



**CONESTOGA-ROVERS  
& ASSOCIATES**

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[www.CRAworld.com](http://www.CRAworld.com)

## TRANSMITTAL

DATE: July 25, 2012

REFERENCE NO.: 240554

PROJECT NAME: 3420 San Pablo Avenue, Oakland

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

**RECEIVED**

11:05 am, Jul 30, 2012

Alameda County  
Environmental Health

Please find enclosed:  Draft  Final  
 Originals  Other \_\_\_\_\_  
 Prints

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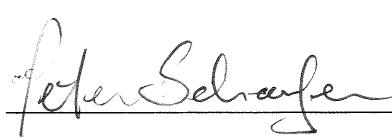
QUANTITY	DESCRIPTION
1	Subsurface Investigation Report

As Requested  For Review and Comment  
 For Your Use

### COMMENTS:

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

Copy to: Denis Brown, Shell Oil Products US (electronic copy)  
Shahriar Almasi, Portola Valley Shell (property owner), 965 Laurel Glen Drive, Palo Alto,  
CA 94304

Completed by: Peter Schaefer Signed: 

Filing: Correspondence File



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

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

Re: Former Shell Service Station  
3420 San Pablo Avenue  
Oakland, California  
SAP Code 139619  
Incident No. 98995748  
ACEH Case No. RO0000006

Dear Mr. Wickham:

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

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

Sincerely,

A handwritten signature in black ink that reads "Denis L. Brown".

Denis L. Brown  
Senior Program Manager



## SUBSURFACE INVESTIGATION REPORT

**FORMER SHELL SERVICE STATION  
3420 SAN PABLO AVENUE  
OAKLAND, CALIFORNIA**

**SAP CODE            139619  
INCIDENT NO.    98995748  
AGENCY NO.       RO0000006**

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

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

Office: (510) 420-0700  
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**JULY 25, 2012**

**REF. NO. 240554 (13)**

This report is printed on recycled paper.

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## **EXECUTIVE SUMMARY**

- CRA drilled three soil borings (SB-13 through SB-15) during this investigation to evaluate soil conditions in the area of previous soil boring SB-10. ACEH requested that lead detections from this investigation and previous investigations be evaluated using the updated OEHHA CHHSL for soil with commercial land use.
- Total lead detections exceeded the OEHHA CHHSL in all samples collected from SB-13 through SB-15 at 1 fbg and in SB-13 and SB-15 at 2 fbg.
- We also note that during the October 2006 and January 2012 subsurface investigations total lead detections exceeded the OEHHA CHHSL in borings SB-1, SB-7, and SB-9 at 2 fbg and SB-10 at 1 fbg.
- We recommend four additional soil borings to further delineate total lead impacts in shallow soils and one additional soil boring behind the station building to collect background samples to evaluate the potential source of lead impacts.

## **1.0 INTRODUCTION**

Conestoga-Rovers & Associates (CRA) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to document the recent subsurface investigation at this site. The purpose of the investigation was to evaluate soil conditions in the area of previous soil boring SB-10, as proposed in CRA's February 8, 2012 *Subsurface Investigation Report* (report). CRA followed the scope of work outlined in our report and procedures presented in our September 27, 2011 *Subsurface Investigation Work Plan* (work plan), as approved in Alameda County Environmental Health's (ACEH's) March 28, 2012 letter. ACEH also requested evaluation of lead concentrations using the updated California human health screening level (CHHSL) for total lead in soil with commercial land use developed by the California Office of Environmental Health Hazard Assessment (OEHHA; September 23, 2010).

ACEH's July 25, 2011 letter requested a soil vapor investigation proposal; however, the State Water Resources Control Board's low-threat underground storage tank closure policy<sup>1</sup> states that soil vapor investigations are not warranted at active service stations. The subject site is likely to remain a service station for the foreseeable future, so no soil vapor investigation is proposed at this time.

The subject site is a former Shell service station located at the southeast corner of the San Pablo Avenue and 35<sup>th</sup> Street intersection in a mixed commercial and residential neighborhood of Oakland, California (Figure 1). Shell sold the station and property in March 2005. The site is currently an operating third-party service station (Figure 2).

A summary of previous work performed at the site and additional background information was presented in our work plan and is not repeated herein.

## **2.0 INVESTIGATION RESULTS**

### **2.1 PERMIT**

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

---

<sup>1</sup> *Low-Threat Underground Storage Tank Case Closure Policy*, State Water Resources Control Board, adopted May 1, 2012

**2.2        DRILLING DATE**

May 9, 2012.

**2.3        DRILLING COMPANY**

Gregg Drilling and Testing, Inc.

**2.4        CRA PERSONNEL**

Environmental scientist Cristina Arganbright directed the drilling activities under the supervision of California Professional Geologist Peter Schaefer.

**2.5        DRILLING METHOD**

Water-knife.

**2.6        NUMBER OF BORINGS**

Three soil borings (SB-13 through SB-15) were drilled during this investigation.

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

**2.7        BORING DEPTHS**

5.5 feet below grade (fbg).

**2.8        WASTE DISPOSAL**

Sludge generated during field activities was temporarily stored on site in a 55-gallon drum, sampled, and profiled for disposal. Waste confirmation documentation is pending and will be provided by CRA upon request. The laboratory analytical report is presented in Appendix C.

## **3.0      FINDINGS**

### **3.1            SOIL**

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

## **4.0      CONCLUSIONS**

Total lead detections exceeded the OEHHA CHHSL in all samples collected from SB-13 through SB-15 at 1 fbg and in SB-13 and SB-15 at 2 fbg. We also note that during the October 2006 and January 2012 subsurface investigations total lead detections exceeded the OEHHA CHHSL in borings SB-1, SB-7, and SB-9 at 2 fbg and SB-10 at 1 fbg.

## **5.0      RECOMMENDATIONS**

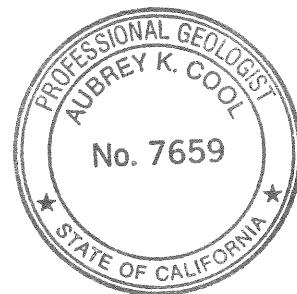
CRA recommends drilling four additional soil borings to further delineate total lead impacts in shallow soils and one additional soil boring behind the station building to collect background samples to evaluate the potential source of lead impacts. The proposed boring locations are shown in Figure 2, and we propose to follow the procedures detailed in our September 27, 2011 work plan, with the exception that the soil samples will be analyzed for lead only.

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

*Peter Schaefer*  
Peter Schaefer, CEG, CHG

*Aubrey K. Cool*

Aubrey K. Cool, PG



## FIGURES

07/13/2012



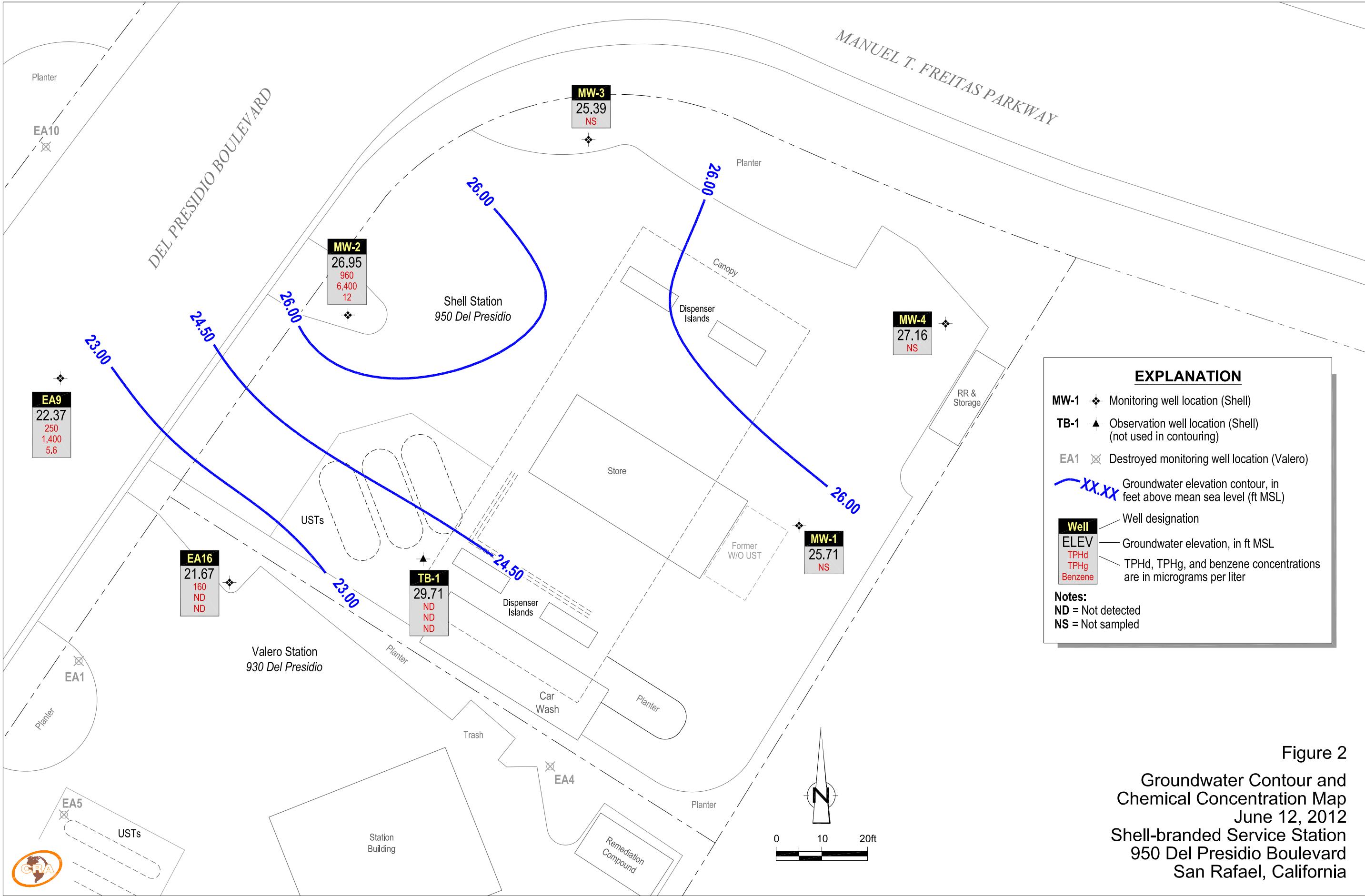
## Shell-branded Service Station

950 Del Presidio Boulevard  
San Rafael, California



**CONESTOGA-ROVERS**  
& ASSOCIATES

## Vicinity Map



TABLE

TABLE 1

Page 1 of 3

**HISTORICAL SOIL ANALYTICAL DATA  
FORMER SHELL SERVICE STATION  
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA**

<i>Sample ID</i>	<i>Date</i>	<i>Depth (fbg)</i>	<i>TPHg (mg/kg)</i>	<i>B (mg/kg)</i>	<i>T (mg/kg)</i>	<i>E (mg/kg)</i>	<i>X (mg/kg)</i>	<i>MTBE (mg/kg)</i>	<i>Total Lead (mg/kg)</i>
B-1	8/8/1988	5 - 5.5	1,400	1.9	42	43	120	---	---
B-1	8/8/1988	9.5 - 10	80	---	---	---	---	---	---
B-1	8/8/1988	15 - 15.5	<5.0	---	---	---	---	---	---
B-1	8/8/1988	20 - 20.5	<5.0	---	---	---	---	---	---
B-2	8/8/1988	5 - 5.5	550	1.5	16	35	33	---	---
B-2	8/8/1988	10 - 10.5	580	0.7	3.3	7.8	48	---	---
B-3	8/8/1988	5, 10, and 15	<5.0	---	---	---	---	---	---
B-4	8/8/1988	5, 10, and 15	<5.0	---	---	---	---	---	---
B-5	8/8/1988	5, 10, and 15	<5.0	---	---	---	---	---	---
MW-1	4/10/1989	5.5 - 6	850	1.2	14	19	100	---	4
MW-1	4/10/1989	10.5 - 11	80	<0.05	1.9	1.9	16	---	3
MW-2	4/10/1989	10.5 - 11	70	0.4	1.5	1.7	1.5	---	8
MW-3	4/10/1989	10.5 - 11	<0.2	<0.002	0.010	0.008	0.069	---	3
MW-4	4/10/1989	10.5 - 11	<0.2	<0.002	0.005	0.004	0.031	---	2
MW-5	1/19/1990	5.5 - 6	5.0	<0.05	<0.1	<0.1	<0.1	---	---
MW-6	1/19/1990	5.5 - 6	<1.0	<0.05	<0.1	<0.1	<0.1	---	---
MW-7	1/19/1990	5.5 - 6	14	0.078	<0.1	0.21	<0.1	---	---
MW-8	1/18/1990	5.5 - 6	<1.0	<0.05	<0.1	<0.1	<0.1	---	---
MW-9	1/18/1990	10.5 - 11	6.1	<0.05	<0.1	0.39	0.14	---	---
MW-10	10/23/1991	5	1.4	0.015	0.006	0.010	0.008	---	---
MW-10	10/23/1991	10	1.8	0.06	<0.0050	0.027	0.0070	---	---
MW-11	10/23/1991	5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	---
MW-11	10/23/1991	10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	---
Disp-1-2.5	6/26/1997	2.5	8.4	0.054	0.046	0.0094	0.21	1.6	5.8
Disp-2-2.0	6/26/1997	2	51	0.075	1.6	0.38	1.6	7.9	9.6
TP-N-7	6/26/1997	7	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<5.0
TP-S-7	6/26/1997	7	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	6.4
P-1-2.5	6/26/1997	2.5	39	0.13	0.051	0.012	0.032	0.82	7.4
P-2-2.5	6/26/1997	2.5	17	0.035	0.079	0.063	0.11	0.33	7.4
P-3-2.5	6/26/1997	2.5	16	0.028	0.059	0.019	0.026	0.092	6.9
P-4-4.0	6/26/1997	4	19	0.041	0.053	<0.010	0.078	<0.050	7.4
P-5-4.0	6/26/1997	4	3.1	0.016	0.0054	<0.0050	0.018	0.028	7.4
P-6-2.5	6/26/1997	2.5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	33

TABLE 1

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**HISTORICAL SOIL ANALYTICAL DATA  
FORMER SHELL SERVICE STATION  
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA**

<i>Sample ID</i>	<i>Date</i>	<i>Depth</i> (ftbg)	<i>TPHg</i> (mg/kg)	<i>B</i> (mg/kg)	<i>T</i> (mg/kg)	<i>E</i> (mg/kg)	<i>X</i> (mg/kg)	<i>MTBE</i> (mg/kg)	<i>Total Lead</i> (mg/kg)
P-7-2-0	6/26/1997	2	4.5	0.040	0.0097	0.0095	0.053	<0.025	2,000
P-8-2-5	6/26/1997	2.5	120	<0.12	0.43	0.33	0.42	<0.62	8.2
SB-1-2	10/4/2006	2	<1.0	0.011	<0.0050	0.0058	0.017	0.0096	620
SB-1-5	10/4/2006	5	6.9	0.0066	<0.0050	<0.0050	<0.010	<0.0050	140
SB-1-8	10/4/2006	8	46,000	<25	<25	<25	<50	<25	250
SB-2-2	10/4/2006	2	12,000	74	<25	<25	82	<25	180
SB-2-5	10/4/2006	5	1.8	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<20
SB-2-8	10/4/2006	8	160	<0.12	<0.12	2.2	1.3	<0.12	<20
SB-3-2	10/4/2006	2	4.7	0.058	0.0075	0.018	0.079	0.15	58
SB-3-5	10/4/2006	5	11,000	<25	<25	<25	<50	<25	<20
SB-3-8	10/4/2006	8	27	<0.12	<0.12	<0.12	<0.25	<0.12	<20
SB-4-4.5	10/4/2006	4.5	<1.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<5
SB-5-4.5	10/4/2006	4.5	2.9	<0.0050	<0.0050	<0.0050	<0.010	0.059	<5
SB-6-4.5	10/4/2006	4.5	7.2	0.012	0.017	0.018	0.16	<0.0050	29
SB-7-1'	1/16/2012	1	<0.099	0.0020	<0.0020	<0.0020	<0.0040	<0.0050	79
SB-7-2'	1/16/2012	2	<0.12	0.0023	<0.0023	<0.0023	<0.0046	0.0058	340
SB-7-5'	1/16/2012	5	<0.20	<0.00099	<0.00099	<0.00099	<0.0020	<0.0020	5.2
SB-8-1'	1/16/2012	1	<0.085	0.0023	<0.0017	<0.0017	<0.0034	<0.0043	160
SB-8-2'	1/16/2012	2	<0.096	0.0044	<0.0019	<0.0019	<0.0039	<0.0048	250
SB-8-5'	1/16/2012	5	1.7	<0.00098	<0.00098	<0.00098	<0.0020	<0.0020	4.9
SB-9-1'	1/16/2012	1	0.12	0.0025	0.0023	<0.0018	<0.0036	<0.0045	97
SB-9-2'	1/16/2012	2	<0.083	0.0048	<0.0017	<0.0017	<0.0033	<0.0042	720
SB-9-5'	1/16/2012	5	<0.20	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	7.7
SB-10-1'	1/16/2012	1	0.12	0.017	0.0028	<0.0022	<0.0044	<0.0056	990
SB-10-2'	1/16/2012	2	0.67	0.0036	<0.0019	<0.0019	<0.0039	<0.0048	140
SB-10-5'	1/16/2012	5	3.1	0.0016	<0.0010	<0.0010	<0.0020	<0.0020	8.7
SB-11-1'	1/16/2012	1	0.72	0.065	0.0070	0.0071	0.022	0.012	260
SB-11-2'	1/16/2012	2	1.7	0.16	0.0070	0.019	0.049	0.021	200
SB-11-5'	1/16/2012	5	2.9	0.10	0.0010	0.042	0.0074	0.030	6.1
SB-12-1'	1/16/2012	1	0.20	0.031	0.0041	0.0040	0.015	0.0061	60
SB-12-2'	1/16/2012	2	2.8	0.20	0.011	0.025	0.097	0.029	200
SB-12-5'	1/16/2012	5	180	0.22	<0.050	1.6	<0.10	<0.10	4.8
SB-13-1'	5/9/2012	1	---	---	---	---	---	---	370
SB-13-2'	5/9/2012	2	---	---	---	---	---	---	320

TABLE 1

Page 3 of 3

**HISTORICAL SOIL ANALYTICAL DATA  
FORMER SHELL SERVICE STATION  
3420 SAN PABLO AVENUE, OAKLAND, CALIFORNIA**

<i>Sample ID</i>	<i>Date</i>	<i>Depth (fbg)</i>	<i>TPHg (mg/kg)</i>	<i>B (mg/kg)</i>	<i>T (mg/kg)</i>	<i>E (mg/kg)</i>	<i>X (mg/kg)</i>	<i>MTBE (mg/kg)</i>	<i>Total Lead (mg/kg)</i>
SB-13-5'	5/9/2012	5	---	---	---	---	---	---	2.0
SB-14-1'	5/9/2012	1	---	---	---	---	---	---	<b>1,200</b>
SB-14-2'	5/9/2012	2	---	---	---	---	---	---	150
SB-14-5'	5/9/2012	5	---	---	---	---	---	---	<2.0
SB-15-1'	5/9/2012	1	---	---	---	---	---	---	480
SB-15-2'	5/9/2012	2	---	---	---	---	---	---	550
SB-15-5'	5/9/2012	5	---	---	---	---	---	---	3.0
<i>Shallow Soil (<math>\leq 10</math> fbg) Screening Level:</i>			180 a	0.27 a	9.3 a	4.7 a	11 a	8.4 a	320 b
<i>Deep Soil (<math>&gt; 10</math> fbg) Screening Level:</i>			180 a	2.0 a	9.3 a	4.7 a	11 a	8.4 a	320 b

Notes:

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; prior to June 26, 1997, analyzed by EPA Method 8015M

BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; prior to June 26, 1997, analyzed by EPA Method 8020

MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8260B; prior to June 26, 1997, analyzed by EPA Method 8020

Total lead analysis by EPA 6010B; prior to April 11, 1989 analyzed by EPA Method 7420

fbg = Feet below grade

mg/kg = Milligrams per kilogram

<x = Not detected at reporting limit x

--- = Not analyzed

ESL = Environmental screening level

CHHSL = California human health screening level

Results in **bold** equal or exceed applicable ESL or CHHSL

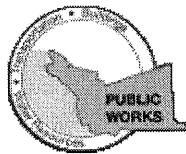
a = San Francisco Bay Regional Water Quality Control Board commercial/industrial ESL for soil where groundwater is not a source of drinking water (Tables B and D of *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, California Regional Water Quality Control Board,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

b = Updated CHHSL for total exposure (inhalation, ingestion, and dermal absorption) developed by the California Office of Environmental Health Hazard Assessment (September 23, 2010) for lead in soil with commercial land use.

**APPENDIX A**

**PERMIT**

# Alameda County Public Works Agency - Water Resources Well Permit



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

Application Approved on: 04/11/2012 By jamesy

Permit Numbers: W2012-0251  
Permits Valid from 05/09/2012 to 05/09/2012

**Application Id:** 1334151653955  
**Site Location:** 3420 San Pablo Ave, Oakland, CA  
**Project Start Date:** 05/09/2012  
**Assigned Inspector:** Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

**City of Project Site:**Oakland  
**Completion Date:**05/09/2012

**Applicant:** Conestoga Rovers & Associates - Sherry  
Phillips  
19449 Riverside Drive, Suite 230, Sonoma, CA 95476  
**Property Owner:** Portolla Valley Shell  
965 Laural Glen Drive, Palo Alto, CA 94304  
**Client:** NA Shell Oil Products US  
20945 S Wilmington Ave, Carson, CA 90815  
**Contact:** Sherry Phillips

**Phone:** 707-732-3039  
**Phone:** --  
**Phone:** 707-865-2501  
**Phone:** 707-732-3039  
**Cell:** 707-732-3039

<b>Receipt Number:</b> WR2012-0109	<b>Total Due:</b>	\$265.00
<b>Payer Name :</b> sherry j phillips	<b>Total Amount Paid:</b>	\$265.00
	<b>Paid By:</b> VISA	<b>PAID IN FULL</b>

## Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 3 Boreholes  
Driller: Gregg Drilling & Testing Inc - Lic #: 485165 - Method: Hand

**Work Total: \$265.00**

## Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2012-0251	04/11/2012	08/07/2012	3	2.00 in.	5.50 ft

## Specific Work Permit Conditions

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

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

permits and requirements have been approved or obtained.

5. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to [stevem@acpwa.org](mailto:stevem@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. 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. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

---

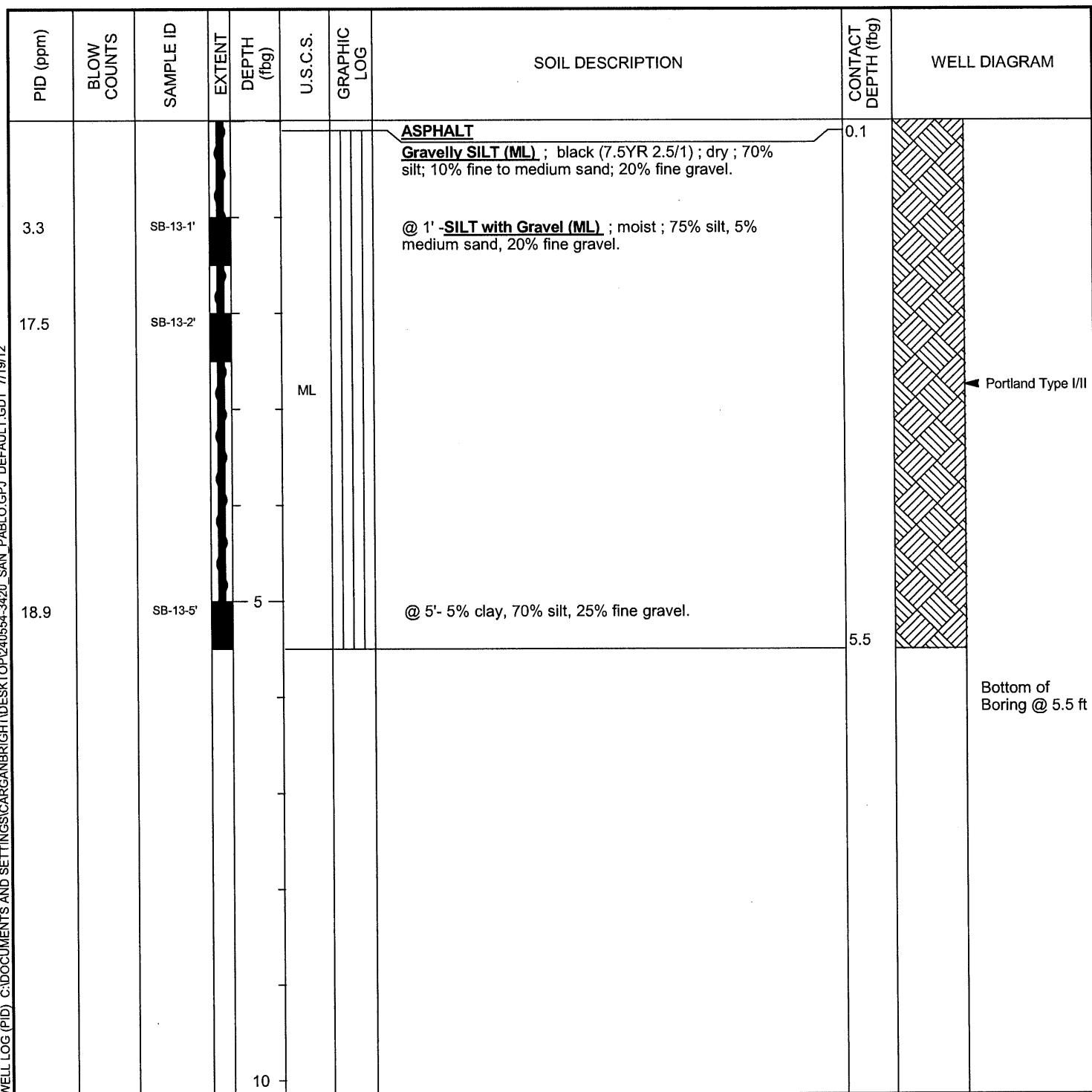
**APPENDIX B**  
**BORING LOGS**



Conestoga-Rovers and Associates  
5900 Hollis Street, Suite A  
Emeryville, California, 94608  
Telephone: (510) 420-0700  
Fax: (510) 420-9170

# BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SB-13
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	09-May-12
LOCATION	3420 San Pablo Avenue, Oakland, Ca	DRILLING COMPLETED	09-May-12
PROJECT NUMBER	240554	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Water-knife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	4"	SCREENED INTERVAL	NA
LOGGED BY	C. Arganbright	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	P. Schaefer PG 5612	DEPTH TO WATER (Static)	NA
REMARKS			

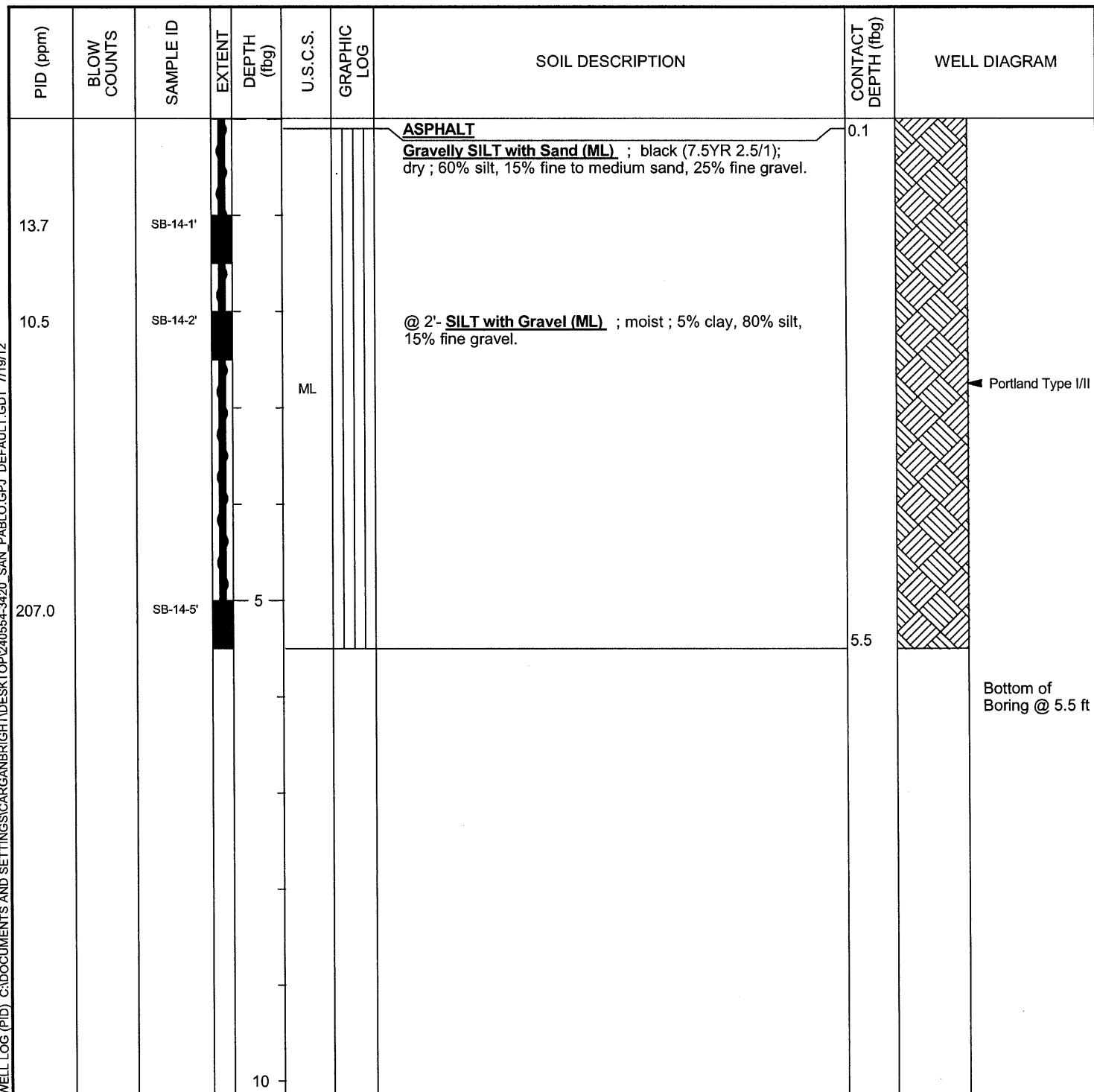




Conestoga-Rovers and Associates  
5900 Hollis Street, Suite A  
Emeryville, California, 94608  
Telephone: (510) 420-0700  
Fax: (510) 420-9170

# BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SB-14
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	09-May-12
LOCATION	3420 San Pablo Avenue, Oakland, Ca	DRILLING COMPLETED	09-May-12
PROJECT NUMBER	240554	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Water-knife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	4"	SCREENED INTERVAL	NA
LOGGED BY	C. Arganbright	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	P. Schaefer PG 5612	DEPTH TO WATER (Static)	NA
REMARKS			

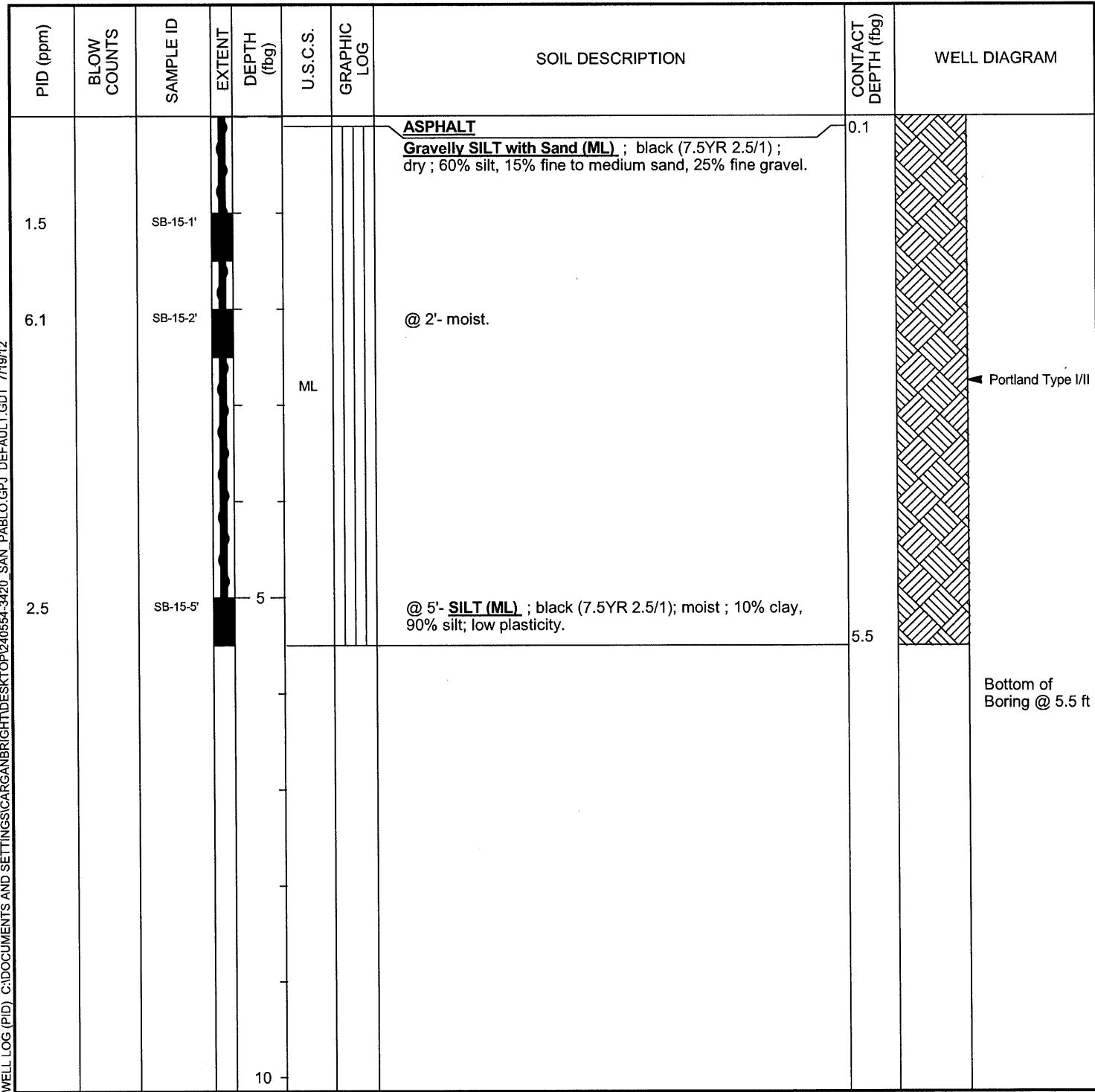




Conestoga-Rovers and Associates  
5900 Hollis Street, Suite A  
Emeryville, California, 94608  
Telephone: (510) 420-0700  
Fax: (510) 420-9170

# BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME	SB-15
JOB/SITE NAME	Former Shell Service Station	DRILLING STARTED	09-May-12
LOCATION	3420 San Pablo Avenue, Oakland, Ca	DRILLING COMPLETED	09-May-12
PROJECT NUMBER	240554	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Water-knife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	4"	SCREENED INTERVAL	NA
LOGGED BY	C. Arganbright	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	P. Schaefer PG 5612	DEPTH TO WATER (Static)	NA
REMARKS			



**APPENDIX C**  
**CERTIFIED ANALYTICAL REPORTS**

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-11558-1

Client Project/Site: 3420 San Pablo Ave., Oakland, CA

For:

Conestoga-Rovers & Associates, Inc.

5900 Hollis Street

Suite A

Emeryville, California 94608

Attn: Peter Schaefer



Authorized for release by:

5/29/2012 4:38:55 PM

Philip Sanelle

Project Manager I

[philip.sanelle@testamericainc.com](mailto:philip.sanelle@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

Have a Question?

Ask—  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Sample Summary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-11558-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-11558-1	SB-15-1'	Solid	05/09/12 08:30	05/11/12 10:00
440-11558-2	SB-15-2'	Solid	05/09/12 08:54	05/11/12 10:00
440-11558-3	SB-15-5'	Solid	05/09/12 09:06	05/11/12 10:00
440-11558-4	SB-14-1'	Solid	05/09/12 09:57	05/11/12 10:00
440-11558-5	SB-14-2'	Solid	05/09/12 10:07	05/11/12 10:00
440-11558-6	SB-14-5'	Solid	05/09/12 10:15	05/11/12 10:00
440-11558-7	SB-13-1'	Solid	05/09/12 10:54	05/11/12 10:00
440-11558-8	SB-13-2'	Solid	05/09/12 11:03	05/11/12 10:00
440-11558-9	SB-13-5'	Solid	05/09/12 11:13	05/11/12 10:00

## Case Narrative

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-11558-1

---

**Job ID: 440-11558-1**

**Laboratory: TestAmerica Irvine**

**Narrative**

---

**Job Narrative  
440-11558-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 5/11/2012 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

**Metals**

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 25822 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 6010B: The following sample(s) was diluted due to the nature of the sample matrix: IDW-3 (440-11410-18). Elevated reporting limits (RLs) are provided. High Calcium.

No other analytical or quality issues were noted.

# Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
 Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-11558-1

**Client Sample ID: SB-15-1'**

**Lab Sample ID: 440-11558-1**

Matrix: Solid

Date Collected: 05/09/12 08:30

Date Received: 05/11/12 10:00

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	480		2.0		mg/Kg		05/14/12 09:28	05/22/12 19:01	5

**Client Sample ID: SB-15-2'**

**Lab Sample ID: 440-11558-2**

Matrix: Solid

Date Collected: 05/09/12 08:54

Date Received: 05/11/12 10:00

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	550		2.0		mg/Kg		05/14/12 09:28	05/22/12 19:03	5

**Client Sample ID: SB-15-5'**

**Lab Sample ID: 440-11558-3**

Matrix: Solid

Date Collected: 05/09/12 09:06

Date Received: 05/11/12 10:00

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	3.0		2.0		mg/Kg		05/14/12 09:28	05/22/12 19:05	5

**Client Sample ID: SB-14-1'**

**Lab Sample ID: 440-11558-4**

Matrix: Solid

Date Collected: 05/09/12 09:57

Date Received: 05/11/12 10:00

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1200		2.0		mg/Kg		05/14/12 09:28	05/22/12 19:07	5

**Client Sample ID: SB-14-2'**

**Lab Sample ID: 440-11558-5**

Matrix: Solid

Date Collected: 05/09/12 10:07

Date Received: 05/11/12 10:00

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	150		2.0		mg/Kg		05/14/12 09:28	05/22/12 19:09	5

**Client Sample ID: SB-14-5'**

**Lab Sample ID: 440-11558-6**

Matrix: Solid

Date Collected: 05/09/12 10:15

Date Received: 05/11/12 10:00

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		2.0		mg/Kg		05/14/12 09:28	05/22/12 19:11	5

**Client Sample ID: SB-13-1'**

**Lab Sample ID: 440-11558-7**

Matrix: Solid

Date Collected: 05/09/12 10:54

Date Received: 05/11/12 10:00

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	370		2.0		mg/Kg		05/14/12 09:28	05/22/12 19:13	5

## Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-11558-1

**Client Sample ID: SB-13-2'**

**Lab Sample ID: 440-11558-8**

Matrix: Solid

Date Collected: 05/09/12 11:03

Date Received: 05/11/12 10:00

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	320		2.0		mg/Kg		05/14/12 09:28	05/22/12 19:15	5

**Client Sample ID: SB-13-5'**

**Lab Sample ID: 440-11558-9**

Matrix: Solid

Date Collected: 05/09/12 11:13

Date Received: 05/11/12 10:00

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.0		2.0		mg/Kg		05/14/12 09:28	05/22/12 19:24	5

## Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.  
 Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-11558-1

**Client Sample ID: SB-15-1'**

Date Collected: 05/09/12 08:30

Date Received: 05/11/12 10:00

**Lab Sample ID: 440-11558-1**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			2.03 g	50 mL	25822	05/14/12 09:28	DT	TAL IRV
Total/NA	Analysis	6010B		5			28095	05/22/12 19:01	DP	TAL IRV

**Client Sample ID: SB-15-2'**

Date Collected: 05/09/12 08:54

Date Received: 05/11/12 10:00

**Lab Sample ID: 440-11558-2**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.99 g	50 mL	25822	05/14/12 09:28	DT	TAL IRV
Total/NA	Analysis	6010B		5			28095	05/22/12 19:03	DP	TAL IRV

**Client Sample ID: SB-15-5'**

Date Collected: 05/09/12 09:06

Date Received: 05/11/12 10:00

**Lab Sample ID: 440-11558-3**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			2.00 g	50 mL	25822	05/14/12 09:28	DT	TAL IRV
Total/NA	Analysis	6010B		5			28095	05/22/12 19:05	DP	TAL IRV

**Client Sample ID: SB-14-1'**

Date Collected: 05/09/12 09:57

Date Received: 05/11/12 10:00

**Lab Sample ID: 440-11558-4**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.98 g	50 mL	25822	05/14/12 09:28	DT	TAL IRV
Total/NA	Analysis	6010B		5			28095	05/22/12 19:07	DP	TAL IRV

**Client Sample ID: SB-14-2'**

Date Collected: 05/09/12 10:07

Date Received: 05/11/12 10:00

**Lab Sample ID: 440-11558-5**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			2.03 g	50 mL	25822	05/14/12 09:28	DT	TAL IRV
Total/NA	Analysis	6010B		5			28095	05/22/12 19:09	DP	TAL IRV

**Client Sample ID: SB-14-5'**

Date Collected: 05/09/12 10:15

Date Received: 05/11/12 10:00

**Lab Sample ID: 440-11558-6**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			2.02 g	50 mL	25822	05/14/12 09:28	DT	TAL IRV
Total/NA	Analysis	6010B		5			28095	05/22/12 19:11	DP	TAL IRV

# Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-11558-1

**Client Sample ID: SB-13-1'**

Date Collected: 05/09/12 10:54

Date Received: 05/11/12 10:00

**Lab Sample ID: 440-11558-7**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.99 g	50 mL	25822	05/14/12 09:28	DT	TAL IRV
Total/NA	Analysis	6010B		5			28095	05/22/12 19:13	DP	TAL IRV

**Client Sample ID: SB-13-2'**

Date Collected: 05/09/12 11:03

Date Received: 05/11/12 10:00

**Lab Sample ID: 440-11558-8**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			2.00 g	50 mL	25822	05/14/12 09:28	DT	TAL IRV
Total/NA	Analysis	6010B		5			28095	05/22/12 19:15	DP	TAL IRV

**Client Sample ID: SB-13-5'**

Date Collected: 05/09/12 11:13

Date Received: 05/11/12 10:00

**Lab Sample ID: 440-11558-9**

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			2.04 g	50 mL	25822	05/14/12 09:28	DT	TAL IRV
Total/NA	Analysis	6010B		5			28095	05/22/12 19:24	DP	TAL IRV

**Laboratory References:**

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-11558-1

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 440-25822/1-A ^5**

**Matrix: Solid**

**Analysis Batch: 27981**

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Lead	ND									

**Lab Sample ID: LCS 440-25822/2-A ^5**

**Matrix: Solid**

**Analysis Batch: 27981**

Analyte	Spike	LCS	LCS	Result	Qualifier	Unit	D	%Rec	Limits	
	Added									
Lead	50.0			48.7		mg/Kg		97	80 - 120	

**Lab Sample ID: 440-11410-B-18-B MS ^25**

**Matrix: Solid**

**Analysis Batch: 27981**

Analyte	Sample	Sample	Spike	Result	Qualifier	Unit	D	%Rec	Limits	
	Result	Qualifier	Added							
Lead	74			49.5		115		81	75 - 125	

**Lab Sample ID: 440-11410-B-18-C MSD ^25**

**Matrix: Solid**

**Analysis Batch: 27981**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD
	Result	Qualifier	Added							
Lead	74			50.0	99.0 F	mg/Kg		49	75 - 125	15 20

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 25822**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 25822**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 25822**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 25822**

## QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-11558-1

### Metals

#### Prep Batch: 25822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-11410-B-18-B MS ^25	Matrix Spike	Total/NA	Solid	3050B	
440-11410-B-18-C MSD ^25	Matrix Spike Duplicate	Total/NA	Solid	3050B	
440-11558-1	SB-15-1'	Total/NA	Solid	3050B	
440-11558-2	SB-15-2'	Total/NA	Solid	3050B	
440-11558-3	SB-15-5'	Total/NA	Solid	3050B	
440-11558-4	SB-14-1'	Total/NA	Solid	3050B	
440-11558-5	SB-14-2'	Total/NA	Solid	3050B	
440-11558-6	SB-14-5'	Total/NA	Solid	3050B	
440-11558-7	SB-13-1'	Total/NA	Solid	3050B	
440-11558-8	SB-13-2'	Total/NA	Solid	3050B	
440-11558-9	SB-13-5'	Total/NA	Solid	3050B	
LCS 440-25822/2-A ^5	Lab Control Sample	Total/NA	Solid	3050B	
MB 440-25822/1-A ^5	Method Blank	Total/NA	Solid	3050B	

#### Analysis Batch: 27981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-11410-B-18-B MS ^25	Matrix Spike	Total/NA	Solid	6010B	25822
440-11410-B-18-C MSD ^25	Matrix Spike Duplicate	Total/NA	Solid	6010B	25822
LCS 440-25822/2-A ^5	Lab Control Sample	Total/NA	Solid	6010B	25822
MB 440-25822/1-A ^5	Method Blank	Total/NA	Solid	6010B	25822

#### Analysis Batch: 28095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-11558-1	SB-15-1'	Total/NA	Solid	6010B	25822
440-11558-2	SB-15-2'	Total/NA	Solid	6010B	25822
440-11558-3	SB-15-5'	Total/NA	Solid	6010B	25822
440-11558-4	SB-14-1'	Total/NA	Solid	6010B	25822
440-11558-5	SB-14-2'	Total/NA	Solid	6010B	25822
440-11558-6	SB-14-5'	Total/NA	Solid	6010B	25822
440-11558-7	SB-13-1'	Total/NA	Solid	6010B	25822
440-11558-8	SB-13-2'	Total/NA	Solid	6010B	25822
440-11558-9	SB-13-5'	Total/NA	Solid	6010B	25822

## Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-11558-1

### Qualifiers

#### Metals

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
♂	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Certification Summary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-11558-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Irvine	Arizona	State Program	9	AZ0671
TestAmerica Irvine	California	LA Cty Sanitation Districts	9	10256
TestAmerica Irvine	California	NELAC	9	1108CA
TestAmerica Irvine	California	State Program	9	2706
TestAmerica Irvine	Guam	State Program	9	Cert. No. 12.002r
TestAmerica Irvine	Hawaii	State Program	9	N/A
TestAmerica Irvine	Nevada	State Program	9	CA015312007A
TestAmerica Irvine	New Mexico	State Program	6	N/A
TestAmerica Irvine	Northern Mariana Islands	State Program	9	MP0002
TestAmerica Irvine	Oregon	NELAC	10	4005
TestAmerica Irvine	USDA	Federal		P330-09-00080

Accreditation may not be offered or required for all methods and analytes reported in this package . Please contact your project manager for the laboratory's current list of certified methods and analytes.

LAB (LOCATION)

- CALSCIENCE \_\_\_\_\_  
 SPL \_\_\_\_\_  
 XENCO \_\_\_\_\_  
 TEST AMERICA \_\_\_\_\_  
 OTHER \_\_\_\_\_



## Shell Oil Products Chain Of Custody Record

## Please Check Appropriate Box:

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

Print Bill To Contact Name:

Peter Schaefer- 240554

INCIDENT # (ENV. SERVICES):

 CHECK IF NO INCIDENT # APPLIES

DATE: 11/7/2008

PO #

SAP #

PAGE: 1 of 2

SAMPLING COMPANY:

Conestoga-Rovers &amp; Associates

LOG CODE:

CRAW

ADDRESS:

5900 Hollis Street, Suite A, Emeryville, CA 94608

PROJECT CONTACT (Handcopy or PDF Report to):

Peter Schaefer

TELEPHONE:

510-420-3319

FAX: 510-420-9170

E-MAIL:

pschaefer@craworld.com

TURNAROUND TIME (CALENDAR DAYS):

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

 LA - RWQCB REPORT FORMAT     UST AGENCY:

## SPECIAL INSTRUCTIONS OR NOTES:

Call composite sample ID and field point name CRA-A  
 SHELL CONTRACT RATE APPLIES  
 STATE REIMBURSEMENT RATE APPLIES  
 EDD NOT NEEDED  
 RECEIPT VERIFICATION REQUESTED  
 Marked TAT except for those contingent tests needed for Aquatic Bioassay determination (5 day TAT or better may apply)

cc: Derek Elsman, Delsman@craworld.com and Shell.Lab.Billing@craworld.com

AB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE					NO. OF CONT.	REQUESTED ANALYSIS														TEMPERATURE ON RECEIPT C° <i>J. K.</i>	Container PID Readings or Laboratory Notes		
		DATE	TIME		HCL	HNO3	H2SO4	NONE	OTHER		TPH - Purgeable (8260B)	TPH - Extractable (8015M)	BTEX (8260B)	5 Oxigenates (8260B)	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2-DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	TPH - MO (8015M)	CAM 17 Metals - Total (6010)	SVOCs (8270C)	VOCs (8260)	PCBs (8082)
	SB-15-1'	5/9	0830	S01						1																	X	
	SB-15-2'	5/9	0831	S0						1																	X	
	SB-15-5'	5/9	0906	S0						1																	X	
	SB-14-1'	5/9	0957	S0						1																	X	
	SB-14-2'	5/9	1003	S0						1																	X	
	SB-14-5'	5/9	1015	S0						1																	X	
	SB-13-1'	5/9	1024	S0						1																	X	
	SB-13-2'	5/9	1103	S0						1																	X	
	SB-13-5'	5/9	1113	S0						1																	X	

Relinquished by: (Signature)

Received by: (Signature)

Relinquished by: (Signature)

Received by: (Signature)

Relinquished by: (Signature)

Received by: (Signature)

5-10-12  
Seall Taylor  
16:00Emeryville office  
Seall Taylor  
Kipin Johnson ADT

BART 5/9/12 1300

5-10-12 11:00

5-11-12 10:00

05/2/08 Revision

## Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 440-11558-1

**Login Number: 11558**

**List Source: TestAmerica Irvine**

**List Number: 1**

**Creator: Escalante, Maria**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	Brenda Carter
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-9616-1

Client Project/Site: 3420 San Pablo Ave., Oakland, CA

For:

Conestoga-Rovers & Associates, Inc.

5900 Hollis Street

Suite A

Emeryville, California 94608

Attn: Peter Schaefrer

*Philip Sanelle*

Authorized for release by:

5/8/2012 4:31:54 PM

Philip Sanelle

Project Manager I

[philip.sanelle@testamericainc.com](mailto:philip.sanelle@testamericainc.com)

### LINKS

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The  
Expert

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[www.testamericainc.com](http://www.testamericainc.com)

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Sample Summary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-9616-1	CRA-1	Solid	04/20/12 13:10	04/24/12 10:25

## Case Narrative

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

### Job ID: 440-9616-1

Laboratory: TestAmerica Irvine

#### Narrative

#### Job Narrative 440-9616-1

#### Comments

No additional comments.

#### Receipt

The sample was received on 4/24/2012 10:25 AM; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 3.30 C.

#### GC/MS VOA

Method(s) 8260B/CA\_LUFTMS: Internal standard responses were outside of acceptance limits for the following sample(s): CRA-1 (440-9616-1). The sample(s) shows evidence of matrix interference.

Method(s) 8260B: Surrogate recovery for the following sample(s) was outside control limits: (440-9641-3 MS), (440-9641-3 MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries associated with batch 21930 were outside control limits: (440-9641-3 MS), (440-9641-3 MSD). Matrix interference is suspected.

Method(s) 8260B: Internal standard responses were outside of acceptance limits for the following sample(s): CRA-1 (440-9616-1). The sample(s) shows evidence of matrix interference.

No other analytical or quality issues were noted.

#### GC Semi VOA

No analytical or quality issues were noted.

#### Metals

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 440-21838 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

#### Organic Prep

Method(s) CA LUFT: The following sample(s) was diluted prior to extraction due to the nature of the sample matrix: CRA-1 (440-9616-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

#### VOA Prep

No analytical or quality issues were noted.

# Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

**Client Sample ID: CRA-1**

**Lab Sample ID: 440-9616-1**

Date Collected: 04/20/12 13:10

Matrix: Solid

Date Received: 04/24/12 10:25

## Method: 8260B/CA\_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Volatile Fuel Hydrocarbons (C4-C12)	1.8		0.10		mg/Kg			04/26/12 04:33	1
<b>Surrogate</b>									
Dibromofluoromethane (Surr)	104		80 - 125				Prepared	04/26/12 04:33	1
4-Bromofluorobenzene (Surr)	89		75 - 120					04/26/12 04:33	1
Toluene-d8 (Surr)	99		80 - 120					04/26/12 04:33	1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.024		0.0010		mg/Kg			04/26/12 04:33	1
Ethylbenzene	0.016		0.0010		mg/Kg			04/26/12 04:33	1
Toluene	0.0012		0.0010		mg/Kg			04/26/12 04:33	1
Xylenes, Total	0.021		0.0020		mg/Kg			04/26/12 04:33	1
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)	89		80 - 120				Prepared	04/26/12 04:33	1
Dibromofluoromethane (Surr)	104		80 - 125					04/26/12 04:33	1
Toluene-d8 (Surr)	99		80 - 120					04/26/12 04:33	1

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28)	100		30		mg/Kg			04/25/12 10:48	04/26/12 03:22
ORO (C29-C40)	92		30		mg/Kg		04/25/12 10:48	04/26/12 03:22	1
<b>Surrogate</b>									
n-Octacosane	70		40 - 140				Prepared	04/25/12 10:48	04/26/12 03:22
									1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10		mg/Kg			04/25/12 10:53	04/25/12 22:38
Arsenic	ND		2.0		mg/Kg			04/25/12 10:53	04/25/12 22:38
Barium	94		1.0		mg/Kg			04/25/12 10:53	04/25/12 22:38
Beryllium	ND		0.51		mg/Kg			04/25/12 10:53	04/25/12 22:38
Cadmium	ND		0.51		mg/Kg			04/25/12 10:53	04/25/12 22:38
Chromium	17		1.0		mg/Kg			04/25/12 10:53	04/25/12 22:38
Cobalt	3.4		1.0		mg/Kg			04/25/12 10:53	04/25/12 22:38
Copper	18		2.0		mg/Kg			04/25/12 10:53	04/25/12 22:38
Lead	54		2.0		mg/Kg			04/25/12 10:53	04/25/12 22:38
Molybdenum	ND		2.0		mg/Kg			04/25/12 10:53	04/25/12 22:38
Nickel	18		2.0		mg/Kg			04/25/12 10:53	04/25/12 22:38
Selenium	ND		2.0		mg/Kg			04/25/12 10:53	04/25/12 22:38
Thallium	ND		10		mg/Kg			04/25/12 10:53	04/25/12 22:38
Vanadium	14		1.0		mg/Kg			04/25/12 10:53	04/25/12 22:38
Zinc	110		5.1		mg/Kg			04/25/12 10:53	04/25/12 22:38
Silver	ND		1.0		mg/Kg			04/25/12 10:53	04/25/12 22:38

## Method: 6010B - Metals (ICP) - STLC Citrate

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.9		0.10		mg/L			05/05/12 22:26	20

## Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

**Client Sample ID: CRA-1**

**Lab Sample ID: 440-9616-1**

Matrix: Solid

Date Collected: 04/20/12 13:10

Date Received: 04/24/12 10:25

### Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.098		0.020		mg/Kg		04/25/12 11:23	04/25/12 18:35	1

## Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

**Client Sample ID: CRA-1**

**Lab Sample ID: 440-9616-1**

**Matrix: Solid**

**Date Collected: 04/20/12 13:10**

**Date Received: 04/24/12 10:25**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 g	10 mL	21930	04/26/12 04:33	RM	TAL IRV
Total/NA	Analysis	8260B/CA_LUFTMS	1		5 g	10 mL	21931	04/26/12 04:33	RM	TAL IRV
Total/NA	Prep	CA LUFT			5.00 g	1 mL	21835	04/25/12 10:48	TM	TAL IRV
Total/NA	Analysis	8015B	1				21926	04/26/12 03:22	ES	TAL IRV
Total/NA	Prep	7471A			0.50 g	50 mL	21382	04/25/12 11:23	SN	TAL IRV
Total/NA	Analysis	7471A	1				21971	04/25/12 18:35	MP	TAL IRV
Total/NA	Prep	3050B			1.98 g	50 mL	21838	04/25/12 10:53	DT	TAL IRV
Total/NA	Analysis	6010B	5				22410	04/25/12 22:38	TK	TAL IRV
STLC Citrate	Leach	CA WET Citrate			32.9 g	329 mL	22649	04/29/12 18:16	CH	TAL IRV
STLC Citrate	Analysis	6010B	20		1.0 mL	1.0 mL	24104	05/05/12 22:26	TK	TAL IRV

**Laboratory References:**

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-21930/4**

**Matrix: Solid**

**Analysis Batch: 21930**

Analyte	MB		RL	MDL	Unit	D	Client Sample ID: Method Blank		Dil Fac
	Result	Qualifier					Prepared	Analyzed	
Benzene	ND		0.0010		mg/Kg		04/25/12 18:18		1
Ethylbenzene	ND		0.0010		mg/Kg		04/25/12 18:18		1
m,p-Xylene	ND		0.0020		mg/Kg		04/25/12 18:18		1
o-Xylene	ND		0.0010		mg/Kg		04/25/12 18:18		1
Toluene	ND		0.0010		mg/Kg		04/25/12 18:18		1
Xylenes, Total	ND		0.0020		mg/Kg		04/25/12 18:18		1
Surrogate	MB		Limits	%Recovery	Qualifier	Prepared	Analyzed	Dil Fac	
	LCS	MB							
4-Bromofluorobenzene (Surr)	107		80 - 120				04/25/12 18:18		1
Dibromofluoromethane (Surr)	96		80 - 125				04/25/12 18:18		1
Toluene-d8 (Surr)	104		80 - 120				04/25/12 18:18		1

**Lab Sample ID: LCS 440-21930/5**

**Matrix: Solid**

**Analysis Batch: 21930**

Analyte	Spike		LCS	LCS	Unit	D	%Rec.		Limits
	Added	Result	Qualifier	%Rec	Limits				
Benzene	0.0500	0.0514		103	65 - 120				
Ethylbenzene	0.0500	0.0492		98	70 - 125				
m,p-Xylene	0.100	0.104		104	70 - 125				
o-Xylene	0.0500	0.0532		106	70 - 125				
Toluene	0.0500	0.0486		97	70 - 125				
Surrogate	LCS		LCS	LCS	Limits	D	%Rec.		Limits
	%Recovery	Qualifier							
4-Bromofluorobenzene (Surr)	105		80 - 120						
Dibromofluoromethane (Surr)	98		80 - 125						
Toluene-d8 (Surr)	104		80 - 120						

**Lab Sample ID: 440-9641-A-3 MS**

**Matrix: Solid**

**Analysis Batch: 21930**

Analyte	Sample Result	Sample Qualifier	Spike		MS	MS	Unit	D	%Rec.	
			Added	Result	Qualifier	%Rec	Limits			
Benzene	ND		0.0507	0.0515		102	65 - 130			
Ethylbenzene	ND		0.0507	0.0574		113	70 - 135			
m,p-Xylene	ND		0.101	0.120		119	70 - 130			
o-Xylene	ND		0.0507	0.0584		115	65 - 130			
Toluene	ND		0.0507	0.0495		98	70 - 130			
Surrogate	MS		MS	MS	Limits	D	%Rec.		Limits	
	%Recovery	Qualifier								
4-Bromofluorobenzene (Surr)	98		80 - 120							
Dibromofluoromethane (Surr)	68	X	80 - 125							
Toluene-d8 (Surr)	102		80 - 120							

# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-9641-A-3 MSD

Matrix: Solid

Analysis Batch: 21930

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Benzene	ND		0.0496	0.0506		mg/Kg	102	65 - 130	2	20	
Ethylbenzene	ND		0.0496	0.0504		mg/Kg	102	70 - 135	13	25	
m,p-Xylene	ND		0.0992	0.104		mg/Kg	105	70 - 130	14	25	
o-Xylene	ND		0.0496	0.0542		mg/Kg	109	65 - 130	8	25	
Toluene	ND		0.0496	0.0470		mg/Kg	95	70 - 130	5	20	
<hr/>											
<b>Surrogate</b>											
4-Bromofluorobenzene (Surr)	96			80 - 120							
Dibromofluoromethane (Surr)	68	X		80 - 125							
Toluene-d8 (Surr)	104			80 - 120							

## Method: 8260B/CA\_LUFTMS - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 440-21931/4

Matrix: Solid

Analysis Batch: 21931

Client Sample ID: Method Blank  
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Volatile Fuel Hydrocarbons (C4-C12)	ND		0.10		mg/Kg			04/25/12 18:18	1
<hr/>									
<b>Surrogate</b>									
Dibromofluoromethane (Surr)	96		80 - 125				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		75 - 120					04/25/12 18:18	1
Toluene-d8 (Surr)	104		80 - 120					04/25/12 18:18	1

Lab Sample ID: LCS 440-21931/6

Matrix: Solid

Analysis Batch: 21931

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added						
Volatile Fuel Hydrocarbons (C4-C12)	1.00	0.991		mg/Kg		99	60 - 135
<hr/>							
<b>Surrogate</b>							
Dibromofluoromethane (Surr)	96		80 - 125				
4-Bromofluorobenzene (Surr)	111		75 - 120				
Toluene-d8 (Surr)	107		80 - 120				

Lab Sample ID: 440-9641-A-3 MS

Matrix: Solid

Analysis Batch: 21931

Client Sample ID: Matrix Spike  
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Volatile Fuel Hydrocarbons (C4-C12)	ND		3.50	2.41		mg/Kg	69	55 - 140	
<hr/>									
<b>Surrogate</b>									
Dibromofluoromethane (Surr)	68	X		80 - 125					

# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

## Method: 8260B/CA\_LUFTMS - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 440-9641-A-3 MS

Matrix: Solid

Analysis Batch: 21931

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Surrogate	MS	MS	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)			98		75 - 120
Toluene-d8 (Surr)			102		80 - 120

Lab Sample ID: 440-9641-A-3 MSD

Matrix: Solid

Analysis Batch: 21931

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	RPD Limit
Volatile Fuel Hydrocarbons (C4-C12)	ND		3.42	2.51		mg/Kg	73	55 - 140	4 25

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Dibromofluoromethane (Surr)	68	X	80 - 125
4-Bromofluorobenzene (Surr)	96		75 - 120
Toluene-d8 (Surr)	104		80 - 120

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 440-21835/1-A

Matrix: Solid

Analysis Batch: 21926

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21835

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28)	ND		5.0		mg/Kg	04/25/12 10:48	04/25/12 20:32		1
ORO (C29-C40)	ND		5.0		mg/Kg	04/25/12 10:48	04/25/12 20:32		1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-Octacosane	74		40 - 140				04/25/12 10:48	04/25/12 20:32	1

Lab Sample ID: LCS 440-21835/2-A

Matrix: Solid

Analysis Batch: 21926

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21835

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
DRO (C10-C28)	33.3	23.7		mg/Kg	71	45 - 115		
<hr/>								
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
n-Octacosane	68		40 - 140					

Lab Sample ID: 440-8587-A-1-I MS

Matrix: Solid

Analysis Batch: 21926

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 21835

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
DRO (C10-C28)	360		33.3	256	4	mg/Kg	-314	40 - 120	
<hr/>									
Surrogate	MS %Recovery	MS Qualifier	Limits						
n-Octacosane	73		40 - 140						

# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 440-8587-A-1-J MSD

Matrix: Solid

Analysis Batch: 21926

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 21835

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
DRO (C10-C28)	360		33.3	239	4	mg/Kg	-363	40 - 120	7	30	
<b>Surrogate</b>	<b>MSD</b>	<b>MSD</b>									
<i>n</i> -Octacosane	%Recovery	Qualifier		Limits							
	67			40 - 140							

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-21838/1-A ^5

Matrix: Solid

Analysis Batch: 22410

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21838

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	ND		10		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Arsenic	ND		2.0		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Barium	ND		1.0		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Beryllium	ND		0.50		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Cadmium	ND		0.50		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Chromium	ND		1.0		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Cobalt	ND		1.0		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Copper	ND		2.0		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Lead	ND		2.0		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Molybdenum	ND		2.0		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Nickel	ND		2.0		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Selenium	ND		2.0		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Thallium	ND		10		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Vanadium	ND		1.0		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Zinc	ND		5.0		mg/Kg	04/25/12 10:53	04/25/12 22:18		5
Silver	ND		1.0		mg/Kg	04/25/12 10:53	04/25/12 22:18		5

Lab Sample ID: LCS 440-21838/2-A ^5

Matrix: Solid

Analysis Batch: 22410

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21838

Analyte	Spike	LCs	LCs	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Antimony	50.5	46.6		mg/Kg	92	80 - 120	
Arsenic	50.5	48.2		mg/Kg	95	80 - 120	
Barium	50.5	49.0		mg/Kg	97	80 - 120	
Beryllium	50.5	48.8		mg/Kg	97	80 - 120	
Cadmium	50.5	48.2		mg/Kg	95	80 - 120	
Chromium	50.5	49.0		mg/Kg	97	80 - 120	
Cobalt	50.5	47.6		mg/Kg	94	80 - 120	
Copper	50.5	46.6		mg/Kg	92	80 - 120	
Lead	50.5	56.7		mg/Kg	112	80 - 120	
Molybdenum	50.5	51.4		mg/Kg	102	80 - 120	
Nickel	50.5	48.1		mg/Kg	95	80 - 120	
Selenium	50.5	44.9		mg/Kg	89	80 - 120	
Thallium	50.5	47.5		mg/Kg	94	80 - 120	
Vanadium	50.5	47.8		mg/Kg	95	80 - 120	
Zinc	50.5	45.7		mg/Kg	90	80 - 120	

# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID:** LCS 440-21838/2-A ^5

**Matrix:** Solid

**Analysis Batch:** 22410

Analyte	Spike Added	LCS	LCS	%Rec.			
		Result	Qualifier	Unit	D	%Rec	Limits
Silver	25.3	23.8		mg/Kg		94	80 - 120

**Lab Sample ID:** 440-7596-A-1-L MS ^5

**Matrix:** Solid

**Analysis Batch:** 22410

Analyte	Sample	Sample	Spike	MS	MS	%Rec.			
	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	ND		50.3	34.3	F	mg/Kg		68	75 - 125
Arsenic	ND		50.3	45.2		mg/Kg		86	75 - 125
Barium	190		50.3	255	F	mg/Kg		131	75 - 125
Beryllium	ND		50.3	46.8		mg/Kg		93	75 - 125
Cadmium	1.1		50.3	47.1		mg/Kg		92	75 - 125
Chromium	13		50.3	62.6		mg/Kg		99	75 - 125
Cobalt	ND		50.3	51.0		mg/Kg		98	75 - 125
Copper	440		50.3	518	4	mg/Kg		146	75 - 125
Lead	13		50.3	64.0		mg/Kg		101	75 - 125
Molybdenum	8.2		50.3	54.2		mg/Kg		92	75 - 125
Nickel	18		50.3	64.0		mg/Kg		91	75 - 125
Selenium	4.2		50.3	48.0		mg/Kg		87	75 - 125
Thallium	ND		50.3	40.0		mg/Kg		80	75 - 125
Vanadium	11		50.3	58.8		mg/Kg		95	75 - 125
Zinc	660		50.3	744	4	mg/Kg		163	75 - 125
Silver	18		25.1	41.0		mg/Kg		93	75 - 125

**Lab Sample ID:** 440-7596-A-1-M MSD ^5

**Matrix:** Solid

**Analysis Batch:** 22410

Analyte	Sample	Sample	Spike	MSD	MSD	%Rec.			RPD	Limit	
	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	ND		50.5	35.6	F	mg/Kg		70	75 - 125	4	20
Arsenic	ND		50.5	46.9		mg/Kg		89	75 - 125	4	20
Barium	190		50.5	264	F	mg/Kg		146	75 - 125	3	20
Beryllium	ND		50.5	48.6		mg/Kg		96	75 - 125	4	20
Cadmium	1.1		50.5	49.3		mg/Kg		96	75 - 125	5	20
Chromium	13		50.5	64.9		mg/Kg		103	75 - 125	4	20
Cobalt	ND		50.5	53.1		mg/Kg		101	75 - 125	4	20
Copper	440		50.5	539	4	mg/Kg		187	75 - 125	4	20
Lead	13		50.5	66.2		mg/Kg		105	75 - 125	3	20
Molybdenum	8.2		50.5	56.0		mg/Kg		95	75 - 125	3	20
Nickel	18		50.5	73.0		mg/Kg		109	75 - 125	13	20
Selenium	4.2		50.5	50.3		mg/Kg		91	75 - 125	5	20
Thallium	ND		50.5	43.4		mg/Kg		86	75 - 125	8	20
Vanadium	11		50.5	60.4		mg/Kg		98	75 - 125	3	20
Zinc	660		50.5	770	4	mg/Kg		212	75 - 125	3	20
Silver	18		25.3	42.0		mg/Kg		97	75 - 125	3	20

# QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 440-22649/1-A ^20

Matrix: Solid

Analysis Batch: 24104

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.10		mg/L			05/05/12 22:20	20

Lab Sample ID: LCS 440-22649/2-A ^20

Matrix: Solid

Analysis Batch: 24104

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Lead	20.0	19.5		mg/L		98	80 - 120

Lab Sample ID: 440-9616-1 MS

Matrix: Solid

Analysis Batch: 24104

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Lead	2.9		20.0	22.5		mg/L		98	75 - 125

Lab Sample ID: 440-9616-1 MSD

Matrix: Solid

Analysis Batch: 24104

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
Lead	2.9		20.0	22.4		mg/L		97	75 - 125	0 20

## Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 440-21382/1-A

Matrix: Solid

Analysis Batch: 21971

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020		mg/Kg		04/23/12 16:23	04/25/12 17:29	1

Lab Sample ID: LCS 440-21382/2-A

Matrix: Solid

Analysis Batch: 21971

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Mercury	0.800	0.732		mg/Kg		92	80 - 120

Lab Sample ID: 440-9090-A-1-D MS

Matrix: Solid

Analysis Batch: 21971

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Mercury	ND		0.784	0.634		mg/Kg		78	70 - 130

## QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

### Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 440-9090-A-1-E MSD

Matrix: Solid

Analysis Batch: 21971

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 21382

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec.	Limits	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier			%Rec			
Mercury	ND		0.784	0.643				80	70 - 130	1	20

# QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

## GC/MS VOA

### Analysis Batch: 21930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-9616-1	CRA-1	Total/NA	Solid	8260B	
440-9641-A-3 MS	Matrix Spike	Total/NA	Solid	8260B	
440-9641-A-3 MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B	
LCS 440-21930/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 440-21930/4	Method Blank	Total/NA	Solid	8260B	

### Analysis Batch: 21931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-9616-1	CRA-1	Total/NA	Solid	8260B/CA_LUFT	
440-9641-A-3 MS	Matrix Spike	Total/NA	Solid	MS	
440-9641-A-3 MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B/CA_LUFT	
LCS 440-21931/6	Lab Control Sample	Total/NA	Solid	MS	
MB 440-21931/4	Method Blank	Total/NA	Solid	8260B/CA_LUFT	
				MS	

## GC Semi VOA

### Prep Batch: 21835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-8587-A-1-I MS	Matrix Spike	Total/NA	Solid	CA LUFT	
440-8587-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	CA LUFT	
440-9616-1	CRA-1	Total/NA	Solid	CA LUFT	
LCS 440-21835/2-A	Lab Control Sample	Total/NA	Solid	CA LUFT	
MB 440-21835/1-A	Method Blank	Total/NA	Solid	CA LUFT	

### Analysis Batch: 21926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-8587-A-1-I MS	Matrix Spike	Total/NA	Solid	8015B	21835
440-8587-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	21835
440-9616-1	CRA-1	Total/NA	Solid	8015B	21835
LCS 440-21835/2-A	Lab Control Sample	Total/NA	Solid	8015B	21835
MB 440-21835/1-A	Method Blank	Total/NA	Solid	8015B	21835

## Metals

### Prep Batch: 21382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-9090-A-1-D MS	Matrix Spike	Total/NA	Solid	7471A	
440-9090-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	7471A	
440-9616-1	CRA-1	Total/NA	Solid	7471A	
LCS 440-21382/2-A	Lab Control Sample	Total/NA	Solid	7471A	
MB 440-21382/1-A	Method Blank	Total/NA	Solid	7471A	

### Prep Batch: 21838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-7596-A-1-L MS ^5	Matrix Spike	Total/NA	Solid	3050B	
440-7596-A-1-M MSD ^5	Matrix Spike Duplicate	Total/NA	Solid	3050B	
440-9616-1	CRA-1	Total/NA	Solid	3050B	
LCS 440-21838/2-A ^5	Lab Control Sample	Total/NA	Solid	3050B	

# QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

## Metals (Continued)

### Prep Batch: 21838 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-21838/1-A ^5	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 21971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-9090-A-1-D MS	Matrix Spike	Total/NA	Solid	7471A	21382
440-9090-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	7471A	21382
440-9616-1	CRA-1	Total/NA	Solid	7471A	21382
LCS 440-21382/2-A	Lab Control Sample	Total/NA	Solid	7471A	21382
MB 440-21382/1-A	Method Blank	Total/NA	Solid	7471A	21382

### Analysis Batch: 22410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-7596-A-1-L MS ^5	Matrix Spike	Total/NA	Solid	6010B	21838
440-7596-A-1-M MSD ^5	Matrix Spike Duplicate	Total/NA	Solid	6010B	21838
440-9616-1	CRA-1	Total/NA	Solid	6010B	21838
LCS 440-21838/2-A ^5	Lab Control Sample	Total/NA	Solid	6010B	21838
MB 440-21838/1-A ^5	Method Blank	Total/NA	Solid	6010B	21838

### Leach Batch: 22649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-9616-1	CRA-1	STLC Citrate	Solid	CA WET Citrate	
440-9616-1 MS	CRA-1	STLC Citrate	Solid	CA WET Citrate	
440-9616-1 MSD	CRA-1	STLC Citrate	Solid	CA WET Citrate	
LCS 440-22649/2-A ^20	Lab Control Sample	STLC Citrate	Solid	CA WET Citrate	
MB 440-22649/1-A ^20	Method Blank	STLC Citrate	Solid	CA WET Citrate	

### Analysis Batch: 24104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-9616-1	CRA-1	STLC Citrate	Solid	6010B	
440-9616-1 MS	CRA-1	STLC Citrate	Solid	6010B	
440-9616-1 MSD	CRA-1	STLC Citrate	Solid	6010B	
LCS 440-22649/2-A ^20	Lab Control Sample	STLC Citrate	Solid	6010B	
MB 440-22649/1-A ^20	Method Blank	STLC Citrate	Solid	6010B	

## Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

#### GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

#### Metals

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
⊗	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Certification Summary

Client: Conestoga-Rovers & Associates, Inc.  
Project/Site: 3420 San Pablo Ave., Oakland, CA

TestAmerica Job ID: 440-9616-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Irvine	Arizona	State Program	9	AZ0671
TestAmerica Irvine	California	LA Cty Sanitation Districts	9	10256
TestAmerica Irvine	California	NELAC	9	1108CA
TestAmerica Irvine	California	State Program	9	2706
TestAmerica Irvine	Guam	State Program	9	Cert. No. 12.002r
TestAmerica Irvine	Hawaii	State Program	9	N/A
TestAmerica Irvine	Nevada	State Program	9	CA015312007A
TestAmerica Irvine	New Mexico	State Program	6	N/A
TestAmerica Irvine	Northern Mariana Islands	State Program	9	MP0002
TestAmerica Irvine	Oregon	NELAC	10	4005
TestAmerica Irvine	USDA	Federal		P330-09-00080

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



## **Shell Oil Products Chain Of Custody Record**

Don Miller 4-23-12  
1630

Vn Band

3.3°C

05/2/06 Revision

05/3/06 Revision

5/8/2012

## Contingent analyses

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

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

## Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 440-9616-1

**Login Number: 9616**

**List Source: TestAmerica Irvine**

**List Number: 1**

**Creator: Perez, Angel**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	