### **RECEIVED**

10:19 am, Jul 17, 2008

Alameda County Environmental Health



#### Denis L. Brown

### **Shell Oil Products US**

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

Re:

Former Shell Service Station 8930 Bancroft Avenue Oakland, California SAP Code 135678 Incident No. 98995742 ACHCSA Case No. RO0000404

## Dear Mr. Wickham:

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

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

Sincerely,

Denis L. Brown Project Manager



19449 Riverside Drive, Suite 230, Sonoma, California 95476 Telephone: 707-935-4850 Facsimile: 707-935-6649

www.CRAworld.com

July 16, 2008

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

Site Investigation Report and Request for Closure

Former Shell Service Station 8930 Bancroft Avenue Oakland, California SAP Code 135678 Incident No. 98995742

Fuel Leak Case No. RO0000404

Dear Mr. Wickham:

Re:

Conestoga-Rovers & Associates (CRA), formerly Cambria Environmental Technology, Inc., (Cambria), prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to document the recent site investigation activities at the above referenced site. In an effort to address one remaining outstanding item raised by the Alameda County Health Care Services Agency (ACHCSA) in their letter dated October 12, 2007, to move this case toward closure, this investigation involved the collection of soil samples from beneath the former first generation underground storage tanks (UST's) previously located on the northwest side of the site.

In a January 12, 2006 email to ACHCSA, Cambria requested that the site be reviewed for closure based on the low level to mostly non-detectable concentrations of chemicals of concern in the groundwater at the site. ACHCSA responded with an email at that time concurring that the site did warrant review for closure. Closure of the site was then discussed during a February 2, 2006 meeting with ACHCSA, at which time ACHCSA stated that additional information was still necessary before the case could be reviewed for closure; specifically, in a February 16, 2006 letter to Shell, ACHCSA requested that Shell investigate the offsite extent of impacted groundwater downgradient of the site. Two offsite soil borings were drilled in July of 2006, but the collection of a groundwater samples from either of these two borings was unsuccessful due to lack of groundwater recharge in the borings. The field activities associated with these offsite borings was documented in Cambria's September 28, 2006 Subsurface Investigation Report, in which an argument was presented by Cambria that further attempts to collect the offsite data was no longer warranted, and that the site should be reviewed for closure as a low risk fuel site.

Case closure of this site was again discussed with ACHCSA during a meeting on March 29, 2007. During this meeting, ACHCSA indicated that the site would be reviewed for closure after receipt of the

Equal Employment Opportunity Employer



Second Quarter 2007 groundwater monitoring data, and that the groundwater monitoring program for the site could be discontinued after the Second Quarter 2007 event. The Second Quarter 2007 groundwater monitoring data was presented to ACHCSA in CRA's August 16, 2007 Groundwater Monitoring Report – Second Quarter 2007 and Request for Closure Consideration, in which CRA presented a discussion on the groundwater data and requested that the site continue to be reviewed for closure as a low risk fuel site. ACHCSA responded to this request in their October 12, 2007 letter, in which ACHCSA noted that they had performed a complete review of all the information in the case files, but that further information was required regarding the former first generation UST's, and the extent of any contamination in this area, to complete the case closure review.

CRA reviewed all available internal files, all available Shell files, and the City of Oakland Fire Department files for information related to this request and was not able to locate any relevant information pertaining to the removal of these former UST's, other than that they were apparently removed from the site in 1983 or 1984. To address the request in ACHCSA's October 12, 2007 letter, CRA proposed installing soil borings within the cavity of the former first generation UST's to collect soil samples to determine the extent, if any, of soil contamination in the area of these former USTs. The work was proposed in CRA's January 25, 2008 Agency Response and Site Investigation Work Plan, which was approved by ACHCSA in their letter dated February 7, 2008. The field activities, data, and findings are presented below. The work was performed in accordance with ACHCSA and San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) guidelines.

#### **EXECUTIVE SUMMARY**

- To address ACHCSA request for information regarding the former first generation UST's, and the extent of any contamination in the vicinity of these former UST's, and thus move this environmental case toward closure, three soil borings (TB-1, TB-2, and TB-3) were proposed to be drilled from within the former UST cavity for the collection of soil samples.
- TB-1 is believed to have been drilled just immediately adjacent to the former first generation UST cavity, while TB-2 and TB-3 were determined to have been drilled from within the former first generation UST cavity.
- Two soil samples where collected from each soil boring. Soil samples were collected from what appeared to be native soils in TB-1 at 10.5 and 12.5 feet below grade (fbg). Soils samples were collected in both TB-2 and TB-3 at 10.5 fbg, from what was believed to have been fill material, and at 13.5 fbg from what appeared to be native soils beneath to former first generations UST's.
- With the exception of the 310 and 52 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPHg) reported in TB-2 at 10.5 and 13.5 fbg, respectively, and the 440

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and 5.4 mg/kg TPHg reported in TB-2 at 10.5 and 13.5 fbg, respectively, none of the soil samples collected from any of the three borings reported any detectable petroleum hydrocarbon concentrations above their respective detection limits.

- Concentrations of TPHg reported in TB-2 and TB-3 attenuate one to two orders of magnitude with depth. Further, the concentrations of TPHg reported in TB-2 and TB-3 at 13.5 fbg, at just above soil groundwater interface, do not exceed the lowest environmental screening level of 83 mg/kg established for deeper soils at sites where groundwater is a current or potential source of drinking water, and therefore do not pose at threat to the groundwater at this site.
- This site meets the low risk fuel site case closure criteria and should be considered for closure and no further action.

#### SITE DESCRIPTION AND BACKGROUND

This former Shell service station is located at the north corner of the Bancroft Avenue and 90<sup>th</sup> Avenue intersection in a mixed commercial and residential area of Oakland, California (Figure 1). A review of historic aerial photographs and Sanborn maps in 1999 indicated that the site was first developed as a gasoline service station in 1960. The former first generation UST location is along the northwest property boundary (Figure 2). The site layout currently includes a second generation UST complex located near the southern corner of the site, four dispenser islands, and a 24-7 Quick Mart (Figure 2).

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

#### INVESTIGATION RESULTS

**Permit:** A drilling permit was obtained from the Alameda County Public Works

Agency, and a copy is provided in Attachment B.

Drilling Dates: June 5 and 6, 2008.

**Drilling Company:** Gregg Drilling and Testing, Inc., of Martinez, California (C57 License

No. 485165)

Personnel: CRA geologist Carmen Rodriguez directed the drilling activities under

the supervision of California Professional Geologist Ana Friel.

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**Drilling Method:** 

Air knife, water knife and hollow stem auger.

Number of Well Borings:

Three soil borings (TB-1, TB-2, and TB-3) were successfully drilled during this investigation in the vicinity of, and from within the former first generation UST cavity. Because the actual location of the former first generation UST cavity was only approximately known, and due to the apparent native soils encountered from boring TB-1, relative to the backfill material and debris encountered in borings TB-2 and TB-3, the location of TB-1 is believed to have been drilled just immediately adjacent to the former first generation UST cavity. Further, because of the backfill material and debris encountered in borings TB-2 and TB-3. numerous attempts at different locations were required before borings TB-2 and TB-3 could be successfully drilled and sampled. However, because of the backfill material and debris encountered in TB-2 and TB-3, it was determined that these two borings were drilled in locations from within the former first generation UST cavity. In addition, because these borings were drilled in what Shell considers a "critical area", the borings were cleared by air knife and water knife to 10 fbg, before any mechanical augering or sampling could commence. specifications and soil types encountered are described on the boring logs contained in Attachment C. The final boring locations are shown on Figure 3.

**Boring Depths:** 

Boring TB-1 was extended to 13 fbg, and borings TB-2 and TB-3 were extended to 14 fbg.

Groundwater Depths:

Groundwater was not encountered in any of the soil borings.

Soil Sampling:

Soil samples for chemical analysis were collected from boring TB-1 at 10.5 and 12.5 fbg. As noted above, TB-1 appears to have been drilled immediately adjacent to the former first generation tanks, and the soil samples were collected from what appeared to be native material in this vicinity.

Soil samples for chemical analysis were collected from borings TB-2 and TB-3 at 10.5 and 13.5 fbg from within the former first generation



UST cavity. Based on field observations, the material within the former first generation UST cavity from surface to approximately 10 fbg appeared to be backfill material and contained various types of debris, and the zone between approximately 10 fbg to approximately 12 fbg appeared to be a transition area between the backfill material and native soils, while the material below approximately 12 fbg was determined to be native soils (see boring logs in Attachment C). Therefore, the soil samples collected from TB-2 and TB-3 at 10.5 fbg were collected from what appeared to be a transition area; and soil samples collected from TB-2 and TB-3 at 13.5 fbg were collected from the native soils beneath the former first generation UST's, and at just above the groundwater interface, which was measured at approximately 15 fbg in the adjacent well MW-2.

Soil Disposal:

One-55 gallon drum of soil and 12 55-gallon drums of soil sludge were generated during field activities and stored onsite. The drum of soil was sampled and profiled for disposal, and the laboratory analytical report is included in Attachment D. Waste disposal confirmation documentation is pending and can be provided by CRA upon request.

#### **FINDINGS and CONCLUSIONS**

**Soil:** The soil chemical analytical data are summarized in Table 1 and TPHg, benzene, and methyl tertiary butyl ether (MTBE) analytical results are presented on Figure 3. Laboratory analytical reports are presented in Attachment E.

With the exception of concentrations of TPHg in both TB-2 and TB-3, none of the soil samples collected from any of the three soil borings reported any detectable petroleum hydrocarbon concentrations above their respective detection limits. The soil samples from boring TB-2 at 10.5 and 13.5 fbg reported concentrations of TPHg at 310 and 52 mg/kg, respectively, which reflects an attenuation of an order of magnitude with depth between the fill and the native soils. The soil samples from boring TB-3 at 10.5 and 13.5 fbg reported concentrations of TPHg at 440 and 5.4 mg/kg, respectively, which reflects an attenuation of two orders of magnitude with depth between the fill and the native soils. Further, as shown in Table 1, the concentrations of TPHg reported in TB-2 and TB-3 at 13.5 fbg, which was at just above soil groundwater interface, do not exceed the lowest environmental screening level of 83 mg/kg



established for deeper soils at sites where groundwater is a current or potential source of drinking water (ref: Table C of SFBRWQCB's Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater – Interim Final – November 2007 [revised May 2008]), and therefore do not pose at threat to the groundwater at this site.

#### **RECOMENDATIONS**

Given the above noted findings and conclusions, in conjunction with the arguments for site closure presented in Cambria's September 28, 2006 Subsurface Investigation Report, and in CRA's August 16, 2007 Groundwater Monitoring Report – Second Quarter 2007 and Request for Closure Consideration, on behalf of Shell, CRA is requesting that the site be considered for closure as a low risk fuel site, and that no further action be required. Groundwater monitoring at this site has been discontinued, and upon concurrence from ACHCSA, the monitoring wells will be properly destroyed.

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#### **CLOSING**

If you have any questions regarding the contents of this document, please call Dennis Baertschi at (707) 268-3813.

Sincerely,

**Conestoga-Rovers & Associates** 

Dennis Baertschi Project Geologist

Ana Friel, PG

Figures:

1 - Vicinity Map 2 - Site Plan

3 - Soil Chemical Concentration Map - June 5 and 6, 2008

Tables:

1 - Soil Analytical Data

Attachments:

A - Site HistoryB - PermitsC - Boring Logs

D -Waste Disposal Documentation E - Certified Analytical Reports

cc:

Denis Brown, Shell Oil Products US

Sidhu Associates, 8930 Bancroft Ave., Oakland, CA 94605

Tom N. Magney PG# 8238

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Conestoga-Rovers & Associates (CRA) prepared this document for use by our client and appropriate regulatory agencies. It is based partially on information available to CRA from outside sources and/or in the public domain, and partially on information supplied by CRA and its subcontractors. CRA makes no warranty or guarantee, expressed or implied, included or intended in this document, with respect to the accuracy of information obtained from these outside sources or the public domain, or any conclusions or recommendations based on information that was not independently verified by CRA. This document represents the best professional judgment of CRA. None of the work performed hereunder constitutes or shall be represented as a legal opinion of any kind or nature.

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# **Former Shell Service Station**

8930 Bancroft Avenue Oakland, California



SCALE 1" = 1/4 MILE

**Vicinity Map** 

# Attachment A Site History

#### SITE HISTORY and PREVIOUS WORK

Former Shell Service Station, 8930 Bancroft Avenue Oakland, California

1983-1984 First Generation Underground Storage Tanks (USTs) Removal: Based on a review of available documentation, Conestoga-Rovers & Associates (CRA) was able to determine that sometime in 1983 or 1984, three first generation USTs and associated piping were removed from the northwest side of the site, and were replace with three new second generation USTs in a new UST cavity located along the southeast side of the site.

1983 Well Installation: In May 1983, Gettler Ryan, Inc. of Dublin, California installed groundwater monitoring wells MW-1 through MW-6 at the site. The well installations were in response to reported gasoline-saturated soils discovered by an independent drilling contractor. The wells were completed between 18 and 19 feet below grade (fbg) and constructed of 3-inch-diameter schedule 40 PVC. No soil or groundwater analytical samples were collected during the well installations. A report detailing the well installations is not available for review at the time of this writing.

1998 Well Sampling: In December 1998, Blaine Tech Services, Inc. (Blaine) developed and sampled the six monitoring wells. Based on hydrocarbon and methyl tertiary-butyl ether (MTBE) detections in the groundwater samples, Cambria Environmental Technology, Inc., (Cambria) filed a December 23, 1998 Underground Storage Tank Unauthorized Release (Leak)/Contaminant Site Report (Form 5) on Shell's behalf.

1999 Phase I Environmental Site Assessment: In April 1999, Cambria conducted a limited Phase I environmental assessment and sensitive receptor survey to identify recognized environmental conditions at the site and to identify wells and surface water bodies within a ½-mile radius of the subject property. A review of historical city directories did not identify any facilities within a ¼-mile radius which have a reasonable potential to impact soil or groundwater quality beneath the subject property. The well survey identified 30 wells of various types within ½-mile of the site. The only identified surface water within the ½-mile radius was Viejo Creek, located approximately ½-mile to the north of the site. Cambria's April 16, 1999 Limited Phase I Environmental Assessment and Sensitive Receptor Survey Report summarizes these findings.

1999 Underground Storage Tanks (USTs), Piping and Dispenser Replacement Sampling: In July 1999, the three second generation 10,000-gallon fiberglass USTs and associated piping and dispensers were removed and replaced at the site. The three new UST's were placed in the same cavity as those that were removed. Soil samples collected beneath the removed USTs,

dispensers, and product piping contained up to 6.20 milligrams per kilogram (mg/kg) MTBE. Following removal activities and sampling, Shell discontinued operating USTs at the site. Cambria's September 20, 1999 *Underground Storage Tank Closure Report* summarizes these activities.

2000 Well Survey: During the fourth quarter 2000, Shell conducted a well survey to identify potential receptors within ½-mile of the site. This survey was performed using well logs provided by the California Department of Water Resources (DWR). Five wells were identified downgradient of the site and classified as "irrigation/agricultural," "unknown," or "active water producing" wells. As recommended in the November 30, 2000 Site Investigation Work Plan, Cambria conducted a field reconnaissance to verify the existence of the five wells. Well locations are plotted on Figure 1. Well #4 was located and observed to be currently in use as an irrigation well. Well #5 and observed to be abandoned. Wells #28 and #29 were located on Pacific Bell property and appear to be out-of-service monitoring wells. Cambria could not locate well #10 using the location information given on the DWR well log. Well #10 is listed as an unknown well with similar owner information and construction details to well #11, which was reported as a cathodic protection well. Based on this information, Cambria believes well #10 is most likely a cathodic protection well. Cambria's November 30, 2000 Site Investigation Work Plan reports well survey results.

2000 Conduit Study: In order to determine whether underground utility trenches may be serving as preferential pathways for contaminant migration from the site, Shell conducted a subsurface conduit study of areas adjacent to the site. During the fourth quarter 2000, Cambria obtained local utility maps from the City of Oakland Public Works Department which located storm sewer and sanitary sewer conduits and their flow line elevations in relation to mean sea level (msl). Based on the findings, it appeared that adjacent sewer conduits existed at elevations which, at times, have been near or below the elevation of the on-site groundwater. Cambria concluded that it is possible groundwater had previously flowed in the utility trench backfill material during periods of higher groundwater elevations. Conduit study results were reported in Cambria's November 30, 2000 Site Investigation Work Plan.

2001 Subsurface Investigation: In April 2001, Cambria advanced soil borings SB-A, SB-B, and SB-C and collected grab groundwater samples within the public right-of-way, downgradient of the site and across Bancroft Avenue. Groundwater was first encountered at approximately 14 fbg in boring SB-A and SB-B, which is deeper than the 7.28 to 9.07 fbg levels encountered during the March 2001 monitoring event. Groundwater was not encountered in boring SB-C to the total explored depth of 26 fbg. Groundwater samples were collected at 14 to 16 fbg in borings SB-A and SB-B. MTBE was only detected in soil sample SB-B-18.0 at a concentration of 0.055 mg/kg.

MTBE was detected only in groundwater sample SB-B-H2O at a concentration of 450 micrograms per liter ( $\mu$ g/l). Details of the well installations were reported in Cambria's August 6, 2001 Subsurface Investigation Report and Sampling Frequency Reduction Recommendation.

2001 Well Survey: In August 2001, Cambria performed a door-to-door well survey for properties within 500 feet downgradient of the site, including those northwest, west and southwest of the site. Cambria mailed questionnaires to property owners and followed up with a field reconnaissance of the survey area. Twenty-two of the 42 parcels provided well survey data. Based on the completed survey questionnaires, no water wells were identified within 500 feet downgradient of the site. Details of the well survey were reported in Cambria's September 25, 2001 Door-to-Door Well Survey Report.

2004 Irrigation Well Sampling: Cambria's September 25, 2001 Door-to-Door Well Survey Report identified one active irrigation well approximately 1,300 feet downgradient of the site. After several attempts by Shell and the ACHCSA to contact the property owner by mail, a response was received from Ms. Wanda Brooks, the contact for the property owner. When Cambria spoke with Ms. Brooks on October 7, 2004, she confirmed that the well was currently being used as a backyard irrigation well, that it was installed in 1980, and that it is approximately 50 feet deep. Ms. Brooks granted verbal permission for Shell to sample water from the well. At Shell's request, Cambria collected one water sample from this well and analyzed it for MTBE on November 10, 2004. MTBE was not detected.

2006 Subsurface Investigation: In a January 12, 2006 email to ACHCSA, Cambria requested that the site be reviewed for closure based on the low level to mostly non-detectable concentrations of chemicals of concern in the groundwater at the site at that time, and ACHCSA agreed in a response email. Closure of the site was subsequently discussed during a February 2, 2006 meeting with ACHCSA, at which time ACHCSA stated that additional information was necessary before the case could be reviewed for closure. Specifically, ACHCSA requested that Shell investigate the offsite extent of impacted groundwater downgradient of the site. Two offsite soil borings (SB-1 and SB-2) were drilled in July of 2006, but the collection of a groundwater sample from either of these two borings was unsuccessful due to lack of groundwater recharge in either boring. The field activities associated with these offsite borings was documented in Cambria's September 28, 2006 Subsurface Investigation Report, in which an argument was presented by Cambria that, because of attenuating concentrations of constituents in the groundwater onsite, further attempts to collect the offsite data was no longer warranted, and that the site should be reviewed for closure as a low risk fuel site.

Second Quarter 2007 Groundwater Monitoring Report: Case closure of this site was again discussed with ACHCSA during a meeting on March 29, 2007, during which ACHCSA indicated that the site would be reviewed for closure after receipt of the Second Quarter 2007 groundwater monitoring data, and that the groundwater monitoring program for the site could be discontinued after the Second Quarter 2007 event, while the site was being reviewed for closure. The Second Quarter 2007 groundwater monitoring data was presented to ACHCSA in CRA's August 16, 2007 Groundwater Monitoring Report — Second Quarter 2007 and Request for Closure Consideration, in which CRA requested that the site continue to be reviewed for closure as a low risk fuel site. ACHCSA responded to this request in an October 12, 2007 letter, in which ACHCSA noted that they had performed a complete review of all the information in the case files, but that further information was required regarding the former first generation UST's, and the extent of any contamination in the area of these former USTs, to complete the case closure review.

Historical Groundwater Monitoring Program: Quarterly groundwater monitoring has been performed at the site since January 1998, and as noted above, was discontinued after the Second Quarter 2007 groundwater monitoring event. Depth to water has ranged historically between 5.93 and 16.02 fbg, and the groundwater flow direction typically has a westerly flow.

During the Second Quarter 2007 monitoring and sampling event, with the exception of the 1,100 μg/l TPHg concentrations reported in well MW-5, all the analyzed constituents in all the wells were reported at either below detection limits or at very low concentrations. The 1,100 µg/l TPHg reported in MW-5 was an increase from the less than 50 µg/l reported in previous quarters in this well. The TPHg reported in this well also contained an associated laboratory note stating that the sample's chromatographic pattern for TPH did not match the chromatographic pattern of the specified standard and that quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard. In addition, the groundwater sample during the Second Quarter 2007 was analyzed for TPHg using EPA Method 8015B, and not EPA Method 8260B, which was the method historically used for TPHg analysis at this site. Because CRA's experience with the analysis of TPHg by the different EPA Methods referenced is that TPHg analyzed by EPA Method 8015B can tend to report higher concentrations than when analyzed by EPA Method 8260B, and because there was no associated increase in BTEX constituents reported, and the sample's chromatographic pattern for TPH did not match the chromatographic pattern of the specified standard, CRA concluded that the apparent increase in TPHg concentrations in well MW-5 during the Second Quarter 2007 was a reflection of the reporting of an unknown analyte in the groundwater and/or the analytical method performed, and not an actual increase in fuel product contaminant in the groundwater.

# Attachment B Permits



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

Application Approved on: 05/23/2008 By vickyh1 Permit Numbers: W2008-0294 Permits Valid from 06/05/2008 to 06/05/2008

City of Project Site: Oakland Application Id: 1211417737006

Site Location: 8930 Bancroft Avenue

Former Shell-branded station

Current 24-7 Gas-branded station

**Project Start Date:** 06/05/2008 Completion Date: 06/05/2008

Requested Inspection: 06/05/2008

Scheduled Inspection: 06/05/2008 at 1:00 PM (Contact your inspector, Vicky Hamlin at (510) 670-5443, to confirm.)

**Applicant:** Conestoga-Rovers & Associates - Carmen Phone: 510-420-3371

5900 Hollis St., Suite A, Emeryville, CA 94608

**Property Owner:** Sid Sidhn Phone: 510-366-5796

Sidhn Associates 8930 Bancroft Ave., Oakland, CA 94605

Phone: 707-865-0251 Client: Denis Brown

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

**Total Due:** \$200.00 Receipt Number: WR2008-0178 Total Amount Paid: \$200.00

Payer Name: Conestoga-Rovers & Paid By: CHECK **PAID IN FULL** 

**Associates** 

### **Works Requesting Permits:**

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

Driller: Gregg Drilling - Lic #: 485165 - Method: hstem Work Total: \$200.00

#### **Specifications**

Permit	Issued Dt	Expire Dt	#	Hole Diam	Max Depth
Number			Boreholes		
W2008-	05/23/2008	09/03/2008	3	8.00 in.	15.00 ft
0294					

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

- 1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
- 2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
- 3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 4. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

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



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

Application Approved on: 05/23/2008 By vickyh1 Permit Numbers: W2008-0294
Permits Valid from 06/06/2008 to 06/06/2008

Application Id: 1211417737006 City of Project Site:Oakland

Site Location: 8930 Bancroft Avenue

Former Shell-branded station
Current 24-7 Gas-branded station

Project Start Date: 06/05/2008 Completion Date:06/05/2008

Requested Inspection: 06/05/2008

Scheduled Inspection: 06/05/2008 at 1:00 PM (Contact your inspector, Vicky Hamlin at (510) 670-5443, to confirm.)

Extension Start Date: 06/06/2008 Extension End Date: 06/06/2008

Extension Count: 1 Extended By: vickyh1

Applicant: Conestoga-Rovers & Associates - Carmen Phone: 510-420-3371

Rodriguez

5900 Hollis St., Suite A, Emeryville, CA 94608

Property Owner: Sid Sidhn Phone: 510-366-5796

Sidhn Associates 8930 Bancroft Ave., Oakland, CA 94605

Client: Denis Brown Phone: 707-865-0251

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

Total Due: \$200.00

Receipt Number: WR2008-0178 Total Amount Paid: \$200.00

Payer Name : Conestoga-Rovers & Paid By: CHECK PAID IN FULL

**Associates** 

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

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

Driller: Gregg Drilling - Lic #: 485165 - Method: hstem Work Total: \$200.00

#### **Specifications**

 Permit
 Issued Dt
 Expire Dt
 #
 Hole Diam
 Max Depth

 Number
 Boreholes

 W2008 05/23/2008
 09/03/2008
 3
 8.00 in.
 15.00 ft

 0294

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

- 1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
- 2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
- 3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 4. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five

- (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
- 5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
- 6. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
- 7. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

# Attachment C Boring Logs

## **BORING/WELL LOG**



Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476 Telephone: 707-935-4850 Fax: 707-935-6649

CLIENT NAME _	Shell Oil Products US	BORING/WELL NAME TB-1		
JOB/SITE NAME _	Former Shell service station	DRILLING STARTED 05-Jun-08		
LOCATION _	8930 Bancroft Avenue, Oakland, California	DRILLING COMPLETED05-Jun-08		
PROJECT NUMBER _	241408	WELL DEVELOPMENT DATE (YIELD)	NA	
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA	_
DRILLING METHOD _	Hydraulic push	TOP OF CASING ELEVATION NA		
BORING DIAMETER _	3"	SCREENED INTERVAL NA		
LOGGED BY	C. Rodriquez	DEPTH TO WATER (First Encountered)	NA	$\nabla$
REVIEWED BY	A. Friel, PG 6452	DEPTH TO WATER (Static)	NA	Y
REMARKS		, ,		_

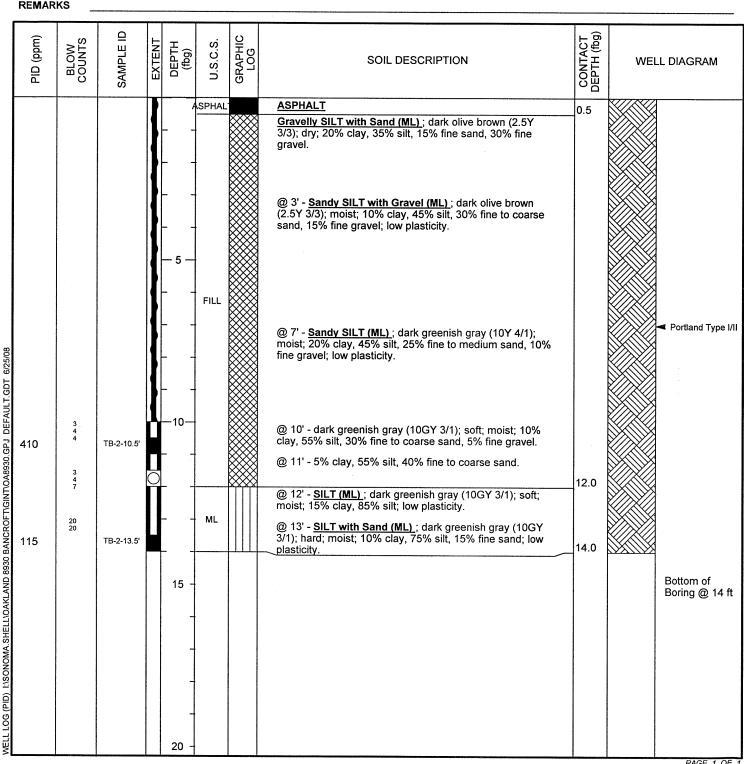
CONTACT DEPTH (fbg) GRAPHIC LOG PID (ppm) BLOW U.S.C.S. DEPTH (fbg) SAMPLE EXTENT SOIL DESCRIPTION WELL DIAGRAM <u>ASPHALT</u> ASPHAL 0.6 SILT with Sand (ML); dark yellowish brown (10YR 4/4); dry; 5% clay, 70% silt, 20% fine sand, 5% fine gravel; low plasticity. @ 0.8' - <u>SILT (ML)</u>; very dark brown (10YR 2/2); dry; 20% clay, 80% silt; low plasticity. Portland Type I/II ML WELL LOG (PID) I:\SONOMA.SHELL\OAKLAND 8930 BANCROFT\GINT\OA8930.GPJ DEFAULT.GDT 6/25/08 @ 10' - <u>SILT with Sand (ML)</u>; dark olive brown (2.5Y 3/3); firm; dry; 20% clay, 65% silt, 15% fine sand; low TB-1-10.5' @ 10.5' - <u>SILT (ML)</u>; dark olive gray (5Y 3/2); firm; dry; 25% clay, 65% silt, 5% fine sand, 5% fine gravel; low plasticity. @ 12' - dark yellowish brown (10YR 4/4); firm; dry; 20% clay, 70% silt, 10% fine sand. @ 12.5' - olive (5Y 4/3). TB-1-12.5' 13.0 Bottom of Boring @ 13 ft 15 20

## **BORING/WELL LOG**



Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476 Telephone: 707-935-4850 Fax: 707-935-6649

CLIENT NAME	Shell Oil Products US	BORING/WELL NAME TB-2	
JOB/SITE NAME	Former Shell service station	DRILLING STARTED 05-Jun-08	
LOCATION	8930 Bancroft Avenue, Oakland, California	DRILLING COMPLETED05-Jun-08	
PROJECT NUMBER	241408	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION _	NA
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION NA	
BORING DIAMETER _	3"	SCREENED INTERVAL NA	
LOGGED BY	C. Rodriquez	DEPTH TO WATER (First Encountered	) NA 🗸
REVIEWED BY	A. Friel, PG 6452	DEPTH TO WATER (Static)	NA ¥
		• • •	



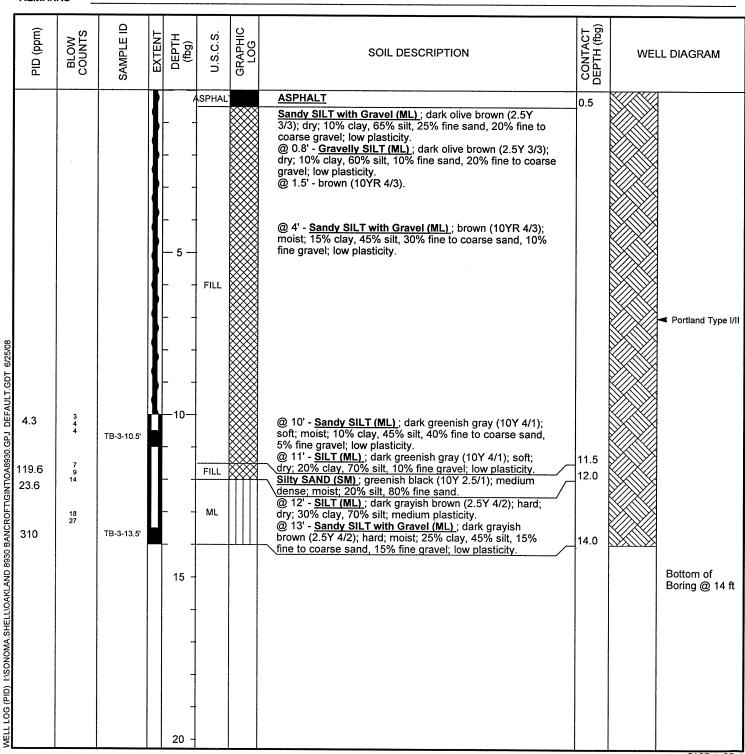
## **BORING/WELL LOG**



Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476 Telephone: 707-935-4850

Fax: 707-935-6649

CLIENT NAME _	Shell Oil Products US	BORING/WELL NAME TB-3	
JOB/SITE NAME _	Former Shell service station	DRILLING STARTED 05-Jun-08	
LOCATION _	8930 Bancroft Avenue, Oakland, California	DRILLING COMPLETED05-Jun-08	
PROJECT NUMBER _	241408	WELL DEVELOPMENT DATE (YIELD) NA	_
DRILLER _	Gregg Drilling	GROUND SURFACE ELEVATION NA	_
DRILLING METHOD _	Hydraulic push	TOP OF CASING ELEVATION NA	
BORING DIAMETER _	3"	SCREENED INTERVAL NA	
LOGGED BY	C. Rodriquez	DEPTH TO WATER (First Encountered) NA	$\overline{\nabla}$
REVIEWED BY	A. Friel, PG 6452	DEPTH TO WATER (Static) NA	Ī
REMARKS			_



# Attachment D Waste Disposal Documentation





June 19, 2008

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

Subject: **Calscience Work Order No.:** 08-06-0809

> Client Reference: 8930 Bancroft Ave., Oakland, CA

### Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/10/2008 and analyzed in accordance with the attached chain-of-custody.

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

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

Sincerely,

Calscience Environmental Laboratories, Inc.

Jessie Kim **Project Manager** 





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

Date Received: Work Order No:

06/10/08 08-06-0809

Preparation: Method:

Units:

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

mg/kg

Project: 8930 Bancroft Ave., Oakland, CA

Page 1 of 1

Client Sample Nu	mber		Lab Sample Number		Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Ba	itch ID
D-10			08-06-0809-	1-A	06/05/08 17:30	Solid	ICP 5300	06/12/08	06/13/08 21:20	08061	2L03
Comment(s):	-Mercury was analyze	d on 6/13/2008 1	12:25:37 PM witl	h batch (	080612L04						
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>	Qual
Antimony	ND	0.750	1		Mercury		ND	0.083	35	1	
Arsenic	8.69	0.750	1		Molybdenum		ND	0.250	)	1	
Barium	142	0.500	1		Nickel		41.3	0.250	)	1	
Beryllium	0.369	0.250	1		Selenium		ND	0.750	)	1	
Cadmium	0.597	0.500	1		Silver		ND	0.250	)	1	
Chromium	29.8	0.250	1		Thallium		ND	0.750	)	1	
Cobalt	8.23	0.250	1		Vanadium		31.3	0.250	)	1	
Copper	21.8	0.500	1		Zinc		67.9	1.00		1	
Lead	29.8	0.500	1								
Method Blank			099-04-007-	5,581	N/A	Solid	Mercury	06/12/08	06/13/08 12:50	08061	2L04
Parameter	Result	RL	DF	Qual							
	ND	0.0835	<u> </u>	Quai							
Mercury	ND	0.0033	<u>'</u>								
Method Blank			097-01-002-	11,080	N/A	Solid	ICP 5300	06/12/08	06/12/08 16:35	08061	2L03
Parameter Parameter	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>		Result	<u>RL</u>		<u>DF</u>	<u>Qual</u>
<u> </u>	ND	0.750	<u> </u>	Quai			ND	0.500	,	1	Qual
Antimony Arsenic	ND ND	0.750	1		Lead Molybdenum		ND ND	0.300		1	
Barium	ND	0.500	1		Nickel		ND	0.250		1	
Beryllium	ND	0.250	1		Selenium		ND	0.250		1	
Cadmium	ND	0.500	1		Silver		ND	0.750		1	
Chromium	ND	0.250	1		Thallium		ND	0.750		1	
Cobalt	ND	0.250	1		Vanadium		ND	0.250		1	

Zinc

Copper

ND

0.500

ND

1.00





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

Date Received: Work Order No: Preparation: Method:

08-06-0809 **EPA 3550B EPA 8015B** 

06/10/08

Project: 8930 Bancroft Ave., Oakland, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-10	08-06-0809-1-A	06/05/08 17:30	Solid	GC 46	06/13/08	06/14/08 11:12	080613B10

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

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

<u>Parameter</u> Result **Units** 2100 50 **Diesel Range Organics** 250 mg/kg

**REC (%) Control Limits** Surrogates: Qual

61-145 Decachlorobiphenyl 127

Method Blank		099-12-025-318	N/A	Solid	GC 46	06/13/08	06/14/08 01:15	080613B10
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
Diesel Range Organics	ND	5.0	1		mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	81	61-145						





Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: 06/10/08 08-06-0809 EPA 3550B EPA 8015B (M)

Project: 8930 Bancroft Ave., Oakland, CA

Page 1 of 1

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Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-10		08-06-0809-1-A	06/05/08 17:30	Solid	GC 45	06/13/08	06/14/08 11:12	080613B14
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
TPH as Motor Oil	10000	1200	50		mg/kg			
Surrogates:	REC (%)	Control Limits		Qual				
Decachlorobiphenyl	127	61-145						
Method Blank		099-12-254-475	N/A	Solid	GC 45	06/13/08	06/14/08 04:36	080613B14
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
TPH as Motor Oil	ND	25	1		mg/kg			
Surrogates:	<u>REC (%)</u>	Control Limits		Qual				
Decachlorobiphenyl	90	61-145						





Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: 06/10/08 08-06-0809 DHS LUFT DHS LUFT

Project: 8930 Bancroft Ave., Oakland, CA

Page 1 of 1

	,							9
Client Sample Number		Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-10		08-06-0809-1-A	06/05/08 17:30	Solid	FLAA	06/16/08	06/16/08 20:16	080616L05
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>			
Organic Lead	ND	1.00	1		mg/kg			
Method Blank		099-10-020-918	N/A	Solid	FLAA	06/16/08	06/16/08 20:16	080616L05
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>			
Organic Lead	ND	1.00	1		mg/kg			

06/10/08

08-06-0809



## **Analytical Report**



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

Date Received: Work Order No: Preparation:

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

Method: Units: mg/kg

Page 1 of 1

Project: 8930 Bancroft Ave., Oakland, CA Page 1 of 1											
Client Sample Number				ib Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Tim d Analyze	,	QC Batch ID
D-10			08-06-	0809-1-A	06/05/08 17:30	Solid	GC/MS R	06/17/08	06/17/08 20:26	3 (	080617L01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
TPPH	ND	0.50	1		Toluene			ND	0.0050	1	
Benzene	ND	0.0050	1		p/m-Xylene			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		o-Xylene			ND	0.0050	1	
Surrogates:	REC (%)	Control		Qual	Surrogates:			REC (%)	<u>Control</u>		<u>Qual</u>
1.4 Dromoflyorobonzono	00	<u>Limits</u>			1.4 Dramafluo	rohonzono Ti	DDLI	0.4	<u>Limits</u>		
1,4-Bromofluorobenzene	92	70-130			1,4-Bromofluoi	robenzene- i	РРП	94	70-130		
Method Blank			099-12	-717-69	N/A	Solid	GC/MS R	06/17/08	06/17/08 16:53	3 (	080617L01
<u>Parameter</u>	Result	RL	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	Qual
TPPH	ND	0.50	1		Toluene			ND	0.0050	1	
Benzene	ND	0.0050	1		p/m-Xylene			ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		o-Xylene			ND	0.0050	1	
Surrogates:	REC (%)	Control		Qual	Surrogates:			REC (%)	Control		Qual
1,4-Bromofluorobenzene	99	<u>Limits</u> 70-130			1,4-Bromofluoi	robenzene-T	PPH	101	<u>Limits</u> 70-130		



DF - Dilution Factor





Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: 06/10/08 08-06-0809 EPA 3050B EPA 6010B

## Project 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number	
08-06-0298-1	Solid	ICP 5300	06/12/08		06/12/08	080612S03	
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	<u>Qualifiers</u>	
	_	4.0					
Antimony	7	10	50-115	36	0-20	3,4	
Arsenic	97	97	75-125	0	0-20		
Barium	4X	4X	75-125	4X	0-20	Q	
Beryllium	102	104	75-125	2	0-20		
Cadmium	103	103	75-125	0	0-20		
Chromium	97	100	75-125	1	0-20		
Cobalt	103	104	75-125	1	0-20		
Copper	105	108	75-125	1	0-20		
Lead	103	101	75-125	1	0-20		
Molybdenum	84	86	75-125	2	0-20		
Nickel	96	100	75-125	1	0-20		
Selenium	77	75	75-125	2	0-20		
Silver	100	101	75-125	2	0-20		
Thallium	101	101	75-125	0	0-20		
Vanadium	92	101	75-125	3	0-20		
Zinc	91	94	75-125	1	0-20		



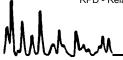




Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: 06/10/08 08-06-0809 EPA 3550B EPA 8015B

## Project 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-06-1138-5	Solid	GC 46	06/13/08	06/14/08	080613S10
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD RPD CL	Qualifiers
Diesel Range Organics	77	80	64-130	4 0-15	



RPD - Relative Percent Difference , CL - Control Limit

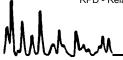




Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: 06/10/08 08-06-0809 EPA 3550B EPA 8015B (M)

## Project 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed		MS/MSD Batch Number
08-06-1233-25	Solid GC 45		06/13/08 06/14/08		/14/08	080613S14
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	Qualifiers
TPH as Motor Oil	90	77	64-130	16	0-15	4



RPD - Relative Percent Difference , CL - Control Limit





Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: 06/10/08 08-06-0809 DHS LUFT DHS LUFT

## Project 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-06-1477-1	Solid	FLAA	06/16/08	06/16/08	080616S05
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD RPD CL	Qualifiers
Organic Lead	83	83	22-148	0 0-18	

MMM\_

RPD - Relative Percent Difference , CL - Control Limit



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



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

Date Received: Work Order No: Preparation: Method: 06/10/08 08-06-0809 EPA 7471A Total EPA 7471A

#### Project 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed		MS/MSD Batch Number
08-06-0838-1	Solid	Mercury	06/12/08	06/13/08	3	080612S04
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD F	RPD CL	Qualifiers
Mercury	97	98	84-138	1	0-7	

RPD - Relative Percent Difference ,
7440 Lincoln

e, CL - Control Limit



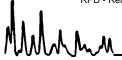
#### **Quality Control - Spike/Spike Duplicate**



Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: 06/10/08 08-06-0809 EPA 5030B LUFT GC/MS / EPA 8260B

Project 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
08-06-1430-1	Solid	GC/MS R	06/17/08		06/17/08	080617S01
						_
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	81	77	70-130	4	0-30	
Ethylbenzene	92	88	70-130	5	0-30	
Toluene	89	83	70-130	7	0-30	
p/m-Xylene	97	92	70-130	5	0-30	
o-Xylene	96	91	70-130	5	0-30	
Methyl-t-Butyl Ether (MTBE)	109	105	70-130	3	0-30	
Tert-Butyl Alcohol (TBA)	90	87	70-130	3	0-30	
Diisopropyl Ether (DIPE)	97	92	70-130	6	0-30	
Ethyl-t-Butyl Ether (ETBE)	103	98	70-130	6	0-30	
Tert-Amyl-Methyl Ether (TAME)	100	95	70-130	6	0-30	
Ethanol	75	74	70-130	1	0-30	







Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: N/A 08-06-0809 EPA 3050B EPA 6010B

Project: 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		ate lyzed	LCS/LCSD Bate Number	ch
097-01-002-11,080	Solid	ICP 5300	06/12/08	06/12	2/08	080612L03	
<u>Parameter</u>	LCS %	REC LCSD	%REC %	REC CL	<u>RPD</u>	RPD CL	Qualifiers
Antimony	113	113	}	80-120	0	0-20	
Arsenic	109	110	)	80-120	0	0-20	
Barium	113	114		80-120	0	0-20	
Beryllium	107	107	,	80-120	0	0-20	
Cadmium	114	114		80-120	0	0-20	
Chromium	109	110	)	80-120	0	0-20	
Cobalt	115	115	;	80-120	0	0-20	
Copper	113	113	}	80-120	0	0-20	
Lead	116	117	•	80-120	0	0-20	
Molybdenum	113	113	}	80-120	0	0-20	
Nickel	118	119	)	80-120	0	0-20	
Selenium	106	105	;	80-120	1	0-20	
Silver	106	107	•	80-120	0	0-20	
Thallium	114	115	i	80-120	1	0-20	
Vanadium	109	109	)	80-120	0	0-20	
Zinc	112	112	!	80-120	0	0-20	





Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: N/A 08-06-0809 EPA 3550B EPA 8015B

Project: 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da <sup>·</sup> Analy		LCS/LCSD Batc Number	h
099-12-025-318	Solid	GC 46	06/13/08	06/14	/08	080613B10	
<u>Parameter</u>	LCS %	6REC LCSD	%REC	%REC CL	RPD	RPD CL	Qualifiers
Diesel Range Organics	77	80		75-123	5	0-12	

RPD - Rel





Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method:

08-06-0809 EPA 3550B EPA 8015B (M)

N/A

Project: 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Da I Analy		LCS/LCSD Batc Number	h
099-12-254-475	Solid	GC 45	06/13/08	06/14	/08	080613B14	
<u>Parameter</u>	LCS %	6REC LCSD	%REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	77	77		75-123	0	0-12	

RPD - Rel

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



Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method:

08-06-0809 DHS LUFT DHS LUFT

Project: 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument Date Analyzed		Instrument Date Analyzed Lab File ID		CS Batch Number
099-10-020-918	Solid	FLAA	06/16/08			080616L05
<u>Parameter</u>		Conc Added	Conc Recovered	LCS %Rec	%Rec CL	Qualifiers
Organic Lead		25.0	24.1	96	72-126	

RPD - Relative Percent Difference ,
7440 Lincoln

CL - Control Limit





Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: N/A 08-06-0809 EPA 7471A Total EPA 7471A

Project: 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Dat Analy		LCS/LCSD Batc Number	h
099-04-007-5,581	Solid	Mercury	06/12/08	06/13	/08	080612L04	
<u>Parameter</u>	LCS %	6REC LCSD	%REC %	REC CL	RPD	RPD CL	Qualifiers
Mercury	101	102		87-117	1	0-3	

MMM\_

RPD - Relative Percent Difference , CL - Control Limit



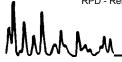


Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: N/A 08-06-0809 EPA 5030B

LUFT GC/MS / EPA 8260B

Project: 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Bate Number	ch
099-12-717-69	Solid	GC/MS R	06/17/08	06/17/08	080617L01	
						_
<u>Parameter</u>	LCS %RE	EC LCSD %	REC %R	EC CL RPD	RPD CL	Qualifiers
TPPH	78	80	6:	5-135 1	0-30	
Benzene	81	82	7	0-130 1	0-30	
Ethylbenzene	86	88	7	0-130 2	0-30	
Toluene	87	87	7	0-130 1	0-30	
p/m-Xylene	90	91	7	0-130 1	0-30	
o-Xylene	89	91	7	0-130 2	0-30	
Methyl-t-Butyl Ether (MTBE)	102	103	7	0-130 0	0-30	
Tert-Butyl Alcohol (TBA)	91	87	7	0-130 4	0-30	
Diisopropyl Ether (DIPE)	95	94	7	0-130 0	0-30	
Ethyl-t-Butyl Ether (ETBE)	103	96	7	0-130 7	0-30	
Tert-Amyl-Methyl Ether (TAME)	98	98	7	0-130 0	0-30	
Ethanol	79	74	7	0-130 7	0-30	





# **Glossary of Terms and Qualifiers**



Work Order Number: 08-06-0809

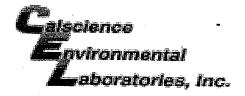
Qualifier	<u>Definition</u>
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.



# **Contingent analyses**

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

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



WORK ORDER #: **08** - 0 6 - 0 8 0 9

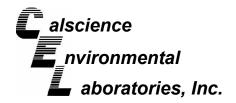
Cooler \_\_\_\_\_ of \_\_\_\_





# **SAMPLE RECEIPT FORM**

CLIENT: CRA	DATE: 6/10/08
TEMPERATURE - SAMPLES RECEIVED BY:	
CALSCIENCE COURIER:  Chilled, cooler with temperature blank provided. Chilled, cooler without temperature blank. Chilled and placed in cooler with wet ice. Ambient and placed in cooler with wet ice. Ambient temperature (For Air & Filter Only).  C Temperature blank.	LABORATORY (Other than Calscience Courier):  3
CUSTODY SEAL INTACT:	
Sample(s): Cooler: No (Not I	ntact) : Not Present:
SAMPLE CONDITION:	<i>V V</i>
Chain-Of-Custody document(s) received with samples  Sampler's name indicated on COC  Sample container label(s) consistent with custody papers  Sample container(s) intact and good condition  Correct containers and volume for analyses requested  Proper preservation noted on sample label(s)  VOA vial(s) free of headspace.  Tedlar bag(s) free of condensation	
COMMENTS:	





June 26, 2008

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

Subject: **Calscience Work Order No.:** 08-06-1927

> Client Reference: 8930 Bancroft Ave., Oakland, CA

#### Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/20/2008 and analyzed in accordance with the attached chain-of-custody.

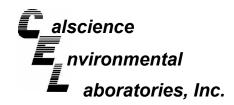
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows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

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

Sincerely,

Calscience Environmental Laboratories, Inc.

Jessie Kim **Project Manager** 



#### **Analytical Report**



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

Date Received: Work Order No: Preparation: Method:

06/20/08 08-06-1927 N/A

CA F&G

Project: 8930 Bancroft Ave., Oakland, CA

Fathead Minnow (Pimephales Promelas)

Mean Length:

Mean Weight: 43 mm

Page 1 of 1

Sample Collected: **Test Start:** 

**Residual Chlorine:** 

pH:

**Test Species:** 

06/18/08 14:30:00 06/20/08 12:00:00

Sample Received: Test End:

06/20/08 10:00:00 06/24/08 12:00:00

**Initial Water Quality Parameters** 

Temperature: Conductivity: 20

umhos/cm 890

mg/L

Dissolved Oxygen (D.O.): Hardness:

7.92 units 7.13 mg/L 40 mg/L

0.01 mg/L

Alkalinity: Ammonia: 196

N/A

Sample Preparation

The sample was adjusted to test temperature.

#### **Sample Adjustment During Analysis**

No Supplemental Aeration needed.

If needed, supplemental aeration to maintain required Dissolved Oxygen level is supplied via a low pressure oil-free pump connected to individual lines for each tank/chamber from a common manifold. Individual valves at each tank/chamber control the flow rate as required.

Client Sample Number		Lab Sample Number	Date Collected	Matrix	Date Prepared	Date/Time Analyzed	QC Batch ID
D-10		08-06-1927-1-A	06/18/08	Solid	06/20/08	06/24/08 12:00:00	
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>		
Bioassay 750 mg/L (% Mortality)	0	0	1		%		
Bioassay 250 mg/L (% Mortality)	0	0	1		%		

#### **Laboratory Notes**

Sample was received within recommended holding time.

All testing was within method protocol.

DF - Dilution Factor , RL - Reporting Limit ,

Qual - Qualifiers



# **Glossary of Terms and Qualifiers**



Work Order Number: 08-06-1927

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Shell Oil Products Chain Of Custody Record LAB (LOCATION) INCIDENT # (ENV SERVICES) CHECK IF NO INCIDENT # APPLIES ☑ CALSCIENCE (\_\_\_ Print Bill To Contact Name: Please Check Appropriate Box: SPL (\_\_\_ SHELL RETAIL ☑ ENV. SERVICES ☐ MOTIVA RETAIL DATE: 6/18/2008 Denis Brown XENCO ( LUBES MOTIVA SD&CM CONSULTANT SAP# PO # TEST AMERICA ( PAGE: \_\_\_1\_\_\_ of \_\_\_\_1\_ SHELL PIPELINE OTHER OTHER ( CRAW 8930 Bancroft Ave, Oakland Conestoga-Rovers & Associates CONSULTANT PROJECT NO .: EDF DELIVERABLE TO (Name, Company, Office Location): 19449 Riverside Drive, Suite 230, Sonoma, California 95476 sonomaedf@craworld.com 241408-2008-7 707-935-4850 Felicia Ballard, CRA, Sonoma PROJECT CONTACT (Hardcopy or PDF Report to): LAB USE ONLY Dennis Baertschi TELEPHONE: E-MAIL: Carmen Rodriguez 707-268-3813 707-268-8180 dbaertschi@craworld.com TURNAROUND TIME (CALENDAR DAYS): RESULTS NEEDED REQUESTED ANALYSIS ☐ 3 DAYS 2 DAYS 24 HOURS STANDARD (14 DAY) 5 DAYS ON WEEKEND ☐ UST AGENCY: TEMPERATURE ON RECEIPT LA - RWQCB REPORT FORMAT (6010) ☑ SHELL CONTRACT RATE APPLIES TPH - Extractable (8015M) SPECIAL INSTRUCTIONS OR NOTES: ☐ STATE REIMBURSEMENT RATE APPLIES Total 5 Oxygenates (8260B) cc: Kari Dupler, kdupler@craworld.com ☐ EDD NOT NEEDED TPH - MO (8015M) Methanol (8015M) ☑ RECEIPT VERIFICATION REQUESTED 1,2 DCA (8260B) Ethanol (8260B) SVOCs (8270C) Fish Bioassay BTEX (8260B) MTBE (8260B) TAME (8260B) ETBE (8260B) DIPE (8260B) EDB (8260B) PCBs (8082) TBA (8260B) VOCs (8260) SAMPLING PRESERVATIVE NO. OF **Container PID Readings** MATRIX **Field Sample Identification** CONT or Laboratory Notes HNO3 H2SO4 NONE OTHER ONLY D-10

50981747

Page 4 of 5



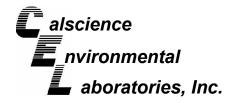
WORK ORDER #: **08** - **0** 6 - **1** 9 2 7

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

# **SAMPLE RECEIPT FORM**

CLIENT: CKA	DATE: 6/20/08
TEMPERATURE - SAMPLES RECEIVED BY:	
CALSCIENCE COURIER:  Chilled, cooler with temperature blank provided.  Chilled, cooler without temperature blank.  Chilled and placed in cooler with wet ice.  Ambient and placed in cooler with wet ice.  Ambient temperature (For Air & Filter only).  CTemperature blank.	LABORATORY (Other than Calscience Courier): ° C Temperature blank° C IR thermometer Ambient temperature (For Air & Filter only).  Initial:
CUSTODY SEAL INTACT:	
Sample(s): Cooler: No (Not I	ntact) : Not Present:
SAMPLE CONDITION:	
Chain-Of-Custody document(s) received with samples	
COMMENTS:	

# Attachment E Certified Analytical Reports





June 20, 2008

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

Subject: Calscience Work Order No.: 08-06-0810

Client Reference: 8930 Bancroft Ave., Oakland, CA

#### Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/10/2008 and analyzed in accordance with the attached chain-of-custody.

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

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

Sincerely,

Calscience Environmental Laboratories, Inc.

Jessie Kim Project Manager

06/10/08

08-06-0810



#### **Analytical Report**



Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received:
Work Order No:
Preparation:

Preparation: EPA 5030B Method: LUFT GC/MS / EPA 8260B

Units: mg/kg

Project: 8930 Bancroft Ave., Oakland, CA Page 1 of 3

		•									
Client Sample Number				ib Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Ti I Analyz		QC Batch ID
TB-1-10.5			08-06-0	0810-1-A	06/05/08 10:05	Solid	GC/MS LL	06/13/08	06/14/0 02:34		080613L02
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
TPPH	ND	0.50	1		Methyl-t-Butyl	Ether (MTB	E)	ND	0.0050	1	
Benzene	ND	0.0050	1		Tert-Butyl Alco	hol (TBA)		ND	0.050	1	
Ethylbenzene	ND	0.0050	1		Diisopropyl Eth	ner (DIPE)		ND	0.010	1	
Toluene	ND	0.0050	1		Ethyl-t-Butyl Et	ther (ETBE	)	ND	0.010	1	
p/m-Xylene	ND	0.0050	1		Tert-Amyl-Met	hyl Ether (T	AME)	ND	0.010	1	
o-Xylene	ND	0.0050	1		-						
Surrogates:	<u>REC (%)</u>	Control Limits		Qual	Surrogates:			REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	99	70-130			1,4-Bromofluoi	robenzene-	ГРРН	99	70-130		
TB-1-12.5			08-06-6	0810-2-A	06/05/08 10:10	Solid	GC/MS LL	06/13/08	06/14/0 03:46		080613L02
<u>Parameter</u>	Result	RL	<u>DF</u>	Qual	<u>Parameter</u>			Result	RL	DF	Qual
TPPH	ND	0.50	1		Methyl-t-Butyl	Ether (MTB	E)	ND	0.0050	1	
Benzene	ND	0.0050	1		Tert-Butyl Alco	•	,	ND	0.050	1	
Ethylbenzene	ND	0.0050	1		Diisopropyl Eth	` ,		ND	0.010	1	
Toluene	ND	0.0050	1		Ethyl-t-Butyl Et	` ,	)	ND	0.010	1	
p/m-Xylene	ND	0.0050	1		Tert-Amyl-Met	hvl Ether (T	AME)	ND	0.010	1	
o-Xylene	ND	0.0050	1		,	, , , ,	,		5.5.5		
Surrogates:	REC (%)	Control	•	Qual	Surrogates:			REC (%)	Control		Qual
		Limits							Limits		
1,4-Bromofluorobenzene	101	70-130			1,4-Bromofluoi	robenzene-	ГРРН	101	70-130		
TB-2-10.5			08-06-6	0810-3-A	06/05/08 15:35	Solid	GC/MS R	06/14/08	06/15/0 07:20		080614L04
Danamatan	D"	DI.	D.F.	0	Danamatan			D#	DI	5-	01
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>			<u>Result</u>	<u>RL</u>	DF	<u>Qual</u>
TPPH	310	50	100		Methyl-t-Butyl	•	E)	ND	0.50	100	
Benzene	ND	0.50	100		Tert-Butyl Alco	,		ND	5.0	100	
Ethylbenzene	ND	0.50	100		Diisopropyl Eth	` ,		ND	1.0	100	
Toluene	ND	0.50	100		Ethyl-t-Butyl Et		,	ND	1.0	100	
p/m-Xylene	ND	0.50	100		Tert-Amyl-Met	hyl Ether (T	AME)	ND	1.0	100	)
o-Xylene	ND	0.50	100								
Surrogates:	<u>REC (%)</u>	Control Limits		Qual	Surrogates:			REC (%)	Control Limits		<u>Qual</u>
1,4-Bromofluorobenzene	105	70-130			1,4-Bromofluoi	robenzene-	ГРРН	106	70-130		

Mullin

DF - Dilution Factor , Qual - Qualifiers

06/10/08



#### **Analytical Report**



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

Date Received: Work Order No: 08-06-0810 Preparation: **EPA 5030B** 

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

Page 2 of 3 Project: 8930 Bancroft Ave., Oakland, CA

Client Sample Number				b Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Ti I Analyz		QC Batch ID
TB-2-13.5			08-06-0	0810-4-A	06/05/08 15:40	Solid	GC/MS R	06/14/08	06/15/ 06:50		080614L04
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>
TPPH	52	12	25		Methyl-t-Butyl I	Ether (MTB	E)	ND	0.12	25	
Benzene	ND	0.12	25		Tert-Butyl Alco	hol (TBA)		ND	1.2	25	
Ethylbenzene	ND	0.12	25		Diisopropyl Eth	ner (DIPE)		ND	0.25	25	
Toluene	ND	0.12	25		Ethyl-t-Butyl Et	ther (ETBE	)	ND	0.25	25	
p/m-Xylene	ND	0.12	25		Tert-Amyl-Metl	nyl Ether (T	AME)	ND	0.25	25	
o-Xylene	ND	0.12	25								
Surrogates:	REC (%)	Control		Qual	Surrogates:			REC (%)	Control		<u>Qual</u>
1.4-Bromofluorobenzene	111	<u>Limits</u> 70-130			1,4-Bromofluor	obenzene-	ГРРН	110	<u>Limits</u> 70-130		
TB-3-10.5			08-06-0	0810-5-A	06/06/08	Solid	GC/MS R	-	06/15/		080614L04
					10:25				06:19	•	
Parameter	Result	RL	<u>DF</u>	Qual	Parameter			Result	<u>RL</u>	DF	Qual
TPPH	440	50	100		Methyl-t-Butyl I	Ether (MTR	E)	ND	0.50	100	<del></del>
Benzene	ND	0.50	100		Tert-Butyl Alco	,	<b>L</b> )	ND	5.0	100	
Ethylbenzene	ND	0.50	100		Diisopropyl Eth	,		ND	1.0	100	
Toluene	ND	0.50	100		Ethyl-t-Butyl Et	` ,	)	ND	1.0	100	
p/m-Xylene	ND	0.50	100		Tert-Amyl-Meti	•	,	ND	1.0	100	
o-Xylene	ND	0.50	100		Tore 7 arriyi Wood	iyi Ediloi (i	/ uvi_)	ND	1.0	100	,
Surrogates:	REC (%)	Control	100	Qual	Surrogates:			REC (%)	Control		Qual
<u>ourrogates.</u>	<u>IXEO (70)</u>	Limits		Quai	Ourrogates.			IXEO (70)	Limits		Quai
1,4-Bromofluorobenzene	108	70-130			1,4-Bromofluor	obenzene-	ГРРН	108	70-130		
TB-3-13.5			08-06-0	0810-6-A	06/06/08 10:30	Solid	GC/MS LL	06/13/08	06/14/ 04:1		080613L02
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Parameter</u>			Result	<u>RL</u>	DF	<u>Qual</u>
TPPH	5.4	0.50	1		Methyl-t-Butyl I	Ether (MTB	E)	ND	0.0050	1	
Benzene	ND	0.0050	1		Tert-Butyl Alco	hol (TBA)	•	ND	0.050	1	
Ethylbenzene	ND	0.0050	1		Diisopropyl Eth	ner (DIPE)		ND	0.010	1	
Toluene	ND	0.0050	1		Ethyl-t-Butyl Et	her (ETBE	)	ND	0.010	1	
p/m-Xylene	ND	0.0050	1		Tert-Amyl-Metl	nyl Ether (T	AME)	ND	0.010	1	
o-Xylene	ND	0.0050	1		Í	. `	•			-	
Surrogates:	REC (%)	Control	•	Qual	Surrogates:			REC (%)	Control		<u>Qual</u>
1,4-Bromofluorobenzene	110	<u>Limits</u> 70-130			1,4-Bromofluor	obenzene-	ГРРН	109	<u>Limits</u> 70-130		

DF - Dilution Factor

Qual - Qualifiers



#### **Analytical Report**



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

Date Received: Work Order No: Preparation:

06/10/08 08-06-0810

Method: Units:

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

mg/kg

Project: 8930 Bancroft Ave., Oakland, CA

Page 3 of 3

Client Sample Number				ıb Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Tii I Analyze		QC Batch ID
Method Blank			099-12	-717-62	N/A	Solid	GC/MS LL	. 06/13/08	06/14/0 02:10		080613L02
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Parameter</u>			Result	<u>RL</u>	DF	Qual
TPPH	ND	0.50	1		Methyl-t-Butyl I	Ether (MTB	E)	ND	0.0050	1	
Benzene	ND	0.0050	1		Tert-Butyl Alco	hol (TBA)		ND	0.050	1	
Ethylbenzene	ND	0.0050	1		Diisopropyl Eth			ND	0.010	1	
Toluene	ND	0.0050	1		Ethyl-t-Butyl Et	her (ETBE	)	ND	0.010	1	
p/m-Xylene	ND	0.0050	1		Tert-Amyl-Meth	nyl Ether (T	AME)	ND	0.010	1	
o-Xylene	ND	0.0050	1								
Surrogates:	REC (%)	Control		<u>Qual</u>	Surrogates:			<u>REC (%)</u>	<u>Control</u>		<u>Qual</u>
1,4-Bromofluorobenzene	100	<u>Limits</u> 70-130			1,4-Bromofluor	obenzene-	ТРРН	100	<u>Limits</u> 70-130		
Method Blank			099-12	-717-67	N/A	Solid	GC/MS R	06/14/08	06/15/0 05:49	-	080614L04
Parameter	Result	RL	DF	Qual	Parameter			Result	RL	DF	Qual
TPPH	ND	12	25		Methyl-t-Butyl I	Ether (MTB	E)	ND	0.12	25	<del></del>
Benzene	ND	0.12	25		Tert-Butyl Alco	,	,	ND	1.2	25	
Ethylbenzene	ND	0.12	25		Diisopropyl Eth	er (DIPE)		ND	0.25	25	;
Toluene	ND	0.12	25		Ethyl-t-Butyl Et	her (ETBE	)	ND	0.25	25	;
p/m-Xylene	ND	0.12	25		Tert-Amyl-Meth	nyl Ether (T	AME)	ND	0.25	25	;
o-Xylene	ND	0.12	25								
Surrogates:	REC (%)	Control		Qual	Surrogates:			REC (%)	Control		<u>Qual</u>
1,4-Bromofluorobenzene	98	<u>Limits</u> 70-130			1,4-Bromofluor	obenzene-	ТРРН	100	<u>Limits</u> 70-130		



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



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

Date Received: Work Order No: Preparation: Method: 06/10/08 08-06-0810 EPA 5030B LUFT GC/MS / EPA 8260B

Project 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
TB-1-10.5	Solid	GC/MS LL	06/13/08		06/14/08	080613S02
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	81	87	70-130	7	0-30	
Ethylbenzene	82	88	70-130	7	0-30	
Toluene	81	88	70-130	8	0-30	
p/m-Xylene	82	89	70-130	8	0-30	
o-Xylene	83	89	70-130	7	0-30	
Methyl-t-Butyl Ether (MTBE)	88	91	70-130	4	0-30	
Tert-Butyl Alcohol (TBA)	67	67	70-130	1	0-30	3
Diisopropyl Ether (DIPE)	84	89	70-130	6	0-30	
Ethyl-t-Butyl Ether (ETBE)	84	89	70-130	5	0-30	
Tert-Amyl-Methyl Ether (TAME)	88	91	70-130	4	0-30	
Ethanol	61	40	70-130	42	0-30	3,4





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



Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: 06/10/08 08-06-0810 EPA 5030B LUFT GC/MS / EPA 8260B

Project 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared		Date Analyzed	MS/MSD Batch Number
08-06-0963-10	Solid	GC/MS R	06/14/08		06/15/08	080614S02
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	<u>Qualifiers</u>
TPPH	0	0	35-135	7	0-30	3
Benzene	88	90	70-130	2	0-30	
Ethylbenzene	14	0	70-130	5	0-30	3
Toluene	98	94	70-130	4	0-30	
p/m-Xylene	0	0	70-130	6	0-30	3
o-Xylene	0	0	70-130	10	0-30	3
Methyl-t-Butyl Ether (MTBE)	119	124	70-130	3	0-30	
Tert-Butyl Alcohol (TBA)	103	99	70-130	4	0-30	
Diisopropyl Ether (DIPE)	119	117	70-130	2	0-30	
Ethyl-t-Butyl Ether (ETBE)	124	123	70-130	0	0-30	
Tert-Amyl-Methyl Ether (TAME)	114	106	70-130	7	0-30	
Ethanol	93	92	70-130	1	0-30	







Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: N/A 08-06-0810 EPA 5030B

LUFT GC/MS / EPA 8260B

Project: 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyz		LCS/LCSD Bato Number	h
099-12-717-62	Solid	GC/MS LL	06/13/08	06/14/0	08	080613L02	
<u>Parameter</u>	LCS %RE	C LCSD %	REC %	REC CL	RPD	RPD CL	Qualifiers
TPPH	111	110		65-135	1	0-30	
Benzene	98	99		70-130	2	0-30	
Ethylbenzene	103	104		70-130	1	0-30	
Toluene	100	102		70-130	1	0-30	
p/m-Xylene	105	105		70-130	0	0-30	
o-Xylene	104	105		70-130	1	0-30	
Methyl-t-Butyl Ether (MTBE)	99	98		70-130	0	0-30	
Tert-Butyl Alcohol (TBA)	90	96		70-130	6	0-30	
Diisopropyl Ether (DIPE)	94	95		70-130	1	0-30	
Ethyl-t-Butyl Ether (ETBE)	95	95		70-130	0	0-30	
Tert-Amyl-Methyl Ether (TAME)	98	99		70-130	1	0-30	
Ethanol	121	119		70-130	2	0-30	





Conestoga-Rovers & Associates 19449 Riverside Drive, Suite 230 Sonoma, CA 95476-6955 Date Received: Work Order No: Preparation: Method: N/A 08-06-0810 EPA 5030B

LUFT GC/MS / EPA 8260B

Project: 8930 Bancroft Ave., Oakland, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Bate Number	ch
099-12-717-67	Solid	GC/MS R	06/14/08	06/15/08	080614L04	
<u>Parameter</u>	LCS %F	REC LCSD S	<u>%REC</u> <u>%R</u>	REC CL RPD	RPD CL	Qualifiers
TPPH	98	98	6	5-135 0	0-30	
Benzene	83	83	7	0-130 0	0-30	
Ethylbenzene	92	93	7	0-130 1	0-30	
Toluene	89	90	7	0-130 1	0-30	
p/m-Xylene	95	97	7	0-130 1	0-30	
o-Xylene	93	94	7	0-130 1	0-30	
Methyl-t-Butyl Ether (MTBE)	96	98	7	0-130 2	0-30	
Tert-Butyl Alcohol (TBA)	95	95	7	0-130 0	0-30	
Diisopropyl Ether (DIPE)	90	91	7	0-130 1	0-30	
Ethyl-t-Butyl Ether (ETBE)	96	90	7	0-130 7	0-30	
Tert-Amyl-Methyl Ether (TAME)	91	91	7	0-130 0	0-30	
Ethanol	85	90	7	0-130 6	0-30	





# **Glossary of Terms and Qualifiers**

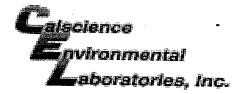


Work Order Number: 08-06-0810

Qualifier	<u>Definition</u>
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

**Shell Oil Products Chain Of Custody Record** LAB (LOCATION) ✓ CALSCIENCE (\_\_\_\_ INCIDENT # (ENV SERVICES) CHECK IF NO INCIDENT # APPLIES Please Check Appropriate Box: Print Bill To Contact Name: SPL (\_ MOTIVA RETAIL SHELL RETAIL ☑ ENV. SERVICES Denis Brown DATE: 6/5/2008 XENCO ( ☐ MOTIVA SD&CM ☐ CONSULTANT LUBES PO # SAP# TEST AMERICA (\_\_\_\_\_ ☐ SHELL PIPELINE OTHER \_ OTHER ( OG CODE: SITE ADDRESS: Street and City CRAW Conestoga-Rovers & Associates 8930 Bancroft Ave, Oakland DF DELIVERABLE TO (Name, Company, Office Location) 19449 Riverside Drive, Suite 230, Sonoma, California 95476 Felicia Ballard, CRA, Sonoma 707-935-4850 sonomaedf@craworld.com LAB USE ONLY Dennis Baertschi TELEPHONE: Carmen Rodriguez 707-268-3813 707-268-8180 dbaertschi@craworld.com TURNAROUND TIME (CALENDAR DAYS): RESULTS NEEDED **REQUESTED ANALYSIS** STANDARD (14 DAY) ☐ 5 DAYS 3 DAYS 2 DAYS 24 HOURS ON WEEKEND ☐ UST AGENCY: ☐ LA - RWQCB REPORT FORMAT TEMPERATURE ON RECEIPT ☑ SHELL CONTRACT RATE APPLIES (8015M) **SPECIAL INSTRUCTIONS OR NOTES:** TPH - Purgeable (8260B) ☐ STATE REIMBURSEMENT RATE APPLIES ☐ EDD NOT NEEDED TPH - Extractable Methanol (8015M) ☑ RECEIPT VERIFICATION REQUESTED Ethanol (8260B) 1,2 DCA (8260B) BTEX (8260B) TAME (8260B) ETBE (8260B) DIPE (8260B) EDB (8260B) TBA (8260B) SAMPLING PRESERVATIVE NO. OF Field Sample Identification MATRIX **Container PID Readings** DATE TIME USE ONLY or Laboratory Notes HNO3 H2SO4 NONE OTHER 6/5/1005 X WIO 1540

Page 10 of 11



WORK ORDER #: 08 - 0 6 - 0 8 1

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





# **SAMPLE RECEIPT FORM**

CLIENT: CRA	DATE: 6/10/08
TEMPERATURE - SAMPLES RECEIVED BY:	
CALSCIENCE COURIER:  Chilled, cooler with temperature blank provided. Chilled, cooler without temperature blank. Chilled and placed in cooler with wet ice. Ambient and placed in cooler with wet ice. Ambient temperature (For Air & Filter Only).	LABORATORY (Other than Calscience Courier):  C Temperature blank.  C IR thermometer.  Ambient temperature (For Air & Filter Only).
C Temperature blank.	Initial:
CUSTODY SEAL INTACT:	
Sample(s): Cooler: No (Not In	Not Present:
SAMPLE CONDITION:	70
Chain-Of-Custody document(s) received with samples	
COMMENTS:	