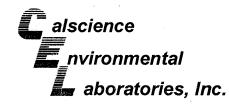
N/A

Method:

ASTM D-1946 (M)

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
1099-12-872-87	Air	GC 55	N/A	03/31/11	110331L01	
<u>Parameter</u>	LCS %RE	C LCSD %R	EC %REC	CL RPD	RPD CL Qual	lifiers
Helium	102	103	80-1	20 0	0-30	
Hydrogen	111	112	80-1	20 0	0-30	





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



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

Date Received: Work Order No:

11-03-2119

Preparation:

N/A

N/A

Method:

EPA 8260B (M)

Quality Control Sample ID	Matrix Ins	trument F	Date Prepared	Date Analyzed	LCS/LCSD Bate Number	ch ·
099-13-041-429	Air	MSZZ	N/A	03/31/11	110331L01	
<u>Parameter</u>	LCS %REC	LCSD %RE	C %REC	CL RPD	RPD CL	Qualifiers
Benzene	105	105	60-15	6 0	0-40	
Toluene	107	106	56-14	16 1	0-43	
Ethylbenzene	106	107	52-15	54 1	0-38	
Xylenes (total)	106	107	42-15	56 1	0-41	



## **Glossary of Terms and Qualifiers**



Work Order Number: 11-03-2119

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and,
•	hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
В	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
<b>E</b>	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. 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.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

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# <WebShip>>>>>

800-322-5555 www.gso.com

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

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

COD: \$0.00

Reference: CRA

**Delivery Instructions:** 

Signature Type: SIGNATURE REQUIRED

ORC

**GARDEN GROVE** 

D92843A



89888912

Print Date : 03/30/11 16:26 PM

NPS

Package 1 of 1

Send Label To Printer

Print All

Edit Shipment

Finish

### LABEL INSTRUCTIONS:

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

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

STEP 2 - Fold this page in half.

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

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

#### **ADDITIONAL OPTIONS:**

Send Label Via Email

Create Return Label

#### TERMS AND CONDITIONS:

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



WORK ORDER #: 11-03- 2 1 9

## SAMPLE RECEIPT FORM

Box <u>\</u> of <u>\</u>

CLIENT:	DATE: _	03/3\/11	_
TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C - 6.0 °C, not froz	en)		٦
Temperature°C + 0.5°C (CF) =°C	☐ Blank	☐ Sample	
☐ Sample(s) outside temperature criteria (PM/APM contacted by:).			
☐ Sample(s) outside temperature criteria but received on ice/chilled on same	day of sampli	ina	
☐ Received at ambient temperature, placed on ice for transport by (		mig.	
Ambient Temperature: ☐ Air ☐ Filter	Journer.	Initial: WS	
	·	HIIGH	ユ
CUSTODY SEALS INTACT:			
☑ Box □ □ No (Not Intact) □ Not Preser	nt □ N/A	Initial: WB	_
☐ Sample ☐ ☐ No (Not Intact) ☑ Not Preser	nt	Initial:	_
			<u> </u>
SAMPLE CONDITION:	Yes	No N/A	
Chain-Of-Custody (COC) document(s) received with samples			
COC document(s) received complete	🗹		
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labe	els.		
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	🗹		
Sample container label(s) consistent with COC	🗹		
Sample container(s) intact and good condition	_		
Proper containers and sufficient volume for analyses requested	🗹		
Analyses received within holding time	🗹		1
pH / Residual Chlorine / Dissolved Sulfide received within 24 hours	🗀		
Proper preservation noted on COC or sample container	🗆		
☐ Unpreserved vials received for Volatiles analysis	*		
Volatile analysis container(s) free of headspace	🗆 -		
Tedlar bag(s) free of condensation  CONTAINER TYPE:	, 🗹		
Solid: □4ozCGJ □8ozCGJ □16ozCGJ □Sleeve() □EnCo	ores <sup>®.</sup> □Terra	aCores® □	
Water: □VOA □VOAh □VOAna₂ □125AGB □125AGBh □125AGB	Bp □1AGB	□1AGB <b>na₂</b> □1AGB	s
□500AGB □500AGJ □500AGJs □250AGB □250CGB □250CG	Bs □1PB	□500PB □500PBn	a
□250PB			_
Air: ☑Tedlar <sup>®</sup> □Summa <sup>®</sup> Other: □ Trip Blank Lot#:	Labeled	/Checked by:	
Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag			<b>_</b> .
Preservative: h: HCI n: HNO: na-Na-S-O: na: NaOH n: H-PO: s: H-SO: znna: ZnAc-+NaO	H f: Field-filtered	Scanned by: 0 (	

### **Xuan Dang**

From:

Schaefer, Peter [pschaefer@craworld.com]

Sent:

Thursday, June 02, 2011 3:30 PM

To:

Xuan Dang

Subject:

RE: 2301-2307 Lincoln Ave., Alameda, CA / CEL 11-03-2119

Attachments:

11-03-2119 Revised COC.pdf

Xuan,

Please issue a revised lab report per the attached revised COC. SVP-9-5' should have been labeled SVP-9-4.5'. Thank you for your help.

Regards,

**Peter Schaefer** 

Telephone: (510) 420-3319

From: Xuan Dang [mailto:xdang@calscience.com]

Sent: Wednesday, April 13, 2011 10:02 AM

To: Schaefer, Peter

**Subject:** FW: 2301-2307 Lincoln Ave., Alameda, CA / CEL 11-03-2119

Good morning Peter,

Please see attached the report you requested.

Let me know if there's anything else I can help with.

Have a nice day.

Best Regards,

Xuan Dang

Project Manager

Calscience Environmental Laboratories, Inc.

7440 Lincoln Way

Garden Grove, CA 92841-1427

Phone: 714-895-5494 x229

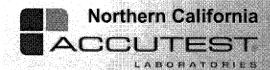
Fax: 714-894-7501 xdang@calscience.com



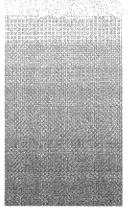
#### PRIVACY NOTICE:

This email (and/or the documents attached to it) is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential, or exempt from disclosure under applicable Federal or State law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone or else to arrange for the return of the documents.

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04/12/11





## Technical Report for

**Shell Oil Products** 

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

60204

Accutest Job Number: C15499

Sampling Date: 04/11/11

## Report to:

Conestoga-Rovers & Associates 5900 Hollis Street Suite A Emeryville, CA 94608 pschaefer@craworld.com

ATTN: Peter Schaefer

Total number of pages in report: 29



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Laurie Glantz-Murphy Laboratory Director

Client Service contact: Simon Hague 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)
This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

Northern California • 2105 Lundy Ave. • San Jose, CA 95131 • tel: 408-588-0200 • fax: 408-588-0201 • http://www.accutest.com

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<b>2.2:</b> C15499-2: PB-W-2	7
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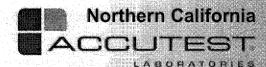
## Sample Summary

**Shell Oil Products** 

C15499

Job No: CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave,Alameda,CA Project No: 60204

Sample Number	Collected Date	Time	Bv	Received	Matri Code		Client Sample ID
L	04/11/11					Soil	PB-E-2
C15499-2	04/11/11	15:00	MWSI	204/11/11	SO	Soil	PB-W-2
.C15499-3	04/11/11	15:00	MWSI	204/11/11	so	Soil	PB-S-2
C15499-4	04/11/11	15:01	MWSI	P04/11/11	so	Soil	PB-N-2
©15499-5	04/11/11	15:02	MWSI	204/11/11	SO	Soil	PB-C-3



Sample Result	Š.		
Report of Anal	ysis		-

Page 1 of 1

Client Sample ID: PB-E-2 Lab Sample ID:

Matrix:

C15499-1

SO - Soil

**Date Sampled:** 04/11/11 Date Received: 04/11/11

Method: Project:

SW846 8260B

Percent Solids: n/a a CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

File ID DF Prep Date Prep Batch **Analytical Batch** By Analyzed M22913.D XB Run #1 VM733 1 04/11/11 n/a n/a

Run #2

Initial Weight

5.14 g

Run #1

Run #2

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total) TPH-GRO (C6-C10)	ND ND ND ND	4.9 4.9 4.9 9.7 97	1.5 1.5 1.5 3.9 49	ug/kg ug/kg ug/kg ug/kg ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its	
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	107% 101% 98%		60-13 60-13 60-13	30%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Page 1 of 1

Client Sample ID: PB-E-2

Lab Sample ID: Matrix:

C15499-1 SO - Soil

**Date Sampled:** 04/11/11

Date Received: 04/11/11

Percent Solids: n/a a

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

#### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	35.6	1.9	mg/kg	1	04/11/11	04/12/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA1821(2) Prep QC Batch: MP3399

(a) All results reported on wet weight basis.

Client Sample ID: PB-W-2

Lab Sample ID:

C15499-2

**Date Sampled:** 04/11/11 Date Received: 04/11/11

Matrix:

SO - Soil

Method:

SW846 8260B

Percent Solids: n/a a

Project:

CRAWCAE: T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	M22914.D	1	04/11/11	XB	n/a	n/a	VM733
Run #2							i

Initial Weight

Run #1

5.10 g

Run #2

#### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total) TPH-GRO (C6-C10)	ND ND ND ND ND	4.9 4.9 4.9 9.8 98	1.5 1.5 1.5 3.9 49	ug/kg ug/kg ug/kg ug/kg ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	106% 102% 102%	*	60-1	30% 30% 30%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Client Sample ID:

PB-W-2

Lab Sample ID: Matrix:

C15499-2 SO - Soil

**Date Sampled:** 04/11/11

Date Received: 04/11/11

Percent Solids: n/a a

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

#### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed B	y Method	Prep Method
Lead	19.2	1.8	mg/kg	1	04/11/11	04/12/11 RS	S SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA1821(2) Prep QC Batch: MP3399

(a) All results reported on wet weight basis.

Page 1 of 1

Client Sample ID: PB-S-2

Lab Sample ID:

C15499-3

Date Sampled: 04/11/11

Matrix:

SO - Soil

Date Received: 04/11/11

Method:

SW846 8260B

Percent Solids: n/a a

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	M22915.D	1	04/11/11	XB	n/a	n/a	VM733

Run #2

Initial Weight

Run #1 Run #2 5.04 g

### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-88-3	Toluene	ND.	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	9.9	4.0	ug/kg	
	TPH-GRO (C6-C10)	ND	99	50	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	iits	
1868-53-7	Dibromofluoromethane	106%		<b>60</b> -1	130%	
2037-26-5	Toluene-D8	101%		<b>60</b> -1	130%	
460-00-4	4-Bromofluorobenzene	100%		<b>60</b> -1	130%	
		711 - 772 - 772 - 773 - 774 -	***			

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: PB-S-2

Lab Sample ID: Matrix:

C15499-3 SO - Soil **Date Sampled:** 04/11/11

Date Received: 04/11/11

Percent Solids: n/a a

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

#### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	15.0	1.8	mg/kg	1	04/11/11	04/12/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA1821(2) Prep QC Batch: MP3399

(a) All results reported on wet weight basis.

Page 1 of 1

Client Sample ID: PB-N-2

Lab Sample ID:

C15499-4 SO - Soil Date Sampled: 04/11/11 Date Received: 04/11/11

Matrix: Method:

SW846 8260B

Percent Solids: n/a a

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	M22916.D	1	04/11/11	XB	n/a	n/a	VM733
Run #2							

Initial Weight

Run #1 Run #2 5.03 g

#### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3	Benzene Toluene	ND ND	5.0 5.0	1.5 1.5	ug/kg ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
1330-20-7	TPH-GRO (C6-C10)	ND.	99	50	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7 2037-26-5	Dibromofluoromethane Toluene-D8	105% 101%		60-1	30% 30%	
1330-20-7 CAS No. 1868-53-7	Xylene (total) TPH-GRO (C6-C10) Surrogate Recoveries Dibromofluoromethane	ND ND Run# 1	9.9 99	4.0 50 <b>Lim</b> 60-1 60-1	ug/kg ug/kg its	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Page 1 of 1

Client Sample ID: PB-N-2

Lab Sample ID: Matrix:

C15499-4 SO - Soil

**Date Sampled:** 04/11/11

Date Received: 04/11/11 Percent Solids: n/a a

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

#### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	17.9	1.9	mg/kg	1	04/11/11	04/12/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA1821 (2) Prep QC Batch: MP3399

(a) All results reported on wet weight basis.

Page 1 of 1

Client Sample ID: PB-C-3

Lab Sample ID: Matrix:

C15499-5

**Date Sampled:** 04/11/11 Date Received: 04/11/11

Method:

SO - Soil SW846 8260B

Percent Solids: n/a a

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	M22917.D	1	04/11/11	XB	n/a	n/a	VM733

Run #2

Initial Weight

5.07 g

Run #1

Run #2

### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.9	1.5	ug/kg	
108-88-3	Toluene	ND	4.9	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	9.9	3.9	ug/kg	
	TPH-GRO (C6-C10)	ND	99	49	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7	Dibromofluoromethane	110%		<b>60-</b> 1	130%	
2037-26-5	Toluene-D8	102%	The state of the s	60-1	l <b>30</b> %	
460-00-4	4-Bromofluorobenzene	100%		60-1	130%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: PB-C-3

Lab Sample ID:

C15499-5 SO - Soil

**Date Sampled:** 04/11/11

Date Received: 04/11/11 Percent Solids: n/a a

Matrix: Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	150	1.9	mg/kg	1	04/11/11	04/12/11 RS	SW846 6010B <sup>1</sup>	SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA1821 (2) Prep QC Batch: MP3399

(a) All results reported on wet weight basis.



Misc. Forms	
Custody Docum	ents and Other Forms
Custody Docum	cins und Other Forms
Includes the follow	ving where applicable:

• Chain of Custody

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Copy of final report to Shell Lab	) pilind@ciawbita.cor	TI.		Ø REC			ON REQ	UESTED		Purgeable	1			BTEX (\$260B)	BTEX + MTBE + TBA (8260B)	BTEX + S OXYS (MTBE, TB	Full VOC 11st (8260B)		*		2	8					1		ON ICE)
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C15499: Chain of Custody Page 1 of 2

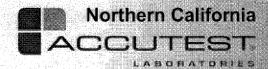
Accutest Laboratories Northern California Sample Recei	ving Check L	.ist Job# : C	15499	Initial: EK
Review Chain of Custody Chain of Custody is to be compl	ete and legible.			· · · · · · · · · · · · · · · · · · ·
Are these regulatory (NPDES) samples? GWA-	(es) No	Client Sample ID	pH Check	Other Comments/Issues
pts pH requested?	Yes / No	- Choin Complete	p oo	
□ Was Client informed that hold time is 15 min? Yes / No Continue	Yes / No			
Was ortho-Phosphate filtered with in 15 min? Yes / No Continue	Yes / No			
Are sample within hold time?	(63) No			
Are sample in danger of exceeding hold-time	Yes / (10)			
Existing Client? (res)/ No Existing Project?	Yes /No			
If No: Is Report to info complete and legible, including;	-			
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	Yes / (100			
	(BP/No			
s Matrix listed and correct?	No No			
Analyses listed, we do, or client has authorized a subcontract?	No No			
Chain is signed and dated by both client and sample custodian?	(es) No			
p fAT requested available? (reg / No Approved by Pm				
Review Coolers:				,
Were all Coolers temperatures measured at ≤6°C? 9.6°C (ON ICE)	Yes/(No)			
y If cooler is outside the ≤6°C; note down the affected bottles in that cooler on the left	$\sim$			
Are samples on ice?	(es) No			
Note that ANC does NOT accept evidentiary samples. (We do not lock refrigerators)				
Ar .		····		
& Shipment Received Method				
Custody Seals: Present: Yes / (10) If Yes; Unbroken:	Yes / No			
Review of Sample Bottles: If you answer no, explain to the side				
Chain matches bottle labels?	Pes No	<del></del>		
Is there enough sample volume in proper bottle for requested analyses?	(Pes)/ No	<del></del>		
o Proper Preservatives? Yes / No				
Check pH on preserved samples except 1664, 625, 8270 and VOAs; make notes on left.			<b> </b>	
□ Headspace-VOAs? Greater than 6mm in diameter List sample ID and affected container	Yes / No	<del></del>		
			L	

Non-Compliance issues and discrepancies on the COC are forwarded to Project Management

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C15499: Chain of Custody

Page 2 of 2



MS Vo	

QC Data Summaries

## Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary Job Number: C15499

Account:

**SHELLWIC Shell Oil Products** 

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM733-MB2	M22912.D	1	04/11/11	XB		n/a	VM733
					2		

The QC reported here applies to the following samples:

Method: SW846 8260B

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2 100-41-4 108-88-3 1330-20-7	Benzene Ethylbenzene Toluene Xylene (total) TPH-GRO (C6-C10)	ND ND ND ND ND	5.0 5.0 5.0 10	1.5 1.5 1.5 4.0 50	ug/kg ug/kg ug/kg ug/kg ug/kg
CAS No.	Surrogate Recoveries		Limits		
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	101% 102% 99%	60-130 60-130 60-130	%	

## Method Blank Summary Job Number: C15499

Account:

**SHELLWIC Shell Oil Products** 

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

Sample	File ID	DF	Analyzed 04/11/11	<b>By</b>	Prep Date	Prep Batch	Analytical Batch
VM733-MB	M22895.D	1		XB	n/a	n/a	VM733

The QC reported here applies to the following samples:

Method: SW846 8260B

VM733-BSD, VM733-BS1

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2	Benzene	ND	5.0	1.5	ug/kg
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg
108-88-3	Toluene	ND	5.0	1.5	ug/kg
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg
4	TPH-GRO (C6-C10)	ND	100	50	ug/kg
CAS No.	Surrogate Recoveries		Limit	s	
1868-53-7	Dibromofluoromethane	99%	60-13	0%	
2037-26-5	Toluene-D8	103%	60-13	0%	
460-00-4	4-Bromofluorobenzene	100%	60-13	0%	

## Blank Spike Summary Job Number: C15499

Account:

SHELLWIC Shell Oil Products

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

Sample VM733-BS1	File ID M22898.D	DF 1	<b>Analyzed</b> 04/11/11	By XB	Prep Date	Prep Batch n/a	Analytical Batch VM733

The QC reported here applies to the following samples:

Method: SW846 8260B

CAS No.	Compound	- F	BSP ug/kg	BSP %	Limits
	TPH-GRO (C6-C10)	250	243	97	60-130
CAS No.	Surrogate Recoveries	BSP	Lim	its	
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	101% 103% 100%	60-1	30% 30% 30%	

# Blank Spike/Blank Spike Duplicate Summary Job Number: C15499

Account:

SHELLWIC Shell Oil Products

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

			T /T)	,	, =	T.D. 47700
VM733-BS M22896	.D I	04/11/11	XB	n/a	n/a	VM733
VM733-BSD M22897	.D 1	04/11/11	XB	n/a	n/a	VM733

The QC reported here applies to the following samples:

Method: SW846 8260B

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4 108-88-3 1330-20-7	Benzene Ethylbenzene Toluene Xylene (total)	40 40 40 120	43.4 41.0 40.7 121	109 103 102 101	42.6 40.5 40.3 119	107 101 101 99	2 1 1 2	60-130/30 60-130/30 60-130/30 60-130/30
CAS No.	Surrogate Recoveries	BSP	BS	D	Limits			
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	106% 95% 97%	106 959 999	%	60-1309 60-1309 60-1309	6		

Page 1 of 1

# Matrix Spike/Matrix Spike Duplicate Summary Job Number: C15499

Account:

**SHELLWIC Shell Oil Products** 

Project:

CRAWCAE: T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

Sample C15499-5MS C15499-5MSD	File ID M22918.D M22919.D	DF 1 1	Analyzed 04/11/11 04/11/11	By XB XB	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch VM733 VM733
C15499-5	M22917.D	1	04/11/11	XB	n/a	n/a	VM733

The QC reported here applies to the following samples:

Method: SW846 8260B

CAS No.	Compound	C15499-5 ug/kg Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4	Benzene Ethylbenzene	ND ND	39.7 39.7	43.2 39.7	109 100	42.0 40.3	106 101	3 1	60-130/30 60-130/30
108-88-3 1330-20-7	Toluene Xylene (total)	ND ND	39.7 119	39.5 118	100 99	40.4 120	102 101	2 2	60-130/30 60-130/30
CAS No.	Surrogate Recoveries	MS	MSD	<b>C</b> 1:	5499-5	Limits			
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	111% 96% 100%	110% 98% 104%	110 102 100	<b>%</b>	60-1309 60-1309 60-1309	6		



Metals Analysis

**QC Data Summaries** 

### Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: C15499
Account: SHELLWIC - Shell Oil Products
Project: CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave,Alameda,CA

QC Batch ID: MP3399 Matrix Type: SOLID

Methods: SW 846 6010B Units: mg/kg

Prep Date:

04/11/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	1.3	2		
Antimony	2.0	.07	.087		
Arsenic	2.0	.07	.07		
Barium	1.0	.04	.035		
Beryllium	1.0	.02	.012		
Boron	10	.09	.2		
Cadmium	1.0	.02	.015		
Calcium	300	.71	7.6		
Chromium	1.0	.03	.054		
Cobalt	1.0	.02	.022		
Copper	1.0	.12	.19		
Iron	10	.64	1.6		
Lead	2.0	.07	.054	-0.020	<2.0
Magnesium	200	2.7	1.5		
Manganese	1.0	.01	.054		
Molybdenum	1.0	. 02	.024		
Nickel	1.0	.02	.024		
Potassium	200	1.8	1.3		
Selenium	2.0	.18	.23		
Silicon	20	.12	. 77		
Silver	1.0	.03	.044		
Sodium	300	1.5	4.8		
Strontium	1.0	.02	.017		
Thallium	2.0	.05	.073		
Tin	50	.02	.41		
Titanium	1.0	.04	.079		
Vanadium	1.0	.03	.025		
Zinc	2.0	.03	.098		

Associated samples MP3399: C15499-1, C15499-2, C15499-3, C15499-4, C15499-5

Results < IDL are shown as zero for calculation purposes (\*) Outside of QC limits (anr) Analyte not requested

#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C15499
Account: SHELLWIC - Shell Oil Products
Project: CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave,Alameda,CA

QC Batch ID: MP3399 Matrix Type: SOLID

Methods: SW 846 6010B Units: mg/kg

Prep Date:

04/11/11

Metal	C15471-1 Original MS	Spikelot MPIR4A % Rec	QC Limits
Aluminum			
Antimony			
Arsenic	anr		
Barium	anr		
Beryllium			
Boron			
Cadmium	anr		
Calcium			
Chromium	anr		
Cobalt			
Copper			
Iron			
Lead	5.5 46.9	46.7 88.6	75-125
Magnesium			
Manganese			
Molybdenum			
Nickel			
Potassium			
Selenium	anr		
Silicon			
Silver	anr		
Sodium			
Strontium			
Thallium			
Tin			
Titanium			
Vanadium			
Zinc			

Associated samples MP3399: C15499-1, C15499-2, C15499-3, C15499-4, C15499-5

Results < IDL are shown as zero for calculation purposes (\*) Outside of QC limits (N) Matrix Spike Rec. outside of QC limits (anr) Analyte not requested

#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C15499
Account: SHELLWIC - Shell Oil Products

Project: CRAW CAE: T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

QC Batch ID: MP3399 Matrix Type: SOLID

Methods: SW 846 6010B

Units: mg/kg

Prep Date:

04/11/11

Metal	C15471-1 Original	MSD	Spikelot MPIR4A	% Rec	MSD RPD	QC Limit
Aluminum						60 C
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						THE CONTRACTOR OF THE CONTRACT
Boron .						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper						据· · · · · · · · · · · · · · · · · · · ·
Iron						
Lead	5.5	47.7	46.7	90.3	1.7	20
Magnesium						
Manganese						
Molybdenum Nickel						
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP3399: C15499-1, C15499-2, C15499-3, C15499-4, C15499-5

Results < IDL are shown as zero for calculation purposes (\*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C15499
Account: SHELLWIC - Shell Oil Products
Project: CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

QC Batch ID: MP3399 Matrix Type: SOLID

Methods: SW846 6010B Units: mg/kg

Prep Date:

04/11/11

Metal	BSP Result	Spikelot MPIR4A % 1	Rec	QC Limits		 				
Aluminum	-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						-	 	-	
Antimony										
Arsenic	anr									
Barium	anr									
Beryllium										
Boron										
Cadmium	anr									
Calcium										
Chromium	anr									
Cobalt									-	
Copper					*,					
Iron										
Lead	44.6	50 89	.2	80-120						
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium				,						
Selenium	anr	76.00								
Silicon										
Silver	anr									
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP3399: C15499-1, C15499-2, C15499-3, C15499-4, C15499-5

Results < IDL are shown as zero for calculation purposes (\*) Outside of QC limits (anr) Analyte not requested



#### SERIAL DILUTION RESULTS SUMMARY

Login Number: C15499
Account: SHELLWIC - Shell Oil Products
Project: CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave,Alameda,CA

QC Batch ID: MP3399 Matrix Type: SOLID

Methods: SW846 6010B Units: ug/l

Prep Date:

04/11/11

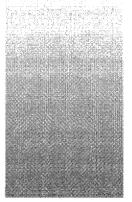
Metal	C15471-1 Original SDL 1:5 %DIF	QC Limits
Aluminum		
Antimony		
Arsenic	anr	
Barium	anr	
Beryllium		
Boron		
Cadmium	anr	
Calcium		
Chromium	anr	
Cobalt		
Copper		
Iron		
Lead	58.1 57.0 <b>1.9</b>	0-10
Magnesium		
Manganese		
Molybdenum		
Nickel		
Potassium		
Selenium	anr ·	
Silicon		MARKET
Silver	anr	
Sodium		20. pm. 10. pm
Strontium		
Thallium		All parties and the second sec
Tin		
Titanium		
Vanadium		
Zinc		RECENT TO THE PROPERTY OF THE

Associated samples MP3399: C15499-1, C15499-2, C15499-3, C15499-4, C15499-5

Results < IDL are shown as zero for calculation purposes (\*) Outside of QC limits (anr) Analyte not requested



04/13/11





## **Technical Report for**

**Shell Oil Products** 

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

60204

Accutest Job Number: C15515

Sampling Date: 04/12/11

### Report to:

Conestoga-Rovers & Associates 5900 Hollis Street Suite A Emeryville, CA 94608 pschaefer@craworld.com; shell.lab.billing@craworld.com

ATTN: Peter Schaefer

Total number of pages in report: 22



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Laurie Glantz-Murphy Laboratory Director

Client Service contact: Simon Hague 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

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Test results relate only to samples analyzed.

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## Sample Summary

**Shell Oil Products** 

C15515

Job No: CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave,Alameda,CA Project No: 60204

Sample Number	Collected Date	Time	Ву	Received	Matri Code		Client Sample ID
Gistilialia	04/12/11	12:38	MWSF	204/12/11	SO	Soil	HC-CN-13.5
C15515-2	04/12/11	12:45	MWSF	P04/12/11	so	Soil	HC-CS-13
C15515-3	04/12/11	13:05	MWSF	P04/12/11	so	Soil	HC-E-6
C15515.4	04/12/11	13:07	MWSF	204/12/11	so	Soil	HC-E-12
C15515-5	04/12/11	13:37	MWSI	204/12/11	so	Soil	HC-W-6
C15515-7	04/12/11	13:47	MWSI	P04/12/11	so	Soil	HC-W-8
C15515-8	04/12/11	13:50	MWSI	P04/12/11	SO	Soil	HC-N-6
C15515-9	04/12/11	13:55	MWSI	P04/12/11	so	Soil	HC-N-8
C1.551.5-10	04/12/11	14:10	MWSI	P04/12/11	SO	Soil	HC-S-3
@15515±11	04/12/11	14:13	MWSI	P04/12/11	so	Soil	HC-S-7.5

Sample Resu	ılts		

Client Sample ID: HC-CN-13.5

Lab Sample ID:

C15515-1 SO - Soil Date Sampled: 04/12/11
Date Received: 04/12/11

Matrix: Method:

SW846 8260B

Percent Solids: n/a a

Project:

CRAWCAE: T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	M22995.D	1	04/13/11	XB	n/a	n/a	VM735
Run #2							

Initial Weight

Run #1 0.950 g

Run #2

#### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	23.0	26	7.9	ug/kg	J
108-88-3	Toluene	ND	26	7.9	ug/kg	_
100-41-4	Ethylbenzene	21.5	26	7.9	ug/kg	J
1330-20-7	Xylene (total)	ND	53	21	ug/kg	•
	TPH-GRO (C6-C10)	2270	530	260	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	2 Limits		
1868-53-7	Dibromofluoromethane	102%	F16	60-1	130%	
2037-26-5	Toluene-D8	98%	College Colleg	60-130%		
460-00-4	4-Bromofluorobenzene	101%		60-	130%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Page 1 of 1

Client Sample ID: HC-CS-13

Lab Sample ID:

C15515-2

SO - Soil SW846 8260B Date Sampled: Date Received: 04/12/11

04/12/11

Percent Solids: n/a a

Method: Project:

Matrix:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

**Analytical Batch** File ID DF Prep Date Prep Batch Analyzed By VM735 XB Run #1 M22996.D 1 04/13/11 n/a n/a VM735 M23000.D 04/13/11 XB n/a n/a Run #2 1

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	1.08 g		
Run #2	5.03 g	5.0 ml	50.0 ul

#### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	53.5	<b>23</b>	6.9	ug/kg	
108-88-3	Toluene	ND	23	6.9	ug/kg	
100-41-4	Ethylbenzene	141	23	6.9	ug/kg	
1330-20-7	Xylene (total)	ND.	46	19	ug/kg	
	TPH-GRO (C6-C10)	27100 b	9900	5000	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	. Lim	its	
1868-53-7	Dibromofluoromethane	100%	99%	60-1	130%	
2037-26-5	Toluene-D8	97%	99%	60-1	l <b>30</b> %	
460-00-4	4-Bromofluorobenzene	106%	101%	60-1	130%	

- (a) All results reported on wet weight basis.
- (b) Result is from Run# 2

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: HC-E-6

Lab Sample ID:

C15515-3

Date Sampled: 04/12/11

Date Received: 04/12/11

Matrix: Method: SO - Soil SW846 8260B

Percent Solids: n/a a

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	M22990.D	1	04/13/11	XB	n/a	n/a	VM735

Run #2

Initial Weight Methanol Aliquot Final Volume Run #1 5.02 g 5.0 ml 100 ul

Run #2

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total) TPH-GRO (C6-C10)	ND ND 182 ND 20400	250 250 250 500 500	75 75 75 200 2500	ug/kg ug/kg ug/kg ug/kg ug/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	0 0		
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	99% 100% 103%		60-1	130% 130% 130%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: HC-E-12 Lab Sample ID:

C15515-4

Date Sampled: 04/12/11 Date Received: 04/12/11

Matrix:

SO - Soil SW846 8260B

Percent Solids: n/a a

Method: Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

By

XB

	File ID
Run #1	M22997.D

DF Analyzed 1 04/13/11

Prep Date n/a

Prep Batch n/a

Analytical Batch VM735

Run #2

Initial Weight

Run #1 Run #2 1.07 g

#### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total) TPH-GRO (C6-C10)	ND ND ND ND 1310	23 23 23 47 470	7.0 7.0 7.0 19 230	ug/kg ug/kg ug/kg ug/kg ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	98% 98% 102%		60-1 60-1 60-1	30%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: HC-W-6

Lab Sample ID:

C15515-5

**Date Sampled:** 04/12/11

Matrix:

SO - Soil

Date Received: 04/12/11

Method:

SW846 8260B

Percent Solids: n/a a

Project:

CRAWCAE: T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

File ID Run #1 M22991.D DF 1

Analyzed By XB 04/13/11

Prep Date n/a

Prep Batch n/a

**Analytical Batch** VM735

Run #2

Initial Weight

5.10 g

Final Volume 5.0 ml

Methanol Aliquot

Run #1

Run #2

100 ul

#### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND -	250	74	ug/kg	
108-88-3	Toluene	ND	250	74	ug/kg	
100-41-4	Ethylbenzene	966	250	74	ug/kg	
1330-20-7	Xylene (total)	ND	490	200	ug/kg	
	TPH-GRO (C6-C10)	25200	4900	2500	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7	Dibromofluoromethane	99%	988 988 988 988 988 988 988 988	60-1	130%	
2037-26-5	Toluene-D8	99%	ic is is is is	<b>60</b> -1	130%	
460-00-4	4-Bromofluorobenzene	103%		60-1	130%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

Client Sample ID: HC-W-8

Lab Sample ID:

C15515-7

Matrix: Method: SO - Soil

SW846 8260B

**Date Sampled:** 04/12/11

Date Received: 04/12/11

Percent Solids: n/a a

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

Project:

File ID M22992.D DF 1

Analyzed By XB 04/13/11

Prep Date

Prep Batch n/a

**Analytical Batch** VM735

Run #1 Run #2

> Initial Weight 5.00 g

Final Volume 5.0 ml

Methanol Aliquot 100 ul

Run #1

Run #2

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	250	75	ug/kg	
108-88-3	Toluene	ND	250	75	ug/kg	
100-41-4	Ethylbenzene	173	250	75	ug/kg	J
1330-20-7	Xylene (total)	ND	500	200	ug/kg	
	TPH-GRO (C6-C10)	17000	5000	2500	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7	Dibromofluoromethane	97%		<b>60</b> -1	130%	
2037-26-5	Toluene-D8	99%	09 56 70 80 80 80 80	60-1	130%	
460-00-4	4-Bromofluorobenzene	102%		60-1	130%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B \,=\, Indicates \,\, analyte \,\, found \,\, in \,\, associated \,\, method \,\, blank$ 

Client Sample ID: HC-N-6

Lab Sample ID:

C15515-8

**Date Sampled:** 04/12/11

Matrix:

SO - Soil

Date Received: 04/12/11

Method:

SW846 8260B

1

Project:

Percent Solids: n/a a

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

M22998.D

DF Analyzed 04/13/11

By XB n/a

Prep Date

Prep Batch n/a

**Analytical Batch** VM735

Run #2

Initial Weight

Run #1

5.00 g

File ID

Run #2

#### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total) TPH-GRO (C6-C10)	ND ND 30.2 ND 951	5.0 5.0 5.0 10 100	1.5 1.5 1.5 4.0 50	ug/kg ug/kg ug/kg ug/kg ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	103% 98% 102%		60-1	30% 30% 30%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

Client Sample ID: HC-N-8

Lab Sample ID:

C15515-9

**Date Sampled:** 04/12/11 Date Received: 04/12/11

Matrix: Method: SO - Soil SW846 8260B

Percent Solids: n/a a

Project:

CRAWCAE: T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	M22994.D	1	04/13/11	XB	n/a	n/a	VM735

Run #2

	Initial Weight	Final Volume	Methanol Aliquot	
Run #1	5.08 g	5.0 ml	20.0 ul	
Run #2				

#### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total) TPH-GRO (C6-C10)	ND ND 2240 ND 127000	1200 1200 1200 2500 25000	370 370 370 980 12000	ug/kg ug/kg ug/kg ug/kg ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its	
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	100% 100% 102%	•	60-1	30% 30% 30%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: HC-S-3 Lab Sample ID:

C15515-10

Date Sampled: 04/12/11 Date Received: 04/12/11

Matrix:

SO - Soil SW846 8260B

Percent Solids: n/a a

Method: Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

**Analytical Batch** Prep Date Prep Batch File ID DF Analyzed By VM735 Run #1 M22993.D 1 04/13/11 XB n/a n/a

Run #2

Initial Weight Final Volume Methanol Aliquot Run #1 5.03 g5.0 ml 100 ul

Run #2

#### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	250	75	ug/kg	
108-88-3	Toluene	ND	250	75	ug/kg	
100-41-4	Ethylbenzene	ND	250	75	ug/kg	
1330-20-7	Xylene (total)	ND	500	200	ug/kg	
*	TPH-GRO (C6-C10)	15100	5000	2500	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	٠
1868-53-7	Dibromofluoromethane	97%		60-1	30%	
2037-26-5	Toluene-D8	98%		<b>60</b> -1	<b>30</b> %	
460-00-4	4-Bromofluorobenzene	102%	1000 1000 1000 1000 1000 1000 1000 100	60-1	130%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: HC-S-7.5

Lab Sample ID:

C15515-11

Date Sampled: 04/12/11

Date Received: 04/12/11

Matrix:

SO - Soil SW846 8260B

Percent Solids: n/a a

Method: Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	M22999.D	1	04/13/11	XB	n/a	n/a	VM735

Run #2

Initial Weight

2.35 g

Run #1

Run #2

#### Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total) TPH-GRO (C6-C10)	15.0 ND 4.4 ND 1080	11 11 11 21 210	3.2 3.2 3.2 8.5 110	ug/kg ug/kg ug/kg ug/kg ug/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	99% 97% 101%		60-1	130% 130% 130%	

(a) All results reported on wet weight basis.

ND = Not detected

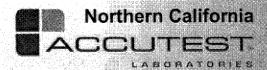
MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Custody Doc	uments	and Othe	r Forms	

• Chain of Custody

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C15515: Chain of Custody Page 1 of 3

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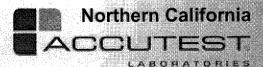
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Accutest Laboratories Northern California Sample Recei	ving Check List	Job# : Cj	5515	Initial:EK
Review Chain of Custody Chain of Custody is to be compl	lete and legible.			
Are these regulatory (NPDE6) samples? GWA	(es) No CI	lent Sample ID	pH Check	Other Comments/Issues
D/s pH requested?	Yes / No	ioni oumpio io	pir citem	
p Was Client informed that hold time is 15 min? Yes / No Continue	Yes / No			
Was ortho-Phosphate filtered with in 15 min?     Yes / No Continue	Yes / No			
Are sample within hold time?	(65)/ No	<u>-</u>		
Are sample in danger of exceeding hold-time	Yes/160 -			
(Lexisting Client? Yes) No Existing Project?	(Yes) / No			
If No: Is Report to info complete and legible, including;	<b>└</b>			
a deliverable a Name a Address a phone a e-mail	ļ			
Is Bill to Info complete and legible, including;				
p PO# p Credit card p Contact paddress p phone p e-mail	ļ			
is Contact and/or Project Manager Identified, including;				
phone de-mail	ļ			
n Project name / number				
Special requirements?	Yes /(No)			
Sample IDs / date & time of collection provided?	169/ No			
s Matrix listed and correct?	No L			
Analyses listed, we do, or client has authorized a subcontract?	Yes/ No			
Chain is signed and dated by both client and sample custodian?	Yes/ No			
TAT requested available? Yes/No Approved by PM				
Review Coolers:				
Were all Coolers temperatures measured at <6°C? 5.7°C	Yes/No			
y If cooler is outside the ≤6°C; note down the affected bottles in that cooler on the left				
Are samples on Ice?	(es)/No			
Note that ANC does NOT accept evidentiary samples. (We do not lock refrigerators)				
4 AC				
Shipment Received Method				
Custody Seals: Present: Yes / (10) If Yes; Unbroken:	Yes / No			
	<del></del>			
Review of Sample Bottles: If you answer no, explain to the side	$\sim$			
Chain matches bottle labels? (6) / No Sample bottle intact?	(es) No			
of sthere enough sample volume in proper bottle for requested analyses?	(Fes)/ No			
□ Proper Preservatives? Yes / No	ļ.,			
Check pH on preserved samples except 1664, 625, 8270 and VOAs; make notes on left.				
u Headspace-VOAs? Greater than 6mm in diameter List sample ID and affected container	Yes / No			
	<u> </u>			

Non-Compliance issues and discrepancies on the COC are forwarded to Project Management

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C15515: Chain of Custody Page 3 of 3



# **GC/MS** Volatiles

**QC Data Summaries** 

#### Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



# Method Blank Summary Job Number: C15515 Account: SHELLWIC Shell Oil Products

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

Sample	File ID	DF	Analyzed 04/13/11	By	Prep Date	Prep Batch	Analytical Batch
VM735-MB	M22986.D	1		XB	n/a	n/a	VM735

The QC reported here applies to the following samples:

Method: SW846 8260B

C15515-1, C15515-2, C15515-3, C15515-4, C15515-5, C15515-7, C15515-8, C15515-9, C15515-10, C15515-11

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2 100-41-4 108-88-3 1330-20-7	Benzene Ethylbenzene Toluene Xylene (total) TPH-GRO (C6-C10)	ND ND ND ND	5.0 5.0 5.0 10 100	1.5 1.5 1.5 4.0 50	ug/kg ug/kg ug/kg ug/kg ug/kg
CAS No.	Surrogate Recoveries		Limit	ts	
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	100% 100% 99%	60-13 60-13 60-13	80%	



# Blank Spike Summary Job Number: C15515

Account:

SHELLWIC Shell Oil Products CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave,Alameda,CA Project:

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM735-BS1	M22989.D	1	04/13/11	XB	n/a		VM735

The QC reported here applies to the following samples:

Method: SW846 8260B

C15515-1, C15515-2, C15515-3, C15515-4, C15515-5, C15515-7, C15515-8, C15515-9, C15515-10, C15515-11

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
	TPH-GRO (C6-C10)	250	259	104	60-130
CAS No.	Surrogate Recoveries	BSP	Lin	nits	
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	103% 101% 100%	60-	130% 130% 130%	

# Blank Spike/Blank Spike Duplicate Summary Job Number: C15515

Account:

**SHELLWIC Shell Oil Products** 

Project:

CRAWCAE: T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

Sample	File ID	<b>DF</b> 1	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM735-BS	M22987.D		04/13/11	XB	n/a	n/a	VM735
VM735-BSD	M22988.D		04/13/11	XB	n/a	n/a	VM735
÷							

The QC reported here applies to the following samples:

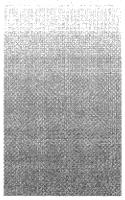
Method: SW846 8260B

C15515-1, C15515-2, C15515-3, C15515-4, C15515-5, C15515-7, C15515-8, C15515-9, C15515-10, C15515-11

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	40	44.1	110	43.1	108	2	60-130/30
100-41-4	Ethylbenzene	40	42.3	106	41.4	104	2	60-130/30
108-88-3	Toluene	40	41.5	104	40.7	102	2	60-130/30
1330-20-7	Xylene (total)	120	125	104	120	100	4	60-130/30
CAS No.	Surrogate Recoveries	BSP	BS	D	Limits			y
1868-53-7	Dibromofluoromethane	106%	104	1%	60-130	%		
2037-26-5	Toluene-D8	95%	959	%	60-130	%		
460-00-4	4-Bromofluorobenzene	100%	100	)%	60-130	%		



04/27/11





### Technical Report for

**Shell Oil Products** 

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

60204

Accutest Job Number: C15582

Sampling Date: 04/14/11

#### Report to:

Conestoga-Rovers & Associates 5900 Hollis Street Suite A Emeryville, CA 94608 pschaefer@craworld.com; shell.lab.billing@craworld.com

ATTN: Peter Schaefer

Total number of pages in report: 15



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Laurie Glantz-Murphy Laboratory Director

Client Service contact: Simon Hague 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)
This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

Northern California • 2105 Lundy Ave. • San Jose, CA 95131 • tel: 408-588-0200 • fax: 408-588-0201 • http://www.accutest.com

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## Sample Summary

**Shell Oil Products** 

C15582

Job No: CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave,Alameda,CA Project No: 60204

Sample	Collected	Colleged		Matrix		Client
Number	Date	Time By	Received	Code	Туре	Sample ID
C15582-1	04/14/11	12:43 GWSP	04/14/11	SO	Soil	HC-S-7
C15582-2	04/14/11	12:55 GWSP	04/14/11	so	Soil	HC-SW-7
C15582-3	04/14/11	13:05 GWSP	04/14/11	so	Soil	HC-W-7



ple R		



Client Sample ID: HC-S-7

Lab Sample ID: Matrix:

C15582-1

SO - Soil

Date Sampled: Date Received:

04/14/11 04/14/11

Method:

SW846 8260B

Percent Solids: n/a a

Project:

CRAWCAE: T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

					<del></del>		
-	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	M23185.D	1	04/20/11	XB	n/a	n/a	VM741
D #2							

Run #2

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.10 g	5.0 ml	25.0 ul
Run #2			

#### Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7 1634-04-4	Benzene Toluene Ethylbenzene Xylene (total) Methyl Tert Butyl Ether TPH-GRO (C6-C10)	ND ND 1540 ND ND ND	980 980 980 2000 980 20000	290 290 290 780 200 9800	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	105% 98% 99%	X 200	60-1	30% 30% 30%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

Page 1 of 1

Client Sample ID: HC-SW-7

Lab Sample ID:

C15582-2

Date Sampled: 04/14/11

Matrix:

SO - Soil

Date Received: 04/14/11

Method:

SW846 8260B

Percent Solids: n/a a

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

Prep Batch **Analytical Batch** File ID DF Analyzed Prep Date By Run #1 M23176.D 1 04/20/11 XB n/a VM741 n/a

Run #2

Initial Weight

Run #1 5.09 g

Run #2

#### Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL (	Units	Q
71-43-2	Benzene	2.0	4.9	1.5	ug/kg	J
108-88-3	Toluene	ND	4.9	1.5	ug/kg	
100-41-4	Ethylbenzene	31.5	4.9	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	9.8	3.9	ug/kg	-
1634-04-4	Methyl Tert Butyl Ether	ND	4.9	0.98	ug/kg	
	TPH-GRO (C6-C10)	399	98	49	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its	
1868-53-7	Dibromofluoromethane	111%	751 751 141	60-1	30%	
2037-26-5	Toluene-D8	99%		60-1	<b>30</b> %	
460-00-4	4-Bromofluorobenzene	103%	Chi.	60-1	30%	
		***************************************				

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: HC-W-7

Lab Sample ID:

C15582-3

Date Sampled: 04/14/11

A/1 A/1 1

Matrix:

SO - Soil

Date Received: 04/14/11

Method:

SW846 8260B

Percent Solids: n/a a

Project:

CRAWCAE: T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	M23186.D	1	04/20/11	XB	n/a	n/a	VM741

Run #2

Initial Weight

Run #1 1.16 g

Run #2

#### Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	22	6.5	ug/kg	
108-88-3	Toluene	ND	22	6.5	ug/kg	
100-41-4	Ethylbenzene	44.8	22	6.5	ug/kg	
1330-20-7	Xylene (total)	ND	43	17	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	22	4.3	ug/kg	
	TPH-GRO (C6-C10)	912	430	220	ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7	Dibromofluoromethane	103%		60-1	30%	
2037-26-5	Toluene-D8	100%		60-1	<b>30</b> %	
460-00-4	4-Bromofluorobenzene	101%		60-1	30%	

(a) All results reported on wet weight basis.

ND = Not detected

MDL - Method Detection Limit

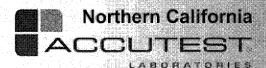
RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank





Custo	ly Docu	ments and	l Other F	orms	

Miles Terms

• Chain of Custody



	LAB (LOCATION)						⑳		S	hell	0	il F	ro	du	cts	C	ha	in (	Of	Cu	sto	ody	R	ec	ore	t			SH	161	LW 1C353B
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	ROUND TIME (CALENDAR DAYS): DARD (14 DAY) S DAYS	🗆 3 DAYS		2 DAVS	<b>□</b> 24 HC	URS		] RESULT		VEEKEN V	4										REC	UES	TED	ANA	LYS	IS			-		
□ IA-F	RWQCB REPORT FORMAT UST	AGENCY:									] _	_			Т	Т													T	TEI	MPERATURE ON RECEIPT
Сору	CIAL INSTRUCTIONS OR NOTES: of final report to Shell Lab Billing@c				SHELE STATE EOD F	RETHEU IOT NEED	IRSEMEIF DED	T RATE A			Purgeable (8260B)	dractable (8015M)				(8260B)	BTEX + MTBE + TBA (8260B)	BTEX + 6 OXYS (MTBE, TBA, DIPE, TAME, ETBE) 8260B	(82608)	(\$260B)	(9)			SM)							?.6+ 0.5 =3.1°C
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eab Use Oilly	Fleid Sample Identifica	tion	T	TIME	MATRIX	, a		ON NOTE	отнея	HO. OF CONT.	TPH -GRO.	TPH -ORO, Extractable	TPHg (8015M)		BTEX (5260B)	BTEX + MTBE (8260B)	BTEX + M	BTEX + 6 OIPE, TAN	Full VOC IIst (82608)	Singte Compound:_	1,2-OCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)						'	Container PID Readings or Laboratory Notes
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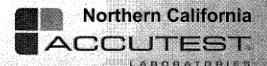
C15582: Chain of Custody Page 1 of 2

Accutest Laboratories Northern California Sample Rece	iving Check Li	ist Job#: C	15 587/	Initial: <u>EK</u>
Review Chain of Custody Chain of Custody is to be comp	lete and legible.			
Are these regulatory (NPDE6) samples? CWA-	(es) No			<u> </u>
pls pH requested?	Yes / No	Client Sample ID	pH Check	Other Comments/issues
o Was Client informed that hold time is 15 min? Yes / No Continue	Yes / No			
m Was asthe Dhasehate Street and the second as	Yes / No			
Are sample within hold time?	(es)/ No			
Are sample in danger of exceeding hold-time	Yes / (No)			
Existing Client? Yes No Existing Project?				
If No: is Report to info complete and legible, including:				
a deliverable a Name a Address a phone a e-mail		· · · · · · · · · · · · · · · · · · ·		
Is Bill to Info complete and legible, including;	Ť			
□ PO# □ Credit card □ Contact □address □ phone □ e-mail	ľ		· · · · · · · · · · · · · · · · · · ·	
Is Contact and/or Project Manager identified, including:	ļ-			<del>                                     </del>
phone permail	· · · · · · · · · · · · · · · · · · ·			
□ Project name / number	-			
Special requirements?	v			
	Yes/No			
s Matrix listed and correct?	No I			
pAnalyses listed, we do, or client has authorized a subcontract?	No 			
Chain is signed and dated by both client and sample custodian?	No No			
TAT requested available? Fee/ No Approved by Pm	(es) No			
Approved by 1171				
Review Coolers:				
p/Were all Coolers temperatures measured at ≤6°C? 3.1 °C				
y if cooler is outside the ≤6°C; note down the affected bottles in that cooler on the left	<b>∕</b> ®y No [			
Are samples on Ice?	Mes DNo			
Note that ANC does NOT accept evidentiary samples. (We do not lock refrigerators)	(103)/110			
, and the total formation of				
Shipment Received Method AC				
Custody Seals: Present: Yes / No) If Yes; Unbroken:	Yes / No			
ii res, cribioxeri.	Tes/ No			
Review of Sample Bottles: if you answer no, explain to the side	· }-			
Chain matches bottle labels?	~ t		· · · · · · · · · · · · · · · · · · ·	
As there enough sample volume in proper bottle for requested analyses?	(res No			
□ Proper Preservatives? Yes / No	(res) No			
Check pH on preserved samples except 1664, 625, 8270 and VOAs; make notes on left.	<u> </u>			
D Headspace-VOAs? Greater than 6mm in diameter				
List sample ID and affected container	Yes / No			
	. L			

Non-Compliance issues and discrepancies on the COC are forwarded to Project Management

\\Accunca.accutest.com\depts\qa\sops\sop\_completelist\_2010\current\_active\_sop\_oct\_2010\sc001f1\_0\_form1\_samplecontrol\_samplereceivingchecklist\_2009-01-01.doc

C15582: Chain of Custody Page 2 of 2



**QC** Data Summaries

### Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



# Method Blank Summary Job Number: C15582

Account:

SHELLWIC Shell Oil Products

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

Sample VM741-MB	<b>File ID</b> M23165.D	<b>DF</b> 1	<b>Analyzed</b> 04/20/11	By XB	Prep Date	Prep Batch	Analytical Batch VM741

The QC reported here applies to the following samples:

Method: SW846 8260B

Compound	Result	RL	MDL	Units Q
Benzene Ethylbenzene Methyl Tert Butyl Ether Toluene Xylene (total) TPH-GRO (C6-C10)	ND ND ND ND ND	5.0 5.0 5.0 5.0 10	1.5 1.5 1.0 1.5 4.0	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg
Surrogate Recoveries		Limit	S	
Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	99% 100% 96%	60-13	0%	
	Benzene Ethylbenzene Methyl Tert Butyl Ether Toluene Xylene (total) TPH-GRO (C6-C10)  Surrogate Recoveries Dibromofluoromethane Toluene-D8	Benzene ND Ethylbenzene ND Methyl Tert Butyl Ether ND Toluene ND Xylene (total) ND TPH-GRO (C6-C10) ND  Surrogate Recoveries  Dibromofluoromethane 70luene-D8 100%	Benzene Ethylbenzene MD 5.0 Methyl Tert Butyl Ether Toluene Xylene (total) TPH-GRO (C6-C10)  Surrogate Recoveries  Limit  Dibromofluoromethane Toluene-D8  ND 5.0 ND 10 100  Limit	Benzene

# Blank Spike Summary Job Number: C15582

Account:

SHELLWIC Shell Oil Products

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM741-BS1	M23168.D	1	04/20/11	XB		n/a	VM741
				*			

The QC reported here applies to the following samples:

Method: SW846 8260B

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
	TPH-GRO (C6-C10)	250	235	94	60-130
CAS No.	Surrogate Recoveries	BSP	Lin	nits	
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	97% 99% 97%	60-	130% 130% 130%	

# Blank Spike/Blank Spike Duplicate Summary Job Number: C15582 Account: SHELLWIC Shell Oil Products

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
VM741-BS	M23166.D	1	04/20/11	XΒ	n/a	n/a	VM741
VM741-BSD	M23167.D	1	04/20/11	XB	n/a	n/a	VM741

The QC reported here applies to the following samples:

Method: SW846 8260B

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4	Benzene	40 40	40.6 38.7	102 97	42.3	106	4	60-130/30
1634-04-4	Ethylbenzene Methyl Tert Butyl Ether	40	41.1	103	39.9 42.4	100 106	3	60-130/30
108-88-3 1330-20-7	Toluene Xylene (total)	40 120	38.5 115	96 96	39.6 119	99 99	3 3	60-130/30 60-130/30
CAS No.	Surrogate Recoveries	BSP	BS	D	Limits			
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	101% 95% 98%	100 939 959	6	60-1309 60-1309	%		

# Matrix Spike/Matrix Spike Duplicate Summary Job Number: C15582

Account:

**SHELLWIC Shell Oil Products** 

Project:

CRAWCAE:T0619714590-INC#97767044, 2301-2307 Lincoln Ave, Alameda, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C15633-8MS	M23179.D	1	04/20/11	ХB	n/a	n/a	VM741
C15633-8MSD	M23180.D	1	04/20/11	XB	n/a	n/a	VM741
C15633-8	M23173.D	1	04/20/11	XB	n/a	n/a	VM741

The QC reported here applies to the following samples:

Method: SW846 8260B

CAS No.	Compound	C15633-8 ug/kg Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	39.4	43.6	111	42.9	108	2	60-130/30
100-41-4	Ethylbenzene	ND	39.4	40.7	103	40.2	102		60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	39.4	50.4	128	50.6	128	0	60-130/30
108-88-3	Toluene	ND	39.4	40.3	102	39.8	100	1	60-130/30
1330-20-7	Xylene (total)	ND	118	122	103	120	101	2	60-130/30
CAS No.	Surrogate Recoveries	MS	MSD	<b>C</b> 1:	5633-8	Limits			
1868-53-7	Dibromofluoromethane	107%	107%	106	3%	60-1309	%		
2037-26-5	Toluene-D8	94%	96%	102	2%	60-1309	%		
460-00-4	4-Bromofluorobenzene	103%	103%	999	%	60-1309	%		

APPENDIX D

**BORING LOGS** 

### **Boring/Well Log Legend**

#### **KEY TO SYMBOLS/ABBREVIATIONS**

∇ First encountered groundwater

▼ Static groundwater

Soils logged by hand-auger or air-knife cuttings

Soils logged by drill cuttings or disturbed sample

Undisturbed soil sample interval

Soil sample retained for submittal to analytical laboratory

O No recovery within interval

Hydropunch or vapor sample screen interval

PID = Photo-ionization detector or organic vapor meter reading in parts per million (ppm)

fbg = Feet below grade

Blow Counts = Number of blows required to drive a

California-modified split-spoon sampler using a 140-pound hammer falling freely 30 inches, recorded per 6-inch interval of a total 18-inch

sample interval

(10YR 4/4) = Soil color according to Munsell Soil

Color Charts

msl = Mean sea level

Soils logged according to the USCS.

#### UNIFIED SOILS CLASSIFICATION SYSTEM (USCS) SUMMARY

	Major Divisions		Graphic	Group Symbol	Typical Description
•		Clean Gravels		GW	Well-graded gravels, gravel-sand mixtures, little or no fines
	Gravel and	(≤5% fines)		GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
	Gravelly Soils	Gravels with Fines		GM	Silty gravels, gravel-sand-silt mixtures
Coarse-Grained Soils		( ≥15% fines)		GC	Clayey gravels, gravel-sand-clay mixtures
(>50% Sands and/or Gravels)		Clean Sands		SW	Well-graded sands, gravelly sands, little or no fines
	Sand and Sandy	(≤5% fines)		SP	Poorly-graded sands, gravelly sand, little or no fines
	Soils	Sands with Fines		SM	Silty sands, sand-silt mixtures
		( ≥ 15% fines)		SC	Clayey sands, sand-clay mixtures
				ML	Inorganic silts, very fine sands, silty or clayey fine sands, clayey silts with slight plasticity
Fine-Grained	Silts ar	nd Clays		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
Soils (>50% Silts				OL	Organic silts and organic silty clays of low plasticity
and/or Clays)				МН	Inorganic silts, micaceous or diatomaceous fine sand or silty soils
	Silts a	nd Clays		СН	Inorganic clays of high plasticity
				ОН	Organic clays of medium to high plasticity, organic silts
Hi	Highly Organic Soils			PT	Peat, humus, swamp soils with high organic contents





# **BORING / WELL LOG**



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 SVP-9	
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED 07-Mar-11	
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED07-Mar-11	
PROJECT NUMBER	060204	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vapor Tech Services	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Air-knife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	6"	SCREENED INTERVALS	NA
LOGGED BY	O. Yan	DEPTH TO WATER (First Encountered)	NA \(\sigma\)
REVIEWED BY	P. Schaefer PG# 5612	DEPTH TO WATER (Static)	NA _
D=14.0/0	•		

REMAR	KS								**************************************
PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	
0.3		.*		- 5 -	SM		ASPHALT Silty SAND (SM): Dark grayish brown (10 YR 5/3); moist; 5% clay, 20% silt, 75% fine sand.  @ 4 fbg: Cobble approximately 5" diameter.	5.0	Concrete  Bentonite Seal  Monterey Sand #2/12 1"-diam., Stainless Steel Probe  Bentonite Seal  Monterey Sand #2/12 1"-diam., Stainless Steel Probe Bottom of Boring @ 5 fbg

# **BORING / WELL LOG**



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	COMP-1		
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	07-Mar-11		
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED	07-Mar-11		
PROJECT NUMBER	060204	WELL DEVELOPMENT DA	TE (YIELD)	NA	
DRILLER	Vapor Tech Services	GROUND SURFACE ELEV	ATION _	NA	
DRILLING METHOD	Hand-Auger	TOP OF CASING ELEVAT	ION _	NA	
BORING DIAMETER	3"	SCREENED INTERVALS	_	NA	
LOGGED BY	O. Yan	DEPTH TO WATER (First	Encountered)	7.00 fbg (0 <b>7-Mar-11</b> )	$\nabla$
REVIEWED BY	P. Schaefer PG# 5612	DEPTH TO WATER (Statio	)	NA	Ţ
REMARKS	Air knifed to 5 fbg				

USAN DO DESCRIPTION  OUND TO			-, -		illed to					
ASPHALT  Silty SAND (SM): Moderate dark brown (10 YR 4/3); dry; 5% clay, 15% silt, 75% fine sand, 5% fine gravel.  COMP- 1A  COMP- 1B  COMP- 1B  COMP- 1B  COMP- 1C	PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEРТН (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
	0.0211		COMP- 1B		 	SM		Silty SAND (SM): Moderate dark brown (10 YR 4/3); dry; 5% clay, 15% silt, 75% fine sand, 5% fine gravel.  @ 4fbg: Cobbles approximately 5" diameter.  @ 6 fbg: 20% clay, 25% silt, 55% fine sand.  @ 7 fbg: Wet.	0.3	Bottom of Borin

# **BORING / WELL LOG**



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 COMP-2		
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED 07-Mar-1	1	
LOCATION	2301-2307 Lincoln Avenue, Alameda, CA	DRILLING COMPLETED 07-Mar-1	:1	
PROJECT NUMBER	060204	WELL DEVELOPMENT DATE (YIELD	) <u>NA</u>	
DRILLER	Vaport Tech Services	GROUND SURFACE ELEVATION	NA	
DRILLING METHOD	Air-knife	TOP OF CASING ELEVATION	NA	<u> </u>
BORING DIAMETER	3"	SCREENED INTERVALS	NA	
LOGGED BY	O. Yan	DEPTH TO WATER (First Encountered	ed) NA	$\nabla$
REVIEWED BY	P. Schaefer PG# 5612	DEPTH TO WATER (Static)	NA	<u> </u>

REMAR	VED BY KS	P	. 50	chaefer	PG# 5	012	DEPTH TO WATER (Static)  NA  V
PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEРТН (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION  LOGONTAC  LOGONTAC  LOGONTAC  LOGONTAC  WELL DIAGRAM
		COMP- 2A	}	_			ASPHALT Silty SAND (SM): Moderate dark brown (10 YR 4/3); dry; 5% clay, 25% silt, 70% fine sand.
		COMP- 2B	}		SM		@ 2.5 fbg: Moist.  4.0
		COMP- 2D					Bottom of Boris @ 4 fbg
			de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la	·			
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WELL LOG (TD) 1.SHELLE-G-OTRING COZ-TOOD COZ-TOO							

APPENDIX E
WASTE MANIFESTS

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		or's Phone orter 1 Company Name	***************************************				***************************************		17.6		***************************************	***************************************
			reted Saviosa, Inc.						U.S. EPA ID N			erses
ŀ		orter 2 Company Name		***************************************	······································	***************************************			U.S. EPA ID N			
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ľ	18. Desig	nated Facility Owner or	Operator: Certification of receipt of materials of	overed by the ma	anilosi except as	noted in Item 17	a ;			***************************************		
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A	NON-HAZARDOUS	Generator ID Number		2. Page 1 of	3. Emergency Respon	se Phone	4. Waste Tra	icking Nur	iber 04 E4 00
	WASTE MANIFEST 5. Generator's Name and Maili	NOT REC		1	<b>300-4</b> Generator's Site Addre	24-9300	Name of the state	etertechian management and	215100
	Shell Oil Prod	**		,	Shell 2301		~		
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	Generator's Phone				· · · · · · · · · · · · · · · · · · ·	71. O100			
	5. Transporter 1 Company Nam					***************************************	U.S. EPA ID I		
	7. Transporter 2 Company Nam	grated Services, Inc.	***************************************				U.S. EPA ID I	***************************************	AR000148338
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	NON-HAZARDO	OUS	1. Generator IO Number	***************************************	2. Page 1 of	3. Emerg	ency Response	Phone	4. Waste Tr	acking Num	ber 🦳 🚜 📈		1
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	5. Generator's Name a		And the state of t		<del>!</del>				han mailing addi		······································	***************************************	
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	Facility's Phone:		Pastonia, CA 9		4800				1.				
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			ATION: I certify the materials desc	ribed above on this manifest a		***************************************	regulations for	reporting pro	per disposal of H	lazardous W	***************************************	······································	
	Generator's/Offeror's F			daesii.	510	nature	j.		**		Month  I / / I	Day	Year
-	15. International Shipn		of SOPUS - J Sherri										
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١.	17. Discrepancy 17a Discrepancy Indic	ation So		f"1	······································				feeten		fd		***************************************
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-	17b. Allomate Facility (	(or Gene	rator)					,	U.S. EPA ID	Number			
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Ž	Facility's Phone:	conto P	Eta Car Can water			•••••••••••••••••••••••••••••••••••••••	***************************************	***************************************		•••••••••••••••••••••••••••••••••••••••	2 * 15-	······································	
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ľ	18. Designated Facility	Owner o	x Operator: Contification of receipt	of materials covered by the m	anifest except	as noted it	n liem 17a				~~~~~		
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NON-HAZARDOUS	Generator ID Number	<b>V</b>	2. Page 1 of	3. Emerge	incy Response		4. Waste Tra	cking Numi	<sup>xer</sup> 215.	102
WASTE MANIFEST 5. Generator's Name and Mail	NOT REC		<b>.</b>	Generator			han malling addre	KSS)		*** ***
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Generator's Phone		·····					U.S. EPA IO	**************************************	***************************************	·····
6. Transporter 1 Company Na	no Gradual Sarvana, Inc.						U.S. EIM IU :			
7. Transporter 2 Company Na	~~~				***************************************	**************************************	U.S. EPA ID			***************************************
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8. Designated Facility Name a	nd Site Address						U.S. EPA ID	Number		
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Facility's Phone:							1			
					10. Cont	ainers	11, Total	12. Unit	<u> </u>	***************************************
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Charateo.										
14. GENERATOR'S CERTIFI	CATION: I certify the materials described a	bove on this manifest	are not subject	to federal						
Generator's/Offeror's Printed/	**		Sig I	prature					Month ( A)	Day Year
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15. International Shipments Transporter Signature (for exp	I Import to U.S.	٠١	J Export from t	U.S.	Port of e			;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;		
16. Transporter Acknowledger	nent of Receipt of Materials		******************************				***************************************			
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17b. Alternate Facility (or Ger	enter).			menero management			U.S. EFA ID	Number	······································	······································
Facility's Phone:							ě.			
	city for Generators			······································	······································	······································			Month	Day Year
- 1 No Soudistante de Santa Heago F	State Sander transporter and A	•	***							
17c. signature of Alternate re	or Operator: Certification of receipt of mal	origin covered by the	manifest excert	as noted	o item 17a				•	
Printed/Typed Name			***************************************	jnature	······································				· Month	Дау, Уерг
A CONTRACTOR OF THE CONTRACTOR	TERMYCLOUNG					*	*		$D^{t_{7}}$	<u> </u>
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