CONESTOGA-ROVERS
& ASSOCIATES

5900 Hollis Street, Suite A
Emeryville, California 94608
Telephone: (510) 420-0700 Fax: (510) 420-9170
www.CRAworld.com

TRANSMITTAL

DATE: January 31, 2011

REFERENCE NO.: 240612

PROJECT NAME: 1784 150th Avenue, San Leandro

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

RECEIVED
4:50 pm, Feb 03, 2011
Alameda County
Environmental Health

Please find enclosed:
- ☐ Draft
- ☐ Originals
- ☐ Prints
- ☒ Final
- ☐ Other

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

QUANTITY	DESCRIPTION
1	Air Sparge and Soil Vapor Extraction Well Installation and Pilot Test Report

- ☐ As Requested
- ☐ For Your Use
- ☒ For Review and Comment
- ☐
- ☐

COMMENTS:
If you have any questions regarding the content of this document, please contact Peter Schaefer at (510) 420-3319.

Copy to: Denis Brown, Shell Oil Products US (electronic copy)
SF Data Room (electronic copy)

Completed by: Peter Schaefer   Signed: Peter Schaefer

Filing: **Correspondence File**

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

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

Re: Shell-branded Service Station
1784 150th Avenue
San Leandro, California
SAP Code 136019
Incident No. 98996068
ACEH Case No. RO0000367

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
Senior Program Manager

AIR SPARGE AND SOIL VAPOR EXTRACTION WELL INSTALLATION AND PILOT TEST REPORT

SHELL-BRANDED SERVICE STATION
1784 150TH AVENUE
SAN LEANDRO, CALIFORNIA

SAP CODE	136019
INCIDENT NO.	98996068
AGENCY NO.	RO0000367

Prepared by:
Conestoga-Rovers & Associates

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

Office: (510) 420-0700
Fax: (510) 420-9170

web: http:\\www.CRAworld.com

JANUARY 31, 2011
REF. NO. 240612 (20)

This report is printed on recycled paper.

TABLE OF CONTENTS

LIST OF FIGURES
(Following Text)

LIST OF TABLES
(Following Text)

LIST OF APPENDICES
(Following Text)

EXECUTIVE SUMMARY

- In March 2010, CRA installed an air sparging well (AS-1) to conduct an AS/SVE pilot test.
- Later in March 2010, CRA conducted an AS/SVE pilot test. During the test, shallow soil hydrocarbon vapor concentrations up to 3,500 ppmv were detected in SVP-1 (screened 5 feet below grade). Since ACEH's December 30, 2009 letter asked Shell to shut down the test if vapor concentrations in SVP-1 exceeded 30 ppmv, the test was immediately stopped. The SVE system remained on for an extended period to continue vapor recovery.
- In October 2010, CRA installed one soil vapor extraction well (SVE-1) and two soil vapor probes (SVP-6 and SVP-7) to monitor shallow soil vapor during a second pilot test.
- In November 2010, CRA conducted a second AS/SVE pilot test. To maintain shallow soil vapor concentration levels below ACEH's 30 ppmv limit, the injection pressure could not be increased above 20 psi. The minimum feasible sparge flow rate of 10 acfm was not achieved at an injection pressure of 20 psi. Definite spikes in hydrocarbon vapor concentrations were observed at the outset of the 15 and 20 psi sparge steps, but were not sustained throughout the test. The mass removal rate mimicked the vapor concentration trend. An initial spike occurred at the outset of sparging, but was not sustained. The final TPHg mass removal rate was approximately 6 pounds per day. The final benzene mass removal rate was approximately 0.013 pound per day. Sparge air distribution extended up to 11 feet from the injection well, but not in all directions. Reasonable recovery (80%) of the helium tracer could not be achieved, which suggests that recovery of sparge air and stripped hydrocarbons is not feasible or effective.
- The pilot test data demonstrates that AS/SVE is not feasible.

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA), on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), prepared this report to summarize the results of air sparge (AS) and soil vapor extraction (SVE) pilot testing. For the initial AS/SVE pilot test, CRA followed the scope of work and procedures presented in our November 6, 2009 *Air Sparge/Soil Vapor Extraction Pilot Test Work Plan* which was conditionally approved in Alameda County Environmental Health's (ACEH's) December 30, 2009 letter. CRA suspended the initial test when shallow soil vapor concentrations exceeded a 30 parts per million by volume (ppmv) limit specified in ACEH's letter. For a second AS/SVE pilot test, CRA followed the scope of work and procedures presented in our July 28, 2010 *Revised Air Sparge/Soil Vapor Extraction Pilot Test Work Plan* (Revised Work Plan) which was approved in the ACEH's August 19, 2010 letter.

The AS/SVE pilot tests were performed to collect information needed to evaluate the appropriate remedial technology to address petroleum hydrocarbons detected in the subsurface soil and groundwater.

2.0 SITE BACKGROUND

The subject site is an active Shell-branded Service Station located on the southern side of 150th Avenue in a primarily residential area of San Leandro, California (Figure 1). The site layout includes three fuel underground storage tanks (USTs), two fuel dispenser islands, a former waste oil UST, and a station building with an automotive repair shop (Figure 2). A summary of previous work performed at the site and additional background information is contained in Appendix A.

2.1 GEOLOGY AND HYDROGEOLOGY

2.1.1 TOPOGRAPHY

The site is located at the base of the San Leandro Hills, which lie northeast of the site across Highway 580 (Figure 1). Local topography slopes westward. The site elevation is at about 50 feet above mean sea level.

2.1.2 GEOGRAPHY

Sediments in the vicinity are Quaternary alluvial deposits derived from Mesozoic marine as well as Pliocene and Mesozoic intrusive rocks of the Diablo Range. The site is located on the western edge of the Hayward Fault Zone. Previous investigations indicate that the site is underlain by unconsolidated sediments which are predominantly fine-grained, low permeability clay and silt, interbedded with moderate to high permeability sand and gravel lenses.

2.1.3 GROUNDWATER

Local drinking water is supplied by the East Bay Municipal Utility District. Residents do not use groundwater as a potable water source. Weiss Associates' 1992 well survey identified 21 wells within ½ mile, but none of the wells were directly down gradient from the site. Groundwater depths generally range between 17 and 30 feet below grade (fbg) on site and between 4 to 20 fbg in off-site wells. Groundwater level measurements have not shown a consistent or reliable gradient or flow direction, although the predominant flow direction since 1999 has been to the northwest. In September 2010, depth to groundwater (dtw) measurements ranged from 14.10 to 25.75 feet below top of casing, and the groundwater flow direction was variable.

2.2 EXTENT OF PETROLEUM HYDROCARBON IMPACT

2.2.1 DELINEATION OF IMPACTED SOIL

Concentrations of total petroleum hydrocarbons as gasoline (TPHg), and benzene, toluene, ethylbenzene, and xylenes (BTEX) in the vadose zone soils exceeding the applicable San Francisco Bay Regional Water Quality Control Board's environmental screening levels (ESLs)[1] for soil, where groundwater is not a source of drinking water and the land use is commercial, have been found beneath dispensers and product piping and in borings SB-23 and B-1. Vadose zone soil samples from other borings, drilled both on and off site, have not contained TPHg or BTEX concentrations exceeding ESLs. Fuel oxygenates have not been detected at concentrations exceeding ESLs in soil samples. The soil impacts observed at or below the soil/water interface are likely representative of groundwater impact. Thus, impacted vadose zone soil is adequately delineated horizontally to below ESLs and appears to be confined to the fueling equipment area.

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

2.2.2 DELINEATION OF SMEAR ZONE IMPACTS

The smear zone is the area of soil contamination that may exist, at varying extents, within the zone of water table fluctuations that have occurred since the time of the release. Concentrations of TPHg and BTEX exceeding ESLs have been found in soil samples collected in the smear zone (between 23.5 and 31.5 fbg) in the area of the fuel system and in soil samples from borings MW-10, MW-12, and SB-11.

2.2.3 HORIZONTAL DELINEATION OF IMPACTED GROUNDWATER

Horizontally, groundwater impacts in the first-encountered groundwater are adequately defined below ESLs by MW-5, BH-7, MW-4, MW-13, SB-13, BH-5, and SB-12 to the west, northwest, and north of the site. Further delineation is provided by MW-6, SB-17, SB-18, MW-3, and MW-10 to the southwest, south, southeast, and east.

2.2.4 VERTICAL DELINEATION OF IMPACTED GROUNDWATER

Deeper groundwater data from CPT-1 and CPT-2 indicate that the majority of groundwater impact is concentrated at the shallower depths. A consistent upward vertical gradient appears to minimize migration downward. Data from CPT-3, CPT-5, CPT-6, and MW-9 show that the deeper zone is not impacted to the northeast, southeast, southwest, or northwest of the site.

3.0 AIR SPARGE AND VAPOR EXTRACTION WELL INSTALLATIONS

CRA installed AS well (AS-1) and SVE well (SVE-1) to facilitate the AS/SVE pilot test. For the AS well installation, CRA followed the scope of work and procedures presented in our November 6, 2009 *Air Sparge/Soil Vapor Extraction Pilot Test Work Plan* which was conditionally approved in ACEH's December 30, 2009 letter. For the SVE well installation, CRA followed the scope of work and procedures presented in CRA's Revised Work Plan which was approved in ACEH's August 19, 2010 letter. A complete summary of the well installation activities is included as Appendix B.

4.0 AS/SVE PILOT TEST

AS and SVE are common remediation technologies used to address gasoline fuel impacts at UST sites and are most effective in moderate to high permeability soils. AS involves applying a pressure to an injection well to introduce air flow into the formation and strip hydrocarbons from soil and groundwater. AS also promotes the biodegradation of hydrocarbons by increasing the oxygen concentrations in the subsurface. SVE involves applying a vacuum to wells to extract hydrocarbon-bearing vapors from the vadose zone and capillary fringe area. SVE also captures hydrocarbons stripped by AS. Extracted hydrocarbons are typically treated by granular activated carbon, catalytic or thermal oxidizers, or internal combustion engines.

The objective of the AS/SVE pilot test was to determine if AS/SVE is a viable remedial technology and to obtain design information for a potential system. The specific goals of the AS/SVE pilot test were to:

1. Determine if sufficient air can be delivered and properly distributed through the target area,
2. Determine the maximum air injection flow rate,
3. Determine the magnitude and sustenance of hydrocarbon vapor concentrations in vapor extraction wells before and during air sparging, and
4. Determine if hydrocarbon impacts could be effectively mitigated with this technology.

4.1 TEST EQUIPMENT

A Mako Industries, Ltd AS trailer with a rotary screw air compressor capable of 28 cubic feet per minute and 125 pounds per square inch (psi) was used for conducting the AS test. An air hose was attached to the injection well from a pre-constructed manifold. Rotameters were mounted on the manifold to measure air flow. A Solleco model 300 trailer-mounted SVE unit with a 25-horsepower liquid-ring pump and an electric catalytic oxidizer for vapor treatment was used for SVE. A 125 kilo-volts amperes trailer-mounted portable diesel generator was used to power the AS and SVE equipment.

Field vapor concentrations were measured with a Horiba Model MEXA554J organic vapor analyzer calibrated with hexane and a photo ionization detector calibrated with isobutylene. Vapor samples were collected in one-liter Tedlar® bags using a Gast rotary-vane sample pump. The vacuum at the manifold, the pressure at the positive side of the blower, the vacuum applied to the extraction wellheads, and induced pressure in observation wells were measured with a Dwyer digital manometer. A TSI thermoanemometer was used to measure vapor extraction air flow rates and air temperature. A Solinst water level meter was used to measure depth to groundwater in all test and observation wells. A YSI 600 XLM multi-parameter meter was used to measure dissolved oxygen (DO) and oxidation-reduction potential (ORP), and Level Troll pressure transducers were used to measure and record groundwater levels. Helium concentrations were monitored using a Marks Product inline helium detector when helium tracer gas was added at the end of the AS/SVE test.

4.2 TEST PROCEDURE

On March 8 and 9 of 2010, CRA performed the first AS/SVE test, but the test was stopped when hydrocarbon vapor concentrations in soil vapor probe SVP-1 exceeded the 30 ppmv limit specified in ACEH's December 30, 2009 letter. On November 16 and 17 of 2010, CRA performed a second AS/SVE test, using mitigation measures to avoid exceeding the 30 ppmv limit. The field data and analytical results for both tests are presented in Tables 1 through 4.

During the March AS/SVE test, CRA completed two steps of a step test before the test was cut short due to elevated vapor concentrations in SVP-1. During the test, air was injected into well AS-1 and vapors were extracted from P-3A. CRA utilized wells P-3B, P-4A, P-4B, EW-2, and MW-11 and vapor probes SVP-1 and SVP-2 to monitor concentrations, induced vacuums, and induced pressures.

CRA's November AS/SVE test consisted of a three-step step test followed by a constant rate test on injection well AS-1 with vapor extraction primarily from well P-3A. Vapor extraction also occurred from well SVE-1 only when necessary to maintain shallow soil vapor concentrations below ACEH's 30 ppmv limit. CRA utilized wells P-3B, P-4A, P-4B, EW-2, and MW-11 and vapor probes SVP-1, SVP-2, SVP-6, and SVP-7 to monitor concentrations, induced vacuums, and induced pressures.

Prior to both tests, CRA collected vapor samples and static depth to groundwater measurements from onsite wells and vapor probes.

During the step tests, CRA systematically increased (stepped) the AS injection pressure to determine the maximum sparge flow. The initial injection pressure was set at 5 psi. The pressure was then incrementally increased to the maximum injection pressure which was established as 75 percent (%) of the overburden pressure. The target injection pressure range for these tests was established as 5 to 25 psi. Air flow was monitored at each applied pressure interval.

However, testing at the target maximum step (25 psi) could not be maintained. At this injection pressure, vapor concentrations exceeded 30 ppmv in vapor probes SVP-2, SVP-6, and SVP-7. Attempts to control (reduce) the concentrations at these probes through SVE operational adjustments and the addition of SVE-1 as an extraction point had no affect. However, reducing the injection pressure to 20 psi did reduce the vapor concentrations at these probes below ACEH's 30 ppmv limit. Based on these circumstances, the constant-rate test was performed at 20 psi. The constant-rate test ended on the morning of November 17, 2010.

During testing, vapor extraction occurred consistently from P-3A and during the November test occasionally from SVE-1. Hydrocarbon vapor concentrations were periodically field-measured from observation wells. Vapor samples were collected at the end of testing for laboratory analysis to assess volatilization of hydrocarbons.

Depth to groundwater was measured in the observation and extraction wells periodically during testing.

During the November test, CRA conducted a helium tracer test for one and three quarter hours to assess the distribution and recovery of injected air. Helium gas was added to the injected air and helium concentrations were periodically measured from the AS manifold and in observation wells.

4.3 DATA COLLECTION AND SAMPLING

CRA collected AS/SVE system data on standard forms at 30 minute intervals during step testing and at 60 to 120 minute intervals during the constant rate testing.

CRA collected pre-test soil vapor samples from wells and vapor probes to establish the background hydrocarbon vapor concentrations. Static dtw was also collected from all test wells and observation wells prior to testing. Additional vapor samples were collected at the end of testing from select wells. As previously stated, field instruments were used to record water level data, induced pressure or vacuum from wells and vapor probes. In November, DO and ORP were measured from the observation wells P-4A and EW-2, and helium concentrations were measured from wells P-3A, EW-2, SVE-1, and MW-11. Appendix C includes copies of the test field data sheets. Tables 1-A (March) and 1-B (November) summarize the test data.

Vapor samples were analyzed for TPHg by EPA Method TO-3M; for BTEX, and methyl tertiary-butyl ether (MTBE) by EPA Method 8260B(M); for methane, carbon dioxide, and oxygen and argon by Method ASTM D-1946; and for helium by Method ASTM D-1946(M). Tables 2-A (March) and 2-B (November) present the results of the laboratory analyses. Appendix D includes the laboratory analytical reports.

4.4 RESULTS

Tables 3-A (March) and 3-B (November) present SVE operational and mass removal data. Table 4 presents the helium tracer test data.

AS Pressure and Flow: CRA increased injection pressures step-wise at 5 and 16 psi in March and at 5, 15, and 20 psi in November. In March, a sparge flow rate of 3 actual cubic feet per minute (acfm) was achieved at an injection pressure of 16 psi. In November, 5 acfm was achieved at the maximum injection pressure of approximately 20 psi. No sparge air flow was observed at an injection pressure below 16 psi. Figure 3 illustrates the changes in sparge pressure during the November test along with SVE flow and influent hydrocarbon concentrations.

Induced Vacuum and Pressure: During the March test, CRA observed induced pressure at well EW-2 during both test steps, but induced pressure was only observed at P-4B during the second step. During the November test, induced vacuum was consistently observed at wells EW-2, vapor probe SVP-1, and well SVE-1 (prior to extracting from it). Induced pressure was consistently observed in well MW-11 (7 feet from AS-1). No induced pressure or vacuum was observed in observation well P-4A (11 feet from AS-1) or vapor probes SVP-2 (55 feet from AS-1), SVP-6 (20 feet from AS-1), and SVP-7 (35 feet from AS-1). It is likely that no pressure or vacuum was measured in these vapor probes due to their distance from the extraction and injection wells. Additionally, no pressure or vacuum was observed in wells P-3B and P-4B because they are screened below the water table. It is not known why induced pressure or vacuum was not observed at P-4A.

SVE Vacuum and Flow: Prior to the March test, the static water in P-3A afforded 7.56 feet of available vadose-zone screen, but during the test groundwater upwelling in the extraction well significantly limited the available well screen and by the end of the test completely submerged the well screen. Similarly, during the November pilot test, the static water level afforded 10.95 feet of available screen in P-3A and 11.2 feet in SVE-1, respectively. However, during the test, groundwater upwelling again submerged most of the well screen. Only 2.80 feet of P-3A's well screen was not submerged, and only 3.95 feet of SVE-1's well screen was not submerged.

The wellhead applied vacuum ranged between 107.1 and 154.5 inches of water column (inWC) at P-3A in March, 90.0 and 113.9 inWC at P-3A in November, and 95.5 to 114.3 inWC at SVE-1 in November. In March, the vapor extraction flow rate ranged from 12.6 to 37.6 standard cubic feet per minute (scfm). In November, the vapor extraction flow rate from both wells combined ranged from 10.3 to 37.6 scfm. Figure 3 presents the vapor extraction flow rate over the course of the November test.

Vapor Concentrations*:* Tables 2-A and 2-B summarize the laboratory analytical data, and Figure 3 illustrates the field-measured influent hydrocarbon vapor-concentration trend over the course of the November test. Field-measured hydrocarbon vapor concentrations increased at the time the AS injection pressure was increased to 16 psi in March and to 15 psi in November. During the November test, hydrocarbon concentrations declined over the course of testing to approximately 1,000 ppmv. The TPHg concentration trend from influent vapor samples correlates with field measurements.

A decrease in TPHg concentrations is also observed between static vapor samples and end-of-test vapor samples collected from well EW-2. TPHg concentrations in P-3A, P-4A, and MW-11 were generally unchanged by test activities. Because the March test was stopped early, there is not sufficient hydrocarbon concentration data for conducting a trend evaluation.

Mass Removal: SVE operational data and mass removal rates are summarized in Tables 3-A and 3-B. Since hydrocarbon concentrations and flow rates were not sustained during the November constant-rate test, hydrocarbon mass removal rates generally decreased during testing. The final TPHg and benzene mass removal rates were less than 10 and 0.1 pounds per day, respectively. The November mass removal rates and cumulative mass removed are shown on Figure 4. Approximately 63.5 pounds of TPHg and 0.061 pounds benzene were removed during all testing.

Water Levels*:* As discussed, 10.8 feet of groundwater upwelling occurred in the vapor extraction wells during the March test, and 6 to 9 feet during the November test. The upwelling limited available vadose zone well-screen length between 0 and 5 feet and affected the recovery of soil vapors during testing.

During the November test, groundwater mounding was observed in wells MW-11 and P-3B approximately 3 hours after the AS test started based the data recorded by the

Level Trolls. Figure 5 shows the dtw measurements versus time. The maximum mounding observed was 0.94 feet in MW-11. Groundwater mounding resided after approximately 3 hours.

Bio-parameters: Table 1-B presents the DO and ORP data from the November test for observation wells EW-2 and P-4A. Figures 6 and 7 illustrate this data versus time. In general, DO and ORP levels were increased slightly in EW-2 during the test relative to the initial readings, but decreased slightly in P-4A. DO levels peak around 10 AM on November 17 in well EW-2, which is when the test stopped prior to the helium tracer test. DO levels decreased in EW-2 after this time.

Helium Tracer Test: During the November test, CRA injected helium into the air sparge line for approximately 1.75 hours. Table 4 summarizes the helium flow rates and helium concentrations observed in the injected air flow and in the observation wells. During the helium tracer test, helium was monitored at the AS manifold and in wells EW-2, P-3A, SVE-1, and MW-11. Laboratory analysis showed helium concentrations in the system influent (INF-1) at 0.0748% volume, P-3A at 0.0662% volume, and EW-2 at 0.0183% volume. Helium was not detected in P-4A or SVE-1 through laboratory analysis or field measurements. The low percentage of helium recovered in the SVE system influent suggests that the sparge air was not recovered effectively by SVE.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The following limitations were identified during the AS/SVE pilot test:

- SVE from wells P-3A and SVE-1 resulted in groundwater upwelling, which affected vapor recovery data during testing.
- To maintain shallow soil vapor concentration levels below ACEH's 30 ppmv limit, the injection pressure could not be increased above 20 psi.

The pilot test data demonstrates that AS/SVE is not feasible based on the following:

- The minimum feasible sparge flow rate of 10 acfm was not achieved at an injection pressure of 20 psi. As discussed, the maximum injection pressure of 25 psi could not be tested due to the ACEH vapor-probe concentration restriction. CRA speculates that the sparge flow would not have increased substantially at 25 psi. If not solely due to the lithology, the upward vertical groundwater gradient also may have inhibited sparge flow.

- Definite spikes in hydrocarbon vapor concentrations were observed at the outset of the 15 and 20 psi sparge steps, but were not sustained throughout the test. The vapor concentration eventually fell below the initial vapor concentration prior to sparging. The data suggests that volatilization due to sparging slowed or ceased, and that vadose zone soil vapor was possibly diluted by sparge air or effected by groundwater upwelling.
- The mass removal rate mimicked the vapor concentration trend. An initial spike occurred at the outset of sparging, but was not sustained. The final TPHg mass removal rate was approximately 6 pounds per day. The final benzene mass removal rate was approximately 0.013 pound per day. These mass removal rates are considered low.
- The data suggests the sparge air distribution extended up to 11 feet from the injection well based on data from well EW-2, which is considered moderately feasible. However, sparge air distribution did not extend this far in all directions based on data from well P-4A.
- Reasonable recovery (80%) of the helium tracer could not be achieved, which suggests that recovery of sparge air and stripped hydrocarbons is not feasible or effective.

The AS/SVE pilot test data indicates that this technology is not technically feasible. Therefore, full-scale implementation is not recommended.

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

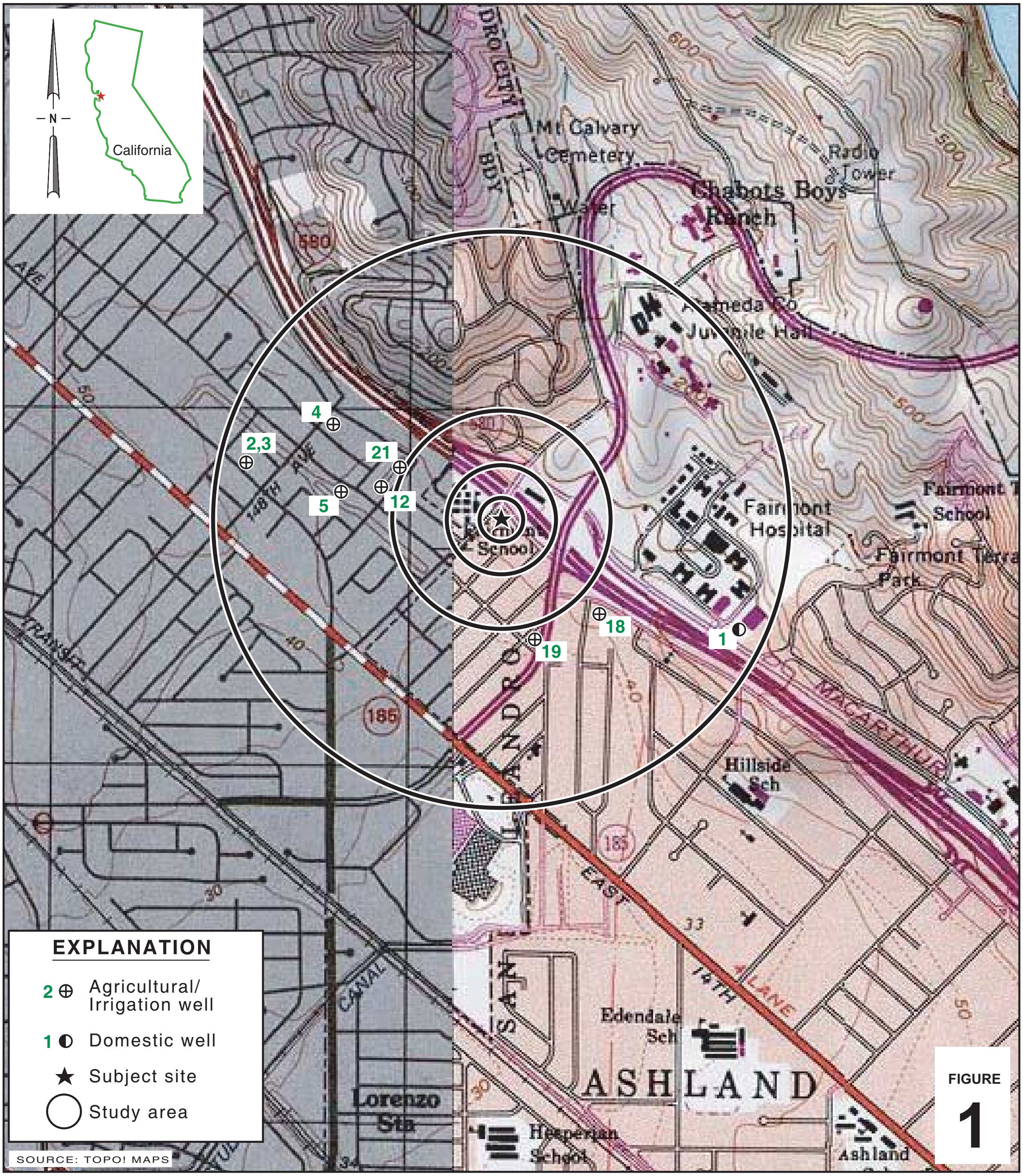
Peter Schaefer, CHG, CEG

Dan Lescure, PE

REGISTERED PROFESSIONAL ENGINEER
DANIEL N. LESCURE
C 70689
EXP. 6/30/11
CIVIL
STATE OF CALIFORNIA

FIGURES

11/03/08



I:\Shell\6-chars\2406--\240612-San Leandro 1784 150th\240612-FIGURES\240612 VICINITY.AI

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Shell-branded Service Station

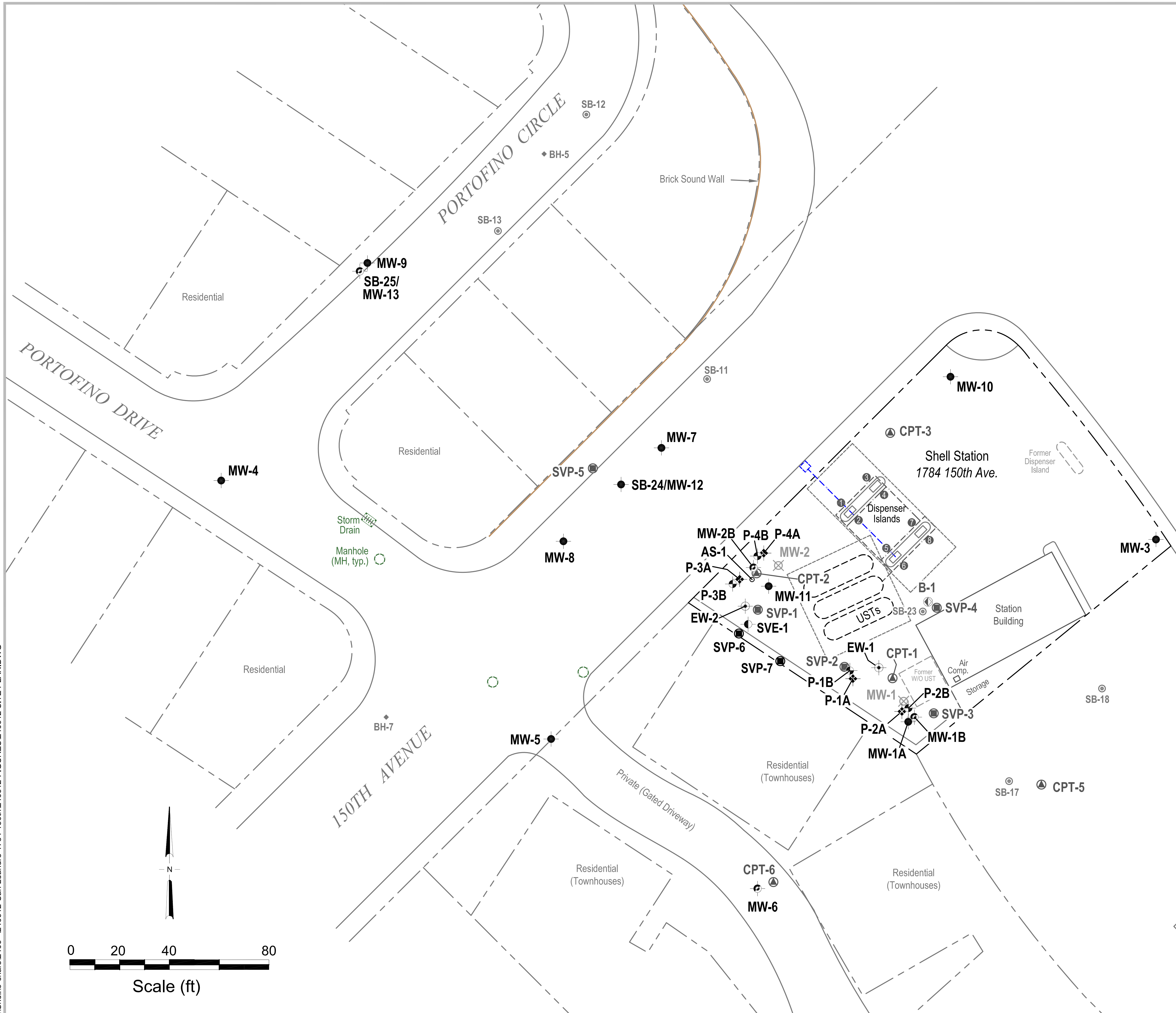
1784 150th Avenue

San Leandro, California

CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map

01/12/2011



EXPLANATION

SVE-1	Soil vapor extraction well location
SVP-6	Soil vapor probe location
AS-1	Air sparge well location
P-1A	Piezometer location
P-1B	Deeper piezometer location
EW-1	Extraction well location
MW-3	Monitoring well location
MW-1B	Deeper monitoring well location
MW-1	Destroyed well location
SVP-1	Soil vapor probe location (8/28/2007 & 10/1/2010)
B-1	Soil boring location (9/14/2007)
CPT-1	CPT location (8/29-30/2007)
S-23	Soil boring location (Cambria, 5/2006)
SB-17	Soil boring location (Cambria, 9/2004)
SB-11	Soil boring location (Cambria, 10/2002)
BH-7	Soil boring location (Weiss, 3/1995)
BH-1	Soil boring location (Weiss, 6/1994)
	Dispenser number
	Product piping (P)
	Water line (W)

Site Plan

CONESTOGA-ROVERS & ASSOCIATES

Shell-branded Service Station
1784 150th Avenue
San Leandro, California

FIGURE
2

I:\Shell6-chars\2406--\240612-San Leandro 1784 150th\240612-FIGURES\240612 SITE PLAN.DWG

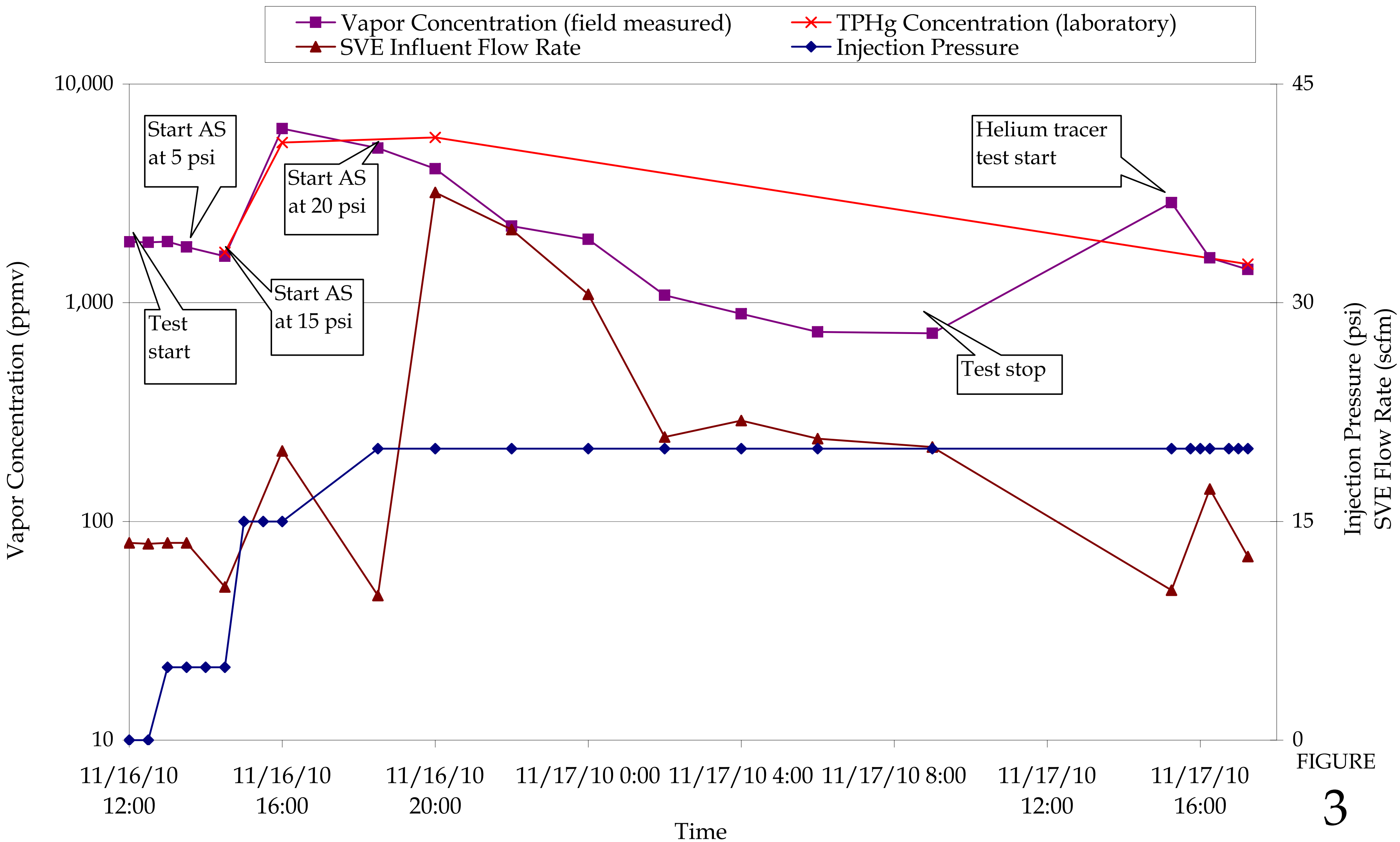


FIGURE
3

Shell-branded Service Station
1784 150th Avenue
San Leandro, California

CONESTOGA-ROVERS & ASSOCIATES

Influent Vapor Concentration, SVE Flow, and Injection Pressure Vs. Operational Hours

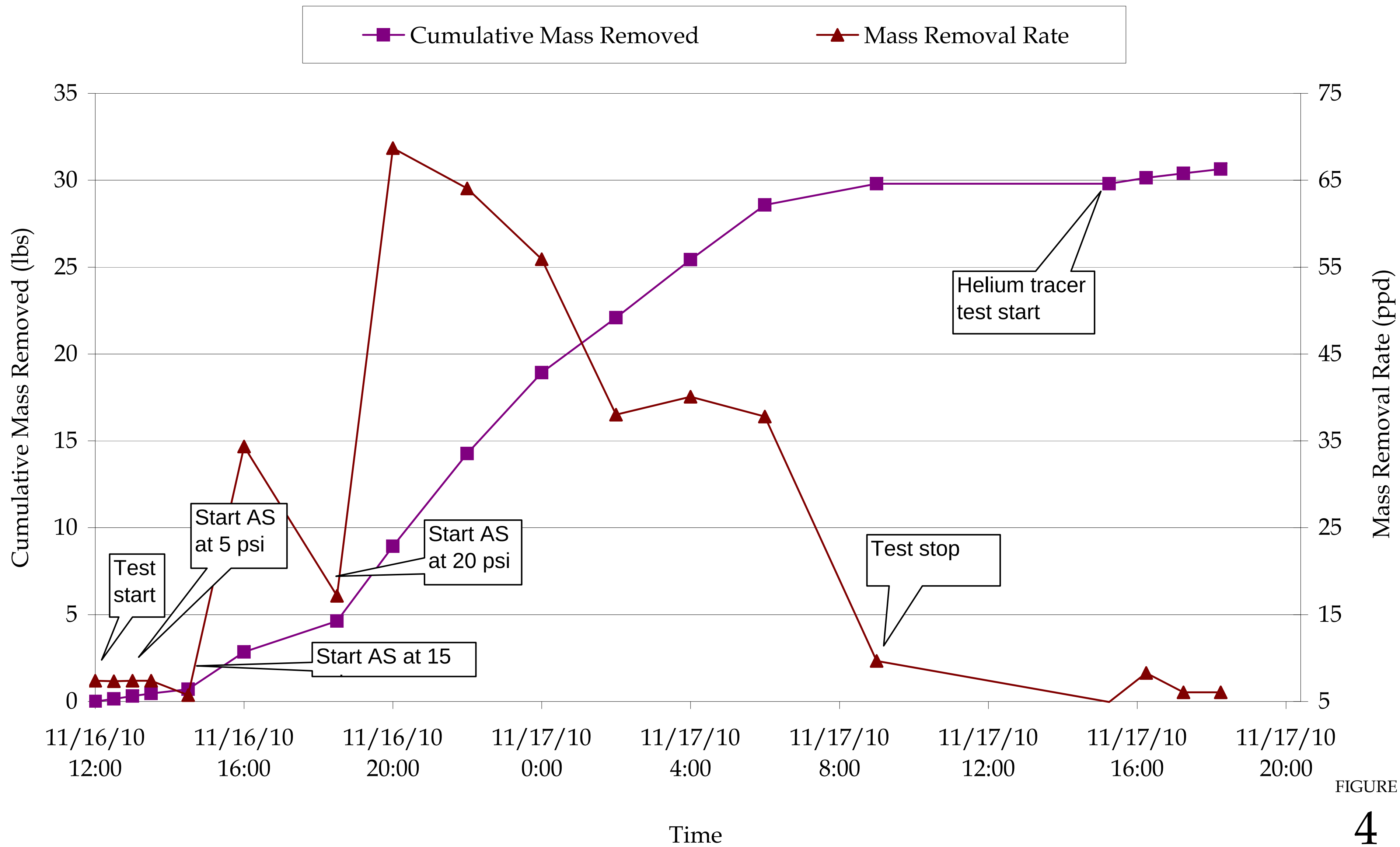


FIGURE
4

Shell-branded Service Station
1784 150th Avenue
San Leandro, California

CONESTOGA-ROVERS & ASSOCIATES

TPHg Mass Removed and Mass Removal Rate Vs. Operational Time

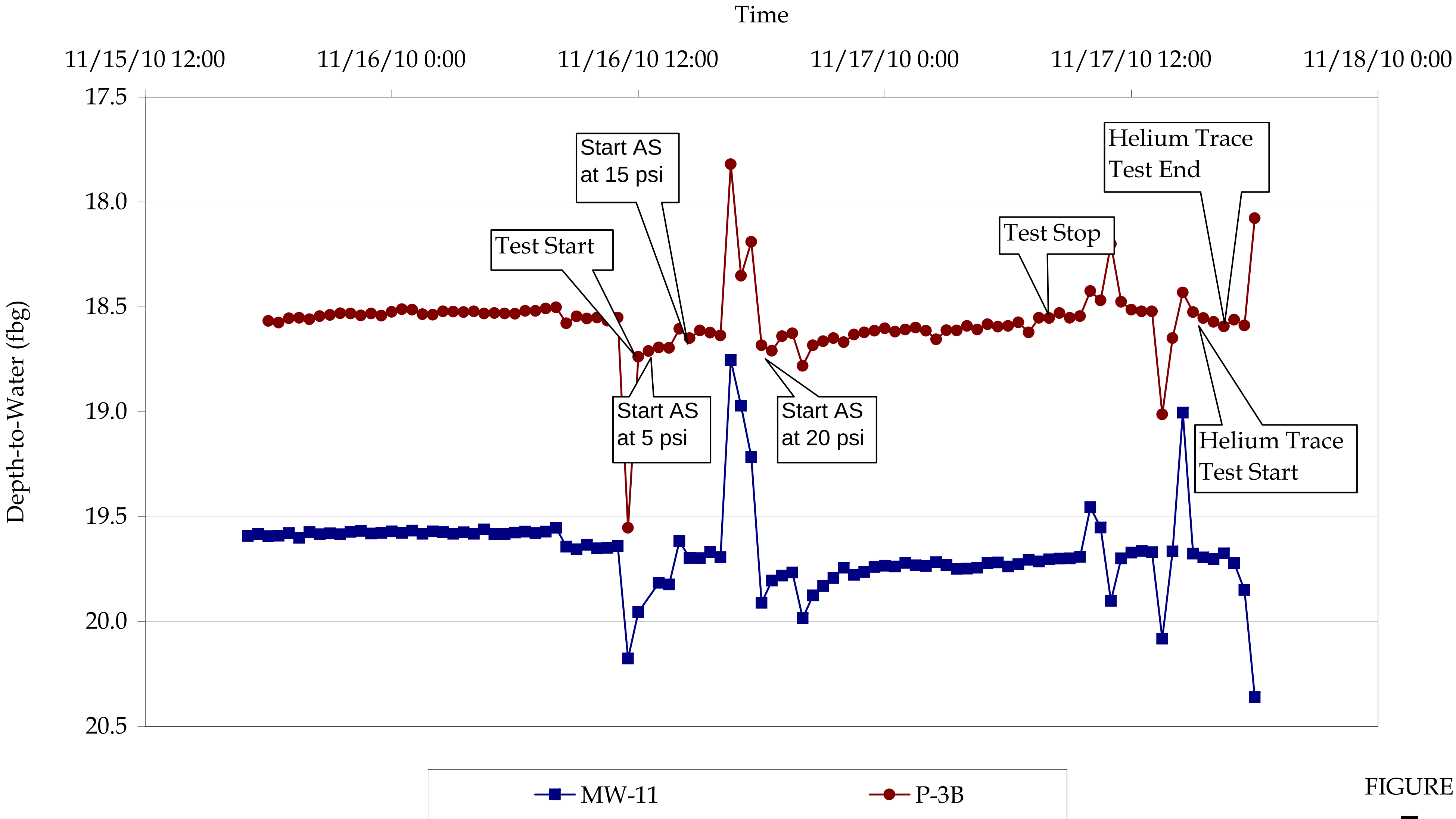


FIGURE 5

Shell-branded Service Station
1784 150th Avenue
San Leandro, California

CONESTOGA-ROVERS & ASSOCIATES

Depth to Water Vs. Time

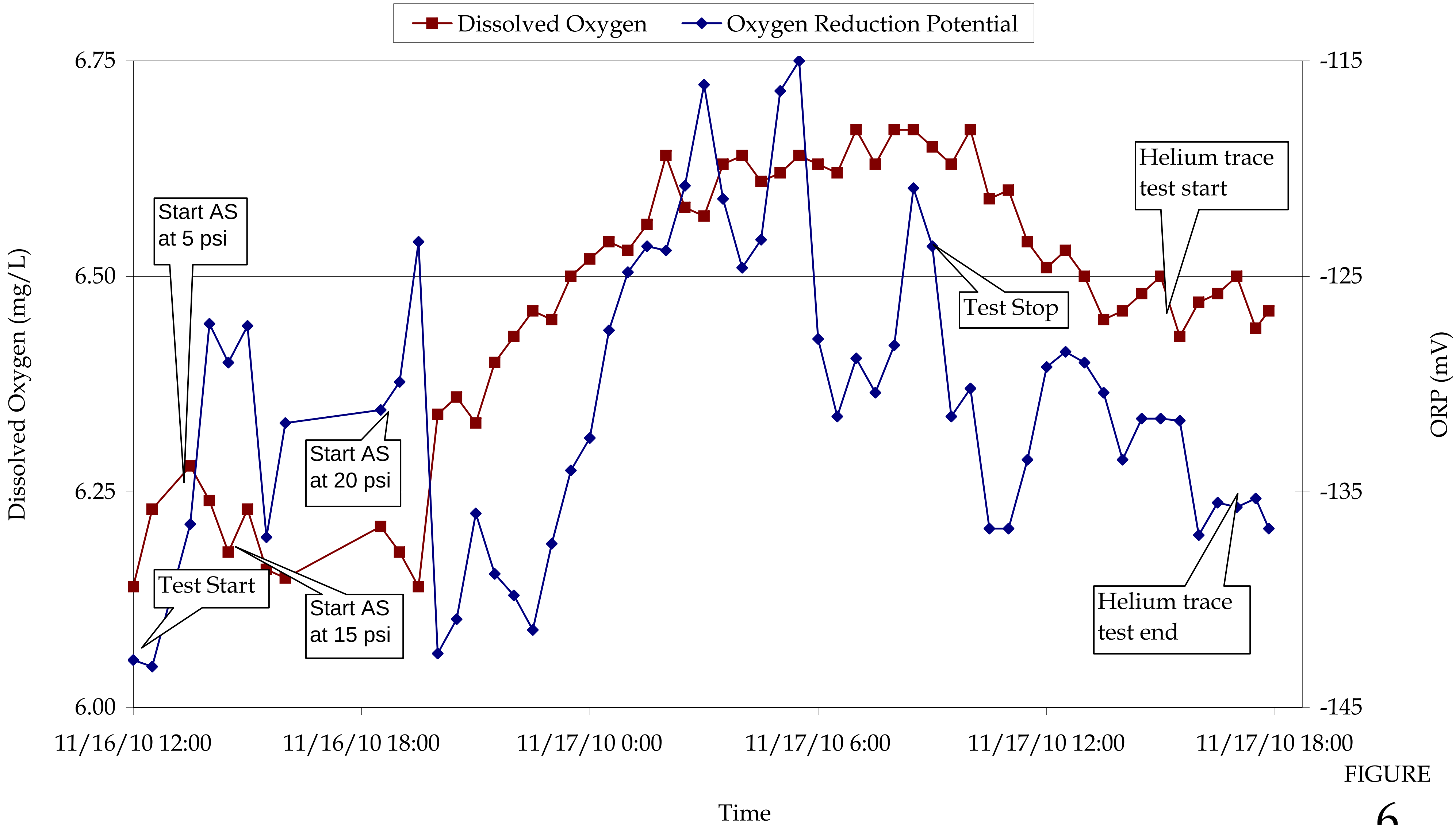


FIGURE
6

Shell-branded Service Station
1784 150th Avenue
San Leandro, California

CONESTOGA-ROVERS & ASSOCIATES

EW-2: DO and ORP Vs. Elapsed Time

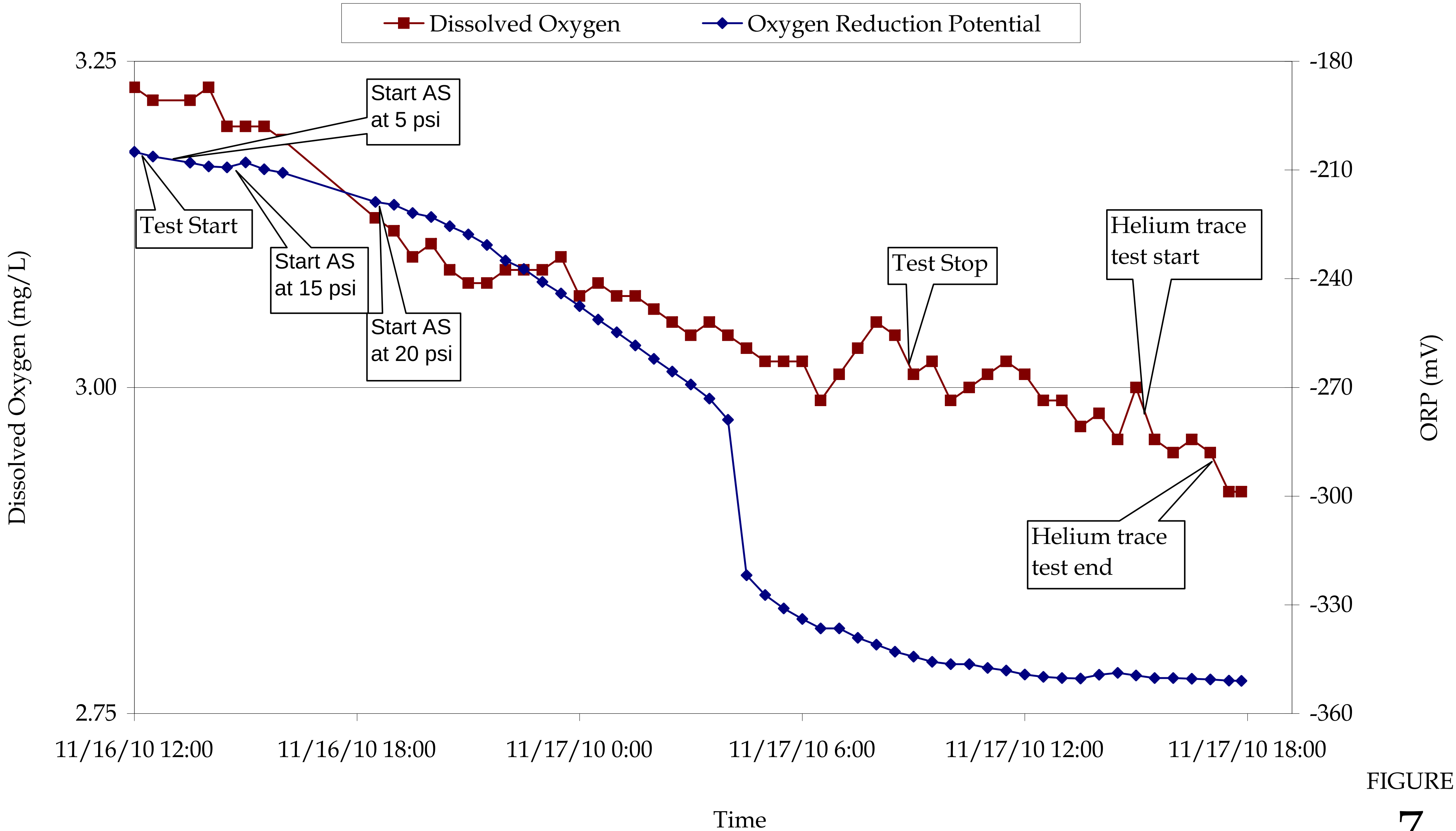


FIGURE
7

Shell-branded Service Station
1784 150th Avenue
San Leandro, California

CONESTOGA-ROVERS & ASSOCIATES

P-4A: DO and ORP Vs. Elapsed Time

TABLES

TABLE 1-A
MARCH 2010 AS/SVE PILOT TEST - AS SYSTEM AND OBSERVATION WELL DATA
SHELL-BRANDED SERVICE
1784 150th AVENUE
SAN LEANDRO, CALIFORNIA

		Injection Well AS-1			*Extraction Well* P-3A (5 feet from AS-1)			*Observation Wells/Probes* P-4A (11 feet from AS-1)				EW-2 (11 feet from AS-1)				P-4B (10 feet from AS-1)				P-3B (8 feet from AS-1)			MW-11 (7 feet from AS-1)				SVP-1		SVP-2	
Date & Time (m/d/yy hh:mm)	Elapsed Time (hours)	Injection Pres. (psi)	Air Flow (cfm)	DTW (fbg)	DTW (fbg)	Water Level Change (ft WC)	Wellhead Vac. (in. WC)	DTW (fbg)	Water Level Change (ft WC)	Wellhead Pres. (in. WC)	Vapor Conc. (ppmv)	DTW (fbg)	Water Level Change (ft WC)	Wellhead Pres. (in. WC)	Vapor Conc. (ppmv)	DTW (fbg)	Water Level Change (ft WC)	Wellhead Pres. (in. WC)	Vapor Conc. (ppmv)	DTW (fbg)	Water Level Change (ft WC)	Wellhead Pres. (in. WC)	DTW (fbg)	Water Level Change (ft WC)	Wellhead Pres. (in. WC)	Vapor Conc. (ppmv)	Wellhead Pres. (in. WC)	Vapor Conc. (ppmv)	Wellhead Pres. (in. WC)	Vapor Conc. (ppmv)
Static Data 3/8/10				16.35	15.56			16.92				16.72				16.73				16.23			17.53							
SVE only: SVE in P-3A																														
3/8/10 23:00	0.00	0	0				-108.1			0.0		16.78	0.06	-0.6		16.79	0.06	0.0		16.31	0.08	0.0	17.56	0.03	-1.6					
3/8/10 23:30	0.50	0	0				-107.7			0.0				0.0				0.5				0.5			-1.3					
Step One at 5 psi: SVE in P-3A and AS in AS-1																														
3/9/10 0:00	1.00	5	3				-107.2	16.96	0.04	0.0				1.1				0.0				-0.5			0.0					
3/9/10 0:30	1.50	5	3												40											96		0.0		0.0
3/9/10 1:00	2.00						-107.9	16.94	0.02	0.0		16.77	0.05	0.5		16.76	0.03	0.0		16.26	16.26	0.0	17.50	-0.03	0.5					
Step Two at 16 psi: SVE in P-3A and AS in AS-1																														
3/9/10 1:30	2.50	16	3				-107.1			0.0				0.5	3,030			0.5				0.0			0.0			2,100		
3/9/10 2:00	3.00	16	3				-107.9			0.0		16.77	0.05	0.5		16.76	0.03	0.5		16.26	16.26	0.0	17.57	0.04	0.0					
3/9/10 2:30	3.50	16	3																											
SVE only: SVE in P-3A																														
3/9/10 3:00	4.00	0	0				-107.1							0.0																
3/9/10 4:00	5.00	0	0							0.0				0.0	56			0.0				0.0			-0.4	5,970		86		
3/9/10 6:00	7.00	0	0				-107.2			0.0					21			0.0				0.0			-1.1	168		65		
3/9/10 9:30	10.50	0	0											0.1													-1.0			
3/9/10 10:00	11.00	0	0											0.0													-1.1			
3/9/10 10:30	11.50	0	0											0.0													-1.0			
3/9/10 11:00	12.00	0	0											0.0													-0.7			
3/9/10 11:30	12.50	0	0		4.75	-10.8	-154.5			-0.3		6.82	-9.90	0.0		17.01	0.28	-0.3		6.33	6.33	-0.5	17.54	0.01	-1.2					
3/9/10 12:30	13.50	0	0				-151.4			0.0				0.0				0.0				0.0			-1.2		-0.5			
3/9/10 13:30	14.50	0	0				-151.2			0.0				0.0				0.0				0.0			-1.3		0.0			

Abbreviations and Notes:

m/d/yy hh:mm = month/day/year hour:minute.
psi = pounds per square inch.
cfm = cubic feet per minute.
conc. = concentration
ppmv = parts per million by volumn
DTW = depth to water
fbg = feet below grade

ft WC = feet of water mg/L = milligrams per liter.
in. WC = inches of w ppmv = parts per million by volume.
mg/L = miligrams p in. WC = inches of water column.
ORP = oxygen reduction potential
Pres. = pressure
Vac. = vacuum
Blank cell = not applicable or not measured

TABLE 1-B
NOVEMBER 2010 AS/SVE PILOT TEST - AS SYSTEM AND OBSERVATION WELL DATA
SHELL-BRANDED SERVICE
1784 150th AVENUE
SAN LEANDRO, CALIFORNIA

Date & Time (m/d/yy hh:mm)	Elapsed Time (hours)	Injection Well AS-1: Injection Pres. (psi)	Injection Well AS-1: Air Flow (cfm)	Injection Well AS-1: DTW (fbg)	Extraction Wells: P-3A (5 feet from AS-1): DTW (fbg)	P-3A: Water Level Change (ft WC)	P-3A: Wellhead Vac. (in. WC)	SVE-1 (15 feet from AS-1): DTW (fbg)	SVE-1: Water Level Change (ft WC)	SVE-1: Wellhead Vac. (in. WC)	Observation Wells/Probes: P-4A (11 feet from AS-1): DTW (fbg)	P-4A: Wellhead Pres. (in. WC)	P-4A: ORP (millivolts)	P-4A: Dissolved Oxygen (mg/L)	P-4A: Vapor Conc. (ppmv)	EW-2 (11 feet from AS-1): DTW (fbg)	EW-2: Water Level Change (ft WC)	EW-2: Wellhead Pres. (in. WC)	EW-2: ORP (millivolts)	EW-2: Dissolved Oxygen (mg/L)	EW-2: Vapor Conc. (ppmv)	P-4B (10 feet from AS-1): DTW (fbg)	P-4B: Water Level Change (ft WC)	P-4B: Wellhead Pres. (in. WC)	P-4B: Vapor Conc. (ppmv)	P-3B (8 feet from AS-1): DTW (fbg)	P-3B: Water Level Change (ft WC)	P-3B: Wellhead Pres. (in. WC)	MW-11 (7 feet from AS-1): DTW (fbg)	MW-11: Water Level Change (ft WC)	MW-11: Wellhead Pres. (in. WC)	MW-11: Vapor Conc. (ppmv)	SVP-1: Wellhead Pres. (in. WC)	SVP-1: Vapor Conc. (ppmv)	SVP-2: Wellhead Pres. (in. WC)	SVP-2: Vapor Conc. (ppmv)	SVP-6: Wellhead Pres. (in. WC)	SVP-6: Vapor Conc. (ppmv)	SVP-7: Wellhead Pres. (in. WC)	SVP-7: Vapor Conc. (ppmv)
Static Data 11/16/10				19.3	18.95			19.2			19.1		-205.0	3.24		18.7			-142.8	6.14		19.0				18.8			19.7											
SVE only: SVE in P-3A																																								
11/16/10 12:00	0.00	0	0				0.0			0.0		0.0	-205.0	3.23		18.7	0.00	0.0	-142.8	6.14		19.00	0.00	0.0		18.8	0.00	0.0	19.7	0.00	0		0		0.0		0.0		0.0	
11/16/10 12:30	0.50	0	0										-206.3	3.22					-143.1	6.23																				
Step One - AS at 5 psi: SVE in P-3A and AS in AS-1																																								
11/16/10 13:00	1.00	5	0		13.25	5.70	90.0	12.45	6.75	95.5		0.0	-207.5	3.23	284	18.4	0.30	-8.6	-139.5	6.25	2.5	19.05	-0.05	0.0		18.8	0.00	0.0	19.4	0.30	5.8	1.0	-0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/16/10 13:30	1.50	5	0		13.00	5.95		12.40	6.80			0.0	-208.0	3.22		18.5	0.20	-8.6	-136.5	6.28		19.05	-0.05	0.0		18.8	0.00	0.0	19.4	0.30	5.8		-0.3		0.0		0.0		0.0	
11/16/10 14:00	2.00	5	0		12.80	6.15	99.0	19.10	0.10	2.0		0.0	-209.0	3.23		18.5	0.20	-4.3	-127.2	6.24		19.05	-0.05	0.0		18.8	0.00	0.0	19.4	0.30	3.9		-0.3		0.0		0.0		0.0	
11/16/10 14:30	2.50	5	0										-209.3	3.20					-129	6.18																				
Step Two - AS at 15 psi: SVE in P-3A; AS in AS-1																																								
11/16/10 15:00	3.00	15	0										-207.9	3.20					-127.3	6.23																				
11/16/10 15:30	3.50	15	0										-209.8	3.20					-137.1	6.16																				
11/16/10 16:00	4.00	15	0		12.75	6.20	101	19.10	0.10	1.6		0.0	-210.8	3.19	503	18.5	0.20	-3.4	-131.8	6.15	1.3	19.05	-0.05	0.0		18.8	0.00	0.0	19.4	0.30	1.8	0.0	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Step Three and Constant Rate Test at 20 psi: SVE in P-3A and SVE-1 and AS in AS-1																																								
11/16/10 18:30	6.50	20	5		11.3	7.65	96.5	19.25	-0.05	0.3		0.0	-218.8	3.13	180	18.69	0.01	-1.0	-131.2	6.21	1.5	19.08	-0.08	0.0		18.8	0.00	0.0	19.95	-0.25	3.0	752	0.0	709	0.0	0.0	0.0	205	0.0	0.0
11/16/10 19:00	7.00												-219.6	3.12					-129.9	6.18																				
11/16/10 19:30	7.50												-221.9	3.10					-123.4	6.14																				
11/16/10 20:00	8.00	20	5		11.50	7.45	109.8	15.32	3.88	100.5		0.0	-223.0	3.11		18.70	0.00	-7.7	-142.5	6.34		19.10	-0.10	0.0		18.8	0.00	0.0	19.98	-0.28	1.4	802	-0.2	48	0.0	0	0.0	22	0.0	0
11/16/10 20:30	8.50												-225.5	3.09					-140.9	6.36																				
11/16/10 21:00	9.00												-227.8	3.08					-136.0	6.33																				
11/16/10 21:30	9.50												-230.7	3.08					-138.8	6.40																				
11/16/10 22:00	10.00	20	5		11.10	7.85	113.9	12.05	7.15	114.3		0.0	-235.0	3.09		18.48	0.22	-6.1	-139.8	6.43		19.05	-0.05	0.0		18.83	-0.03	0.0	19.83	-0.13	1.4	790	-0.1	21	0.0	0	0.0	8	0.0	0
11/16/10 22:30	10.50												-237.3	3.09					-141.4	6.46																				
11/16/10 23:00	11.00												-240.9	3.09					-137.4	6.45																				
11/16/10 23:30	11.50												-244.1	3.10					-134.0	6.50																				
11/17/10 0:00	12.00	20	5		11.00	7.95	112.2	12.05	7.15	112.9		0.0	-247.6	3.07		18.48	0.22	-6.7	-132.5	6.52		19.05	-0.05	0.0		18.84	-0.04	0.0	19.80	-0.10	1.1	860	0.0	16	0.0	0	0.0	7	0.0	0
11/17/10 0:30	12.50												-251.3	3.08					-127.5	6.54																				
11/17/10 1:00	13.00												-254.8	3.07					-124.8	6.53																				
11/17/10 1:30	13.50												-258.4	3.07					-123.6	6.56																				
11/17/10 2:00	14.00	20	5		10.80	8.15	111.7	11.95	7.25	111.4		0.0	-262.1	3.06		18.45	0.25	-6.7	-123.8	6.64		19.07	-0.07	0.0		18.86	-0.06	0.0	19.60	0.10	1.1	1220	0.0	6	0.0	0	0.0	5	0.0	0
11/17/10 2:30	14.50												-265.6	3.05					-120.8	6.58																				
11/17/10 3:00	15.00												-269.2	3.04					-116.1	6.57																				
11/17/10 3:30	15.50												-273.1	3.05					-121.4	6.63																				
11/17/10 4:00	16.00	20	5		11.30	7.65	111.3	12.00	7.20	111.1		0.0	-278.9	3.04		18.50	0.20	-7.0	-124.6	6.64		19.05	-0.05	0.0		18.86	-0.06	0.0	19.68	0.02	1.1	950	0.0	4	0.0	0	0.0	4	0.0	0
11/17/10 4:30	16.50												-321.8	3.03					-123.3	6.61																				
11/17/10 5:00	17.00												-327.3	3.02					-116.4	6.62																				
11/17/10 5:30	17.50												-331.0	3.02					-115.0	6.64																				
11/17/10 6:00	18.00	20	5		13.05	5.90	111.0	12.10	7.10	110.9		0.0	-333.9	3.02		18.38	0.32	-7.2	-127.9	6.63		19.05	-0.05	0.0		18.85	-0.05	0.0	19.85	-0.15	0.9	878	-0.3	4	0.0	0	0.0	4	0.0	0
11/17/10 6:30	18.50												-336.5	2.99					-131.5	6.62																				
11/17/10 7:00	19.00												-336.5	3.01					-128.8	6.67																				
11/17/10 7:30	19.50												-339.1	3.03					-130.4	6.63																				
11/17/10 8:00	20.00												-341.0	3.05					-128.2	6.67																				
11/17/10 8:30	20.50												-342.9	3.04					-128.9	6.67																				
11/17/10 9:00	21.00	20	5		9.65	9.30	107	12.25	6.95	105		0.0	-344.3	3.01		18.45	0.25	-7.8	-123.6	6.65		19.05	-0.05	0.0		18.8	0.00	0.0	19.80	-0.10	0.4	1260		0.0		0.0		0.0		0.0
11/17/10 9:30	21.00												-345.7	3.02					-131.5	6.63																				
11/17/10 10:00	21.00												-346.4	2.99					-130.2	6.67																				
11/17/10 10:30	21.00												-346.4	3.00					-136.7	6.59																				
11/17/10 11:00	21.00												-347.4	3.01					-136.7	6.60																				
11/17/10 11:30	21.00												-348.1	3.02					-133.5	6.54																				
11/17/10 12:00	21.00												-349.2	3.01					-129.2	6.51																				
11/17/10 12:30	21.00												-349.9	2.99					-128.5	6.53																				
11/17/10 13:00	21.00												-350.2	2.99					-129.0	6.50																				
11/17/10 13:30	21.00												-350.3	2.97					-130.4	6.45																				
11/17/10 14:00	21.00												-349.3	2.98					-133.5	6.46																				
11/17/10 14:30	21.00												-348.8	2.96					-131.6	6.48																				
11/17/10 15:00	21.00												-349.5	3.00					-131.6	6.50																				
P-3A: SVE Test @20psi- Helium Tracer Test																																								
11/17/10 15:15	21.00	20	5		13.00	5.95	106.5	19.25	-0.30	0.4		0.0				18.66	0.04	0.9				19.1	-0.07	0.0		18.8	0.00	0.0	19.95	-0.25	3.3		0.0		0.0		0.0		0.0	
11/17/10 15:30	21.25												-350.2	2.96					-131.7	6.43																				
11/17/10 15:45	21.50	20	5																																					
11/17/10 16:00	21.75	20	5										-350.2	2.95					-137.0	6.47																				
11/17/10 16:15	22.00	20	5		13.00	5.95	107.8	19.25	-0.30	0.2		0.0				18.67	0.03	0.5				19.1	-0.10	0.0		18.7	0.10	0.0	20.05	-0.35	3.9		0.1		0.0		0.0		0.0	
11/17/10 16:30	22.25												-350.4	2.96					-135.5	6.48																				
11/17/10 16:45	22.50	20	5																																					
11/17/10 17:00	22.75	20	5										-350.6	2.95					-135.7	6.50																				
11/17/10 17:15	23.00	20	5		13.27	5.68	108.1	19.25	-0.30	0.4		0.0				18.75	-0.05	0.9				19.1	-0.06	0.0		18.7	0.10	0.0	19.96	-0.26	6.8		0.0		0.0		0.0		0.0	
11/17/10 17:30	23.25												-350.9	2.92					-135.3	6.44																				
11/17/10 17:50	23.58												-351.0	2.92					-136.7	6.46																				

Abbreviations and Notes:

m/d/yy hh:mm = month/day/year hour:minute.
psi = pounds per square inch.
cfm = cubic feet per minute.
conc. = concentration
ppmv = parts per million by volumn
DTW = depth to water
fbg = feet below grade

ft WC = feet of water column
in. WC = inches of water column
mg/L = miligrams per liter
ORP = oxygen reduction potential
Pres. = pressure
Vac. = vacuum
Blank cell = not applicable or not measured

TABLE 2-A
MARCH 2010 AS/SVE PILOT TEST - VAPOR ANALYTICAL DATA
SHELL-BRANDED SERVICE STATION
1784 150TH AVENUE
SAN LEANDRO, CALIFORNIA

Well ID	*Date and Time*	*TPHg (ppmv)*	*MTBE (ppmv)*	*Benzene (ppmv)*	*Toluene (ppmv)*	*Ethylbenzene (ppmv)*	*Xylenes (ppmv)*
MW-11	3/9/10 0:05	**4,900**	< 2.5	**3.5**	**28**	**18**	**90**
P-3A	3/9/10 0:10	**2,500**	< 0.10	**0.088**	**0.22**	**0.86**	**3.9**
P-4A	3/9/10 0:15	**48**	< 0.10	< 0.050	< 0.050	**0.069**	**0.13**
EW-2	3/9/10 0:20	**10**	< 0.040	**0.028**	**0.11**	**0.51**	**3.0**
SVP-1	3/9/10 0:25	< 1.5	< 0.010	< 0.0050	**0.0053**	**0.014**	**0.084**
SVP-1	3/9/10 8:40	**220**	< 0.10	< 0.050	< 0.050	< 0.050	< 0.10
SVP-2	3/9/10 0:30	< 1.5	< 0.010	< 0.0050	< 0.0050	**0.0053**	**0.033**
SVP-2	3/9/10 8:50	< 1.5	< 0.010	< 0.0050	**0.0088**	**0.0095**	**0.067**
INF-1	3/8/10 23:00	**1,100**	< 0.10	**0.15**	**0.25**	**0.92**	**3.8**
INF-1	3/9/10 2:30	**4,800**	< 2.5	**1.9**	**4.3**	**4.8**	**16**

Abbreviations and Notes:

TPHg = total petroleum hydrocarbons as gasoline by EPA Method TO-3M
MTBE = methyl tertiary-butyl ether by EPA Method 8260B
BTEX = benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B
ppmv = parts per million by Volume
<x = less than the laboratory method reporting limit
NA = not analyzed

TABLE 2-B
NOVEMBER 2010 AS/SVE PILOT TEST - VAPOR ANALYTICAL DATA
SHELL-BRANDED SERVICE STATION
1784 150TH AVENUE
SAN LEANDRO, CALIFORNIA

Well ID	*Date and Time*	*TPHg (ppmv)*	*MTBE (ppmv)*	*Benzene (ppmv)*	*Toluene (ppmv)*	*Ethylbenzene (ppmv)*	*Xylenes (ppmv)*	*Methane %V*	*Methane (ppmv)*	*Carbon Dioxide %V*	*Oxygen and Argon %V*	*Helium %V*
MW-11	11/16/10 9:15	**2,800**	<0.16	**0.28**	<0.080	**0.16**	**0.44**	**0.636**	NA	**8.73**	**6.33**	<0.0100
MW-11	11/17/10 17:51	**2,000**	<2.0	**5.1**	**7.6**	**11**	**44**	<0.500	NA	<0.500	**21.7**	<0.0100
P-3A	11/16/10 9:25	**1,200**	<0.16	<0.080	<0.080	<0.080	**0.19**	<0.500	NA	**8.45**	**7.46**	<0.0100
P-3A	11/17/10 18:00	**1,600**	<2.0	**4.1**	**4.9**	**11**	**39**	<0.500	NA	**3.21**	**16.9**	**0.0662**
P-4A	11/16/10 9:35	**33**	<0.010	<0.0050	<0.0050	<0.0050	**0.023**	<0.500	NA	<0.500	**21.6**	<0.0100
P-4A	11/17/10 17:55	**27**	<0.040	<0.020	**0.044**	**0.19**	**0.89**	<0.500	NA	<0.500	**21.6**	<0.0100
EW-2	11/16/10 9:50	**900**	<0.12	**0.093**	<0.0062	**0.30**	**0.58**	<0.500	NA	**8.75**	**4.46**	<0.0100
EW-2	11/17/10 17:47	**170**	<0.20	<0.10	**0.18**	**0.33**	**2.1**	<0.500	NA	<0.500	**21.8**	**0.0183**
SVE-1	11/16/10 10:00	**1.7**	<0.010	<0.0050	<0.0050	<0.0050	<0.010	<0.500	NA	<0.500	**21.7**	<0.0100
SVP-1	11/16/10 10:10	**35**	<0.010	<0.0050	<0.0050	<0.0050	<0.010	<0.500	NA	**1.81**	**18.7**	<0.0100
SVP-2	11/16/10 10:40	<1.5	<0.013	<0.0066	<0.0066	<0.0066	<0.013	<0.500	NA	**2.25**	**19.9**	<0.0100
SVP-6	11/16/10 10:20	<1.5	<0.010	<0.0050	<0.0050	<0.0050	<0.010	<0.500	NA	**0.959**	**21.1**	<0.0100
SVP-7	11/16/10 10:30	<1.5	<0.010	<0.0050	<0.0050	<0.0050	<0.010	<0.500	NA	<0.500	**21.6**	<0.0100
INF-1	11/16/10 14:50	**1,700**	<0.40	<0.20	<0.20	<0.20	<0.40	NA	**2,700**	NA	NA	NA
INF-1	11/16/10 16:20	**5,400/6,000**[a]	<2.5	**1.9**	**2.90**	**7.2**	**22**	NA	NA	NA	NA	NA
INF-1	11/16/10 19:25	**5,700**	<2.5	**11**	**12**	**21**	**65**	NA	NA	NA	NA	NA
INF-1	11/17/10 17:40	**1,500**	<2.0	**3.6**	**4.7**	**10**	**38**	<0.500	NA	**2.71**	**17.7**	**0.0748**
EFF	11/16/10 19:30	**5.4**	<0.010	**0.026**	**0.020**	**0.012**	**0.039**	NA	NA	NA	NA	NA

<u>Abbreviations and Notes:</u>
TPHg = total petroleum hydrocarbons as gasoline by EPA Method TO-3M
MTBE = methyl tertiary-butyl ether by EPA Method TO-15
BTEX = benzene, toluene, ethylbenzene, and xylenes by EPA Method TO-15
Methane, Carbon dioxide, oxygen and argon, and helium analyzed by ASTM-D 1946
%V = percent by volume
EFF = sample taken from the effluent stream
ppmv = parts per million by Volume
<x = less than the laboratory method reporting limit
NA = not analyzed
a - original sample results were outside the laboratory calibration range. Subsequent analysis was completed after the hold time.

TABLE 3-A
MARCH 2010 AS/SVE PILOT TEST - SVE SYSTEM AND MASS REMOVAL DATA
SHELL-BRANDED SERVICE STATION
1784 150TH AVENUE
SAN LEANDRO, CALIFORNIA

Date/Time	*Cumulative Operation* (hours)	*System Vacuum* (in. Hg)	*Inf-1 Vacuum* (in.WC)	*Inf-1 Temp.* (°F)	*Inf-1 Vapor Flow Rate* (acfm)	(scfm)	*Inf-1 Vapor Conc.* (ppmv)	*Dilution Vacuum* (in.WC)	*Dilution Temp.* (°F)	*Dilution Flowrate* (acfm)	*Dilution Flowrate* (scfm)	*Flow Rate Sum* (scfm)	*Inf-2 Pressure* (in.WC)	*Inf-2 Temp.* (°F)	*Inf-2 Vapor Flow Rate* (acfm)	(scfm)	*Inf-2 Vapor Conc.* (ppmv)	*Influent Hydrocarbon Concentrations* (ppmv) *TPHg*	*Benzene*	*MTBE*	*TPHg* *Removal Rate* (lbs/day)	*Cumulative Removed* (lbs)	*Benzene* *Removal Rate* (lbs/day)	*Cumulative Removed* (lbs)	*Notes*
3/8/10 23:00	0.00	7	108.1	45.0	50.5	38.8	950	109.7	45.0	43	32.8	71.6	1.7	142	21.0	18.5		1,100	0.15	<0.10	13.683	0.000	0.002	0.000	Start SVE on P-3A
3/8/10 23:30	0.50	8	107.7	46.0	34.3	26.3	940	109.0	46.7	41	31.4	57.7	0.9	143	19.5	17.1	78	-	-	-	9.288	0.193	0.001	0.000	
3/9/10 0:00	1.00	8	107.7	44.0	32.9	25.3	-	107.8	44.9	41	31.7	57.1	1.0	144	23.9	20.9		-	-	-	8.944	0.380	0.001	0.000	Start Step test at 5 psi
3/9/10 0:30	1.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.944	0.566	0.001	0.000	
3/9/10 1:00	2.00	8	107.3	46.2	33.4	25.7		108.0	45.8	42	32.3	57.9	1.0	142	28	24.7		-	-	-	39.501	1.39	0.014	0.000	
3/9/10 1:30	2.50	8	107.9	46.7	45.0	34.5	3,300	107.1	42.1	51	39.5	74.0	1.0	146	26.0	22.7	334	-	-	-	53.061	2.49	0.019	0.001	Start 16 psi step
3/9/10 2:00	3.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53.061	3.60	0.019	0.001	
3/9/10 2:30	3.50	8.0	108.5	42.3	60.0	46.3	-	-	-	-	-	-	-	-	-	-	-	4,800	1.9	<2.5	16.322	3.94	0.026	0.002	
3/9/10 3:00	4.00	8.0	107.4	40.2	33.8	26.3	2,560	-	-	-	-	-	-	-	-	-	-	-	-	-	40.440	4.78	0.015	0.002	Stop step test; continue SVE on P-3A
3/9/10 4:00	5.00	8.0	107.6	38.6	34.0	26.5	1,265	-	-	-	-	-	-	-	-	-	-	-	-	-	40.783	6.48	0.015	0.003	
3/9/10 6:00	7.00	-	107.5	38.6	44.0	34.3	837	-	-	-	-	-	-	-	-	-	-	-	-	-	52.796	10.9	0.019	0.004	
3/9/10 9:30	10.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52.796	18.6	0.019	0.007	
3/9/10 10:00	11.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52.796	19.7	0.019	0.007	
3/9/10 10:30	11.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92.391	21.6	0.034	0.008	
3/9/10 11:00	12.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92.391	23.5	0.034	0.009	
3/9/10 11:30	12.50	-	-153.1	57.2	42.7	60.0	653	-	-	0	-	60.0	2.2	148.5	66	57.6	179.2	-	-	-	92.391	25.5	0.034	0.010	
3/9/10 12:30	13.50	-	-151.0	60.3	42.0	58.4	382	-	-	0	-	58.4	2.2	185.5	12	9.9	137.9	-	-	-	89.996	29.2	0.033	0.011	
3/9/10 13:30	14.50	-	-151.0	62.3	42.1	58.4	522.3	-	-	0	-	58.4	2.2	153.5	12	10.4	141.6	-	-	-	89.865	32.9	0.033	0.012	
3/9/10 14:30	14.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				89.865	32.9	0.033	0.012	End of test
																				Total pounds removed:		**32.9**		**0.012**	

Abbreviations and Notes:

in. Hg = inches of mercury column.
in.WC = inches ofwater column.
acfm = actual cubic feet per minute.
scfm = standard cubic feet per minute.
°F = degrees farenheit
lbs/day = pounds per day
Inf-1 = pre-dilution
Inf-2 = post dilution
temp. = Temperature

Conc. = Concentration
Atmospheric pressure = 406.86 in.wC.
scfm = acfm x ((406.86 [in.wC] + discharge pressure [in.wC]) / 406.86 [in.wC]) x (528 [°R] / (Discharge temperature [°F] + 460))
TPHg = Total purgeable hydrocarbons as gasoline
Removal/Emission Rate = C (ppmv) x Q (cfm) x (1lb-mole/386ft3) x MW (lb/lb-mole) x 60 min/hr x 24 hr/day x 10^{-6}
where; C = concentration, Q = flow, MW= molecularweight (86 lb/lb-mole for TPHg, 78 lb/lb-mole for benzene)
- = not measured or not applicable
a = Dilution flow not converted to scfm. The total flow is approximate.

TABLE 3-B
NOVEMBER 2010 AS/SVE PILOT TEST - SVE SYSTEM AND MASS REMOVAL DATA
SHELL-BRANDED SERVICE STATION
1784 150tTH AVENUE
SAN LEANDRO, CALIFORNIA

Date/Time	Cumulative Operation (hours)	System Vacuum (in. Hg)	Inf-1 Vacuum (in.WC)	Inf-1 Temp. (°F)	Inf-1 Vapor Flow Rate (acfm)	Inf-1 Vapor Flow Rate (scfm)	Inf-1 Vapor Conc. (ppmv)	Dilution Vacuum (in.WC)	Dilution Temp. (°F)	Dilution Flowrate (acfm)	Dilution Flowrate (scfm)	Flow Rate Sum (scfm)	Inf-2 Pressure (in.WC)	Inf-2 Temp. (°F)	Inf-2 Vapor Flow Rate (acfm)	Inf-2 Vapor Flow Rate (scfm)	Inf-2 Vapor Conc. (ppmv)	Influent Hydrocarbon Concentrations TPHg (ppmv)	Influent Hydrocarbon Concentrations Benzene (ppmv)	Influent Hydrocarbon Concentrations MTBE (ppmv)	TPHg Removal Rate (lbs/day)	TPHg Cumulative Removed (lbs)	Benzene Removal Rate (lbs/day)	Benzene Cumulative Removed (lbs)	Notes
11/16/10 12:00	0.0	21	100	72.5	18.1	13.5	1900	-	-	0	0	13.5	88.6	83	70.3	83.2	340	-	-	-	7.38	0.000	0.001	0.000	Start SVE on P-3A
11/16/10 12:30	0.5	21	100	72.3	18.0	13.5	1890	-	-	0	0	13.5	89.4	82.8	70.3	83.4	337	-	-	-	7.34	0.153	0.001	0.000	
11/16/10 13:00	1.0	21	100	72.5	18.1	13.5	1905	-	-	0	0	13.5	89.4	83.1	70.3	83.4	335	-	-	-	7.38	0.307	0.001	0.000	Start Step test at 5 psi
11/16/10 13:30	1.5	22	101	71	18.1	13.5	1800	-	-	0	0	13.5	89.4	82	68	80.8	301	-	-	-	7.38	0.461	0.001	0.000	
11/16/10 14:30	2.5	22	102	70.6	14.1	10.5	1630	-	-	0	0	10.5	103	80.0	64	78.4	215	1,700	<0.20	<0.40	5.73	0.699	0.001	0.000	Start 15 psi step
11/16/10 16:00	4.0	22	104	71.8	26.8	19.8	6260	-	-	0	0	19.8	105.8	77.3	62.7	77.6	728	5,400	1.9	<2.5	34.3	2.85	0.011	0.001	
11/16/10 18:30	6.5	22	97	67.6	13.0	9.9	5100	-	-	20.0	-	29.9 a	98.3	67.3	63.7	79.2	950	-	-	-	17.2	4.64	0.006	0.001	Start 20 psi step and added SVE-1
11/16/10 20:00	8.0	20.5	111.2	66.0	51.5	37.6	4100	-	-	0	0	37.6	112.0	70.1	69.7	88.5	860	5,700	11	<2.5	68.7	8.93	0.123	0.009	
11/16/10 22:00	10.0	20.5	114.7	65.0	48.5	35.0	2240	-	-	0	0	35.0	115.0	66.9	68.6	88.2	550	-	-	-	64.1	14.3	0.114	0.019	
11/17/10 0:00	12.0	20.5	113.3	63.4	42.0	30.6	1950	-	-	0	0	30.6	114.0	62.3	65.0	84.1	500	-	-	-	55.9	18.9	0.100	0.027	
11/17/10 2:00	14.0	20.5	111.7	56.0	28.0	20.8	1083	-	-	0	0	20.8	112.9	56.5	75.0	97.9	310	-	-	-	38.0	22.1	0.068	0.033	
11/17/10 4:00	16.0	20.5	111.5	55.9	29.5	21.9	890	-	-	0	0	21.9	112.8	54.8	76.5	100.2	290	-	-	-	40.1	25.4	0.072	0.039	
11/17/10 6:00	18.0	20.5	111.3	55.7	27.8	20.7	735	-	-	0	0	20.7	112.3	53.4	75.9	99.6	250	-	-	-	37.8	28.6	0.068	0.044	
11/17/10 9:00	21.0	20.5	106.0	64.5	27.0	20.1	725	-	-	0	0	20.1	108	79.2	79.0	97.9	212	-	-	-	9.67	29.8	0.022	0.047	Generator ran out of fuel
11/17/10 15:15	21.0	22	107.5	69	14	10.3	2870	-	-	0	0	10.3	107.8	81.2	70.5	87.0	232	-	-	-	4.95	29.8	0.011	0.047	Start of helium tracer test
11/17/10 16:15	22.0	22	109	69.5	23.6	17.2	1605	-	-	0	0	17.2	108	72	67.2	84.4	236	-		-	8.29	30.1	0.018	0.048	
11/17/10 17:15	23.0	22	108	66.5	17.1	12.6	1420	-	-	0	0	12.6	104	66	70.2	88.5	250	1,500	3.6	<2.0	6.06	30.4	0.013	0.048	
11/17/10 18:15	24.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.06	30.6	0.013	0.049	End of test
																				Total pounds removed:		**30.6**		**0.049**	

Abbreviations and Notes:

in. Hg = inches of mercury column.
in.WC = inches ofwater column.
acfm = actual cubic feet per minute.
scfm = standard cubic feet per minute.
°F = degrees farenheit
lbs/day = pounds per day
Inf-1 = pre-dilution
Inf-2 = post dilution
temp. = Temperature

Conc. = Concentration
Atmospheric pressure = 406.86 in.wC.
scfm = acfm x ((406.86 [in.wC] + discharge pressure [in.wC]) / 406.86 [in.wC]) x (528 [°R] / (Discharge temperature [°F] + 460))
TPHg = Total purgeable hydrocarbons as gasoline
Removal/Emission Rate = C (ppmv) x Q (cfm) x (1lb-mole/386ft3) x MW (lb/lb-mole) x 60 min/hr x 24 hr/day x 10^{-6}
where; C = concentration, Q = flow, MW= molecularweight (86 lb/lb-mole for TPHg, 78 lb/lb-mole for benzene)
- = not measured or not applicable
a = Dilution flow not converted to scfm. The total flow is approximate.

TABLE 4
NOVEMBER 2010 AS/SVE PILOT TEST - HELIUM TRACER TEST DATA
SHELL-BRANDED SERVICE STATION
1784 150TH AVENUE
SAN LEANDRO, CALIFORNIA

Time	*Elapsed Time (hours)*	*Sparge Pressure (psi)*	*Sparge flow rate (cfm)*	*AS-1 Helium Pressure (psi)*	*Helium flow rate (cfm)*	*Helium Conc (% v)*	*EW-2 Helium Conc (% v)*	*P-3A Helium Conc (% v)*	*SVE-1 Helium Conc (% v)*	*MW-11 Helium Conc (% v)*	*Notes*
11/17/10 15:15	0.00	20	5	20	6	0.32	0.0	0.02	0.0	1.5	Start of helium tracer test
11/17/10 15:45	0.50	20	5	20	10	0.83	0.0	0.02	0.0	1.7	
11/17/10 16:00	0.75	20	5	20	6	0.41	0.0	0.01	0.0	2.4	
11/17/10 16:15	1.00	20	5	20	6	0.64	0.0	0.01	0.0	2.5	
11/17/10 16:45	1.50	20	5	20	6	1.60	0.0	0.00	0.0	2.4	
11/17/10 17:00	1.75	20	5	20	6	1.30	0.0	0.00	0.0	2.6	End of helium tracer test
						Distance from AS-1 (feet):	11.0	5.00	15.0	7.0	

Notes and Abbreviations:

psi = pounds per square inch

cfm = cubic feet per minute

%v = percent by volume

conc = concentration

APPENDIX A

SITE HISTORY

SITE HISTORY

1986 Waste Oil Tank Removal: In November 1986, Petroleum Engineering of Santa Rosa, California removed a 550-gallon waste-oil tank. Blaine Tech Services, Inc. (Blaine) of San Jose, California collected soil samples (Soil #1 and Soil #2) beneath the former tank at 8 and 11 feet below grade (fbg). The soil samples contained up to 196 milligrams per kilogram (mg/kg) oil and grease. The tank pit was over-excavated to a total depth of 16 fbg, but no additional soil samples were collected. Groundwater was not encountered in the tank excavation. A new 550-gallon fiberglass waste-oil tank was installed in the same location. Details of the tank removal and sampling are summarized in Weiss Associates' (Weiss') October 13, 1989 letter to Shell Oil Products US (Shell).

1990 Well Installation: In March 1990, Weiss drilled one soil boring (BH-A) adjacent to the waste-oil tank which was completed as groundwater monitoring well (MW-1). A soil sample collected at 29 fbg contained 35 mg/kg total petroleum hydrocarbons as gasoline (TPHg) and 0.23 mg/kg benzene. Details of this investigation are presented in Weiss' July 31, 1990 letter.

1992 Well Installations: In February 1992, Weiss drilled two soil borings (BH-B and BH-C), which were completed as monitoring wells (MW-2 and MW-3). A soil sample collected near the water table from boring BH-B (21.5 fbg) contained 79 mg/kg TPHg. Soil samples from boring BH-C, located over 100 feet cross-gradient of the tanks, contained up to 68 mg/kg TPHg at 31.5 fbg. Details of this investigation are presented in Weiss' April 27, 1992 letter report.

1992 Well Survey: In 1992, Weiss reviewed the California Department of Water Resources (DWR) and Alameda County records to identify water wells within a ½-mile radius of the site. A total of 21 wells were identified: 12 monitoring wells, eight irrigation wells, and one domestic well. No municipal wells were identified. The eight irrigation wells and one domestic well are more than 1,000 feet from the site.

1994 Subsurface Investigation: In June 1994, Weiss advanced six soil borings (BH-1 through BH-6) on and off site. No hydrocarbons were detected in soil samples, with the exception of 0.013 mg/kg benzene in boring BH-3 at 16 fbg. No hydrocarbons were detected in grab groundwater samples from borings BH-1, BH-4, BH-5, and BH-6. The grab groundwater sample collected from boring BH-3 contained 20,000 micrograms per liter (μg/l) TPHg and 25,000 μg/l benzene. Details of this investigation are presented in Weiss' October 13, 1994 *Subsurface Investigation* report.

1995 Well Installation: In February and March 1995, Weiss drilled four soil borings (BH-7 through BH-10) and converted BH-10 to monitoring well MW-4. No petroleum hydrocarbons were detected in soil samples from the borings. Grab groundwater samples from BH-7 and BH-9 contained up to 100 µg/l TPHg and 1.0 µg/l benzene. No TPHg or benzene was detected in the grab groundwater sample from BH-10. Groundwater was not encountered in soil boring BH-8. Details of this investigation are presented in Weiss' June 13, 1995 *Subsurface Investigation Report and First Quarter 1995 Monitoring Results.*

1996 Soil Vapor Survey and Soil Sampling: In July 1996, Weiss conducted a subsurface investigation to obtain site-specific data for a risk-based corrective action (RBCA) evaluation of the site. Soil vapor and soil samples were collected from the vadose zone at 10 on- and off-site locations (SVS-1 through SVS-10). The highest soil vapor hydrocarbon concentrations were detected near the northwest corner of the UST complex (sample SVS-5 at 3.0 fbg, which contained 24,000 micrograms per cubic meter [$\mu g/m^3$] benzene). No TPHg, benzene, toluene, ethylbenzene, and xylenes (BTEX), or methyl tertiary-butyl ether (MTBE) were detected in soil samples, with the exception for 1.1 mg/kg TPHg detected in sample SVS-5 at 18 to 20 fbg. Weiss concluded that depleted oxygen concentrations and elevated carbon dioxide and methane concentrations in the vadose zone indicated that biodegradation was occurring. Details of the investigation are presented in Weiss' February 7, 1997 *Soil Vapor Survey Report.*

1997 RBCA Evaluation: In 1997, Weiss prepared a RBCA evaluation which indicated that BTEX, MTBE, 1,2-dichloroethane, and tetrachloroethylene concentrations detected in soil and groundwater beneath the site did not exceed a target risk level of 10^{-5} for residential indoor or outdoor air exposure pathways. However, a risk threshold exceedance was identified associated with ingestion of groundwater from a hypothetical well 25 feet down gradient of the source. Details of this evaluation are presented in Weiss' October 13, 1994 *RBCA Summary Report.*

1997 Dispenser and Turbine Sump Upgrade: In December 1997, Paradiso Mechanical upgraded dispensers and turbine sumps. Cambria Environmental Technology, Inc. (Cambria) collected soil samples Disp-A through Disp-D from beneath the dispenser islands during upgrade activities. Soil samples contained up to 590 mg/kg TPHg (Disp-C at 4.5 fbg), 1.8 mg/kg benzene (Disp-C at 2.0 fbg), and 1.4 mg/kg MTBE (Disp-C at 2.0 fbg). Details of this investigation are presented in Cambria's March 17, 1998 *Dispenser Soil Sampling* report.

1998 Soil Vapor Survey and Soil Sampling: In November 1998, Cambria conducted a subsurface investigation to obtain site-specific data for an updated RBCA evaluation of the site. Soil samples, soil vapor samples, and grab groundwater samples were collected from the vadose zone at three on-site and three off-site locations (SVS-11 through SVS-16). Soil vapor samples contained up to 2.7 parts per million by volume (ppmv) TPHg (C5+ hydrocarbons; SVS-14) and 0.17 ppmv TPHg (C2-C4 hydrocarbons; SVS-15), and 32 $\mu g/m^3$ benzene (SVS-16 at 5 fbg). Soil samples from boring SVS-11 at 19.5 fbg contained 1.6 mg/kg TPHg and 0.0050 mg/kg benzene. No TPHg or benzene was detected in other soil samples. Grab groundwater samples contained up to 130,000 µg/l TPHg and 18,000 µg/l benzene. Details of the investigation are presented in Cambria's September 17, 1999 *Risk-Based Corrective Action* report.

1999 RBCA Evaluation: In September 1999, Cambria prepared a RBCA evaluation for the site. Cambria analyzed the following potential exposure pathways: off-site ingestion of groundwater, on-site ingestion of surficial soil, volatilization of benzene from soil or groundwater into on-site or off-site indoor air, and migration of benzene soil vapor to on-site or off-site outdoor air. Results of Tier 1 and Tier 2 RBCA analyses indicated that contaminants within soil and groundwater did not present significant health risks. Details of this evaluation are presented in Cambria's September 17, 1999 *Risk-Based Corrective Action* report.

2001 Off-Site Monitoring Well Installation: In October 2001, Cambria installed two monitoring wells (MW-5 and MW-6) off site to the southwest. No TPHg, BTEX, or MTBE was detected in soil samples from well boring MW-5. Soil samples from well boring MW-6 contained up to 0.012 mg/kg MTBE with no TPHg or BTEX. This data corroborated Cambria's 1998 subsurface investigation results, which found no TPHg or benzene and only low MTBE concentrations in soil from three borings (SVS-14 through SVS-16) along the private driveway. Details of this investigation are presented in Cambria's December 20, 2001 *Offsite Monitoring Well Installation Report*.

2002-2004 Mobile Groundwater Extraction (GWE): From July 2002 to March 2004, Cambria conducted semi-monthly GWE using monitoring well MW-2. Beginning in March 2004, Cambria conducted semi-monthly GWE alternating between wells MW-2 and MW-11. Beginning in May 2004, Cambria increased the GWE frequency to weekly from both MW-2 and MW-11. Mobile GWE suspended on August 24, 2004. Approximately 19.6 pounds of TPHg, 3.45 pounds of benzene, and 5.12 pounds of MTBE were removed during these activities. The mobile GWE activities are summarized in Cambria's groundwater monitoring reports for this period.

2002 Off-Site Monitoring Well Installation: In October 2002, Cambria drilled one soil boring (SB-9) and installed two monitoring wells (MW-7 and MW-8) in 150th Avenue northwest of the site. Soil samples contained up to 68 mg/kg TPHg (MW-7@30′) and 0.072 mg/kg benzene (MW-8@25′). Grab groundwater samples contained up 83,000 µg/l TPHg (MW-8) and 2,200 µg/l benzene (MW-9). Details of this investigation are presented in Cambria's November 18, 2002 *Offsite Monitoring Well Installation Report.*

2003 Soil and Groundwater Investigation: In June 2003, Cambria drilled six soil borings (SB-10 through SB-14 and SB-16) to the northwest of the site in both 150th Avenue and Portofino Circle and one boring (SB-15) on site. Grab groundwater samples contained up to 67,000 µg/l TPHg (SB-14-W), 530 µg/l benzene (SB-15-W), and 40 µg/l MTBE (SB-15-W). TPHg was detected in only two soil samples (SB-11-30′ and SB-15-36′) at concentrations up to 650 mg/kg. Benzene was detected in only one soil sample (SB-15-35′) at 0.10 mg/kg. Based on typical groundwater depths in nearby well MW-7, it was determined that samples SB-11-30′ and SB-15-36′ were saturated, and results may be more indicative of chemical concentrations in groundwater. Details of this investigation are presented in Cambria's August 28, 2003 *Soil and Water Investigation Report and Work Plan.*

2003 Sensitive Receptor Survey (SRS): In October 2003, Cambria completed an SRS. The SRS targeted the following as potential sensitive receptors: basements within 200 feet, surface water and sensitive habitats within 500 feet, hospitals, residential care, and childcare facilities within 1,000 feet, and water wells within ½-mile. No basements, surface water, sensitive habitats, or educational and childcare facilities were identified within the search radius. The Fairmont Hospital campus, located at 15400 Foothill Boulevard, is located approximately 1,100 feet from the site, just outside the target radius of 1,000 feet.

To update the 1992 well survey performed by Weiss, Cambria researched DWR records in September 2003 and located no additional well records for locations within ½-mile of the site. The closest identified water well potentially used for drinking water was a well installed in 1952 and listed as a "domestic well." This well is located at Fairmont Hospital, approximately 2,445 feet east-southeast of the site. The well is reportedly 138 feet deep and has a screened interval between 62 and 95 fbg. The well's status and operation frequency are unknown. Due to the well's distance from the site and the site's observed groundwater flow directions, it is unlikely that this well would be impacted by groundwater from the site.

2003 Monitoring Well Installation: In November 2003, Cambria installed two on-site (MW-10 and MW-11) and one off-site groundwater monitoring wells (MW-9). MTBE was detected in two soil samples (MW-11-20′ and MW-11-24.5′) at concentrations up to 1.4 mg/kg. TPHg was detected in four soil samples (MW-10-30′, MW-10-31.5′, MW-11-20′, and MW-11-24.5′) at concentrations up to 330 mg/kg. All soil samples with detectable hydrocarbon and MTBE concentrations were saturated soil samples, so identified results appeared more indicative of chemical concentrations in groundwater than soil. Details of this investigation are presented in Cambria's January 12, 2004 *Soil and Water Investigation and Monitoring Well Installation Report.*

2004 Off-Site Investigation: In September 2004, Cambria drilled two soil borings (SB-17 and SB-18) southeast of the site to further delineate the extent of soil and groundwater impacts. No TPHg, BTEX, or fuel oxygenates were detected in soil samples from the borings. Grab groundwater samples collected contained up to 55 μg/l TPHg with no benzene or fuel oxygenates. Results of the investigation are reported in Cambria's December 17, 2004 *Soil and Water Investigation Report.*

2004 Temporary GWE System Installation: From September to November 2004, Cambria operated of a temporary GWE system from wells MW-1, MW-2, and MW-11 as an interim remedial measure to address the elevated petroleum hydrocarbon and MTBE concentrations in groundwater near the west corner of the site. In November 2004, Cambria suspended temporary GWE operations to conduct interim remediation by dual phase extraction (DPE). During these temporary GWE activities approximately 0.448 pounds of TPHg, 0.036 pounds of benzene, and 0.121 pounds of MTBE were removed. Temporary GWE details are provided in Cambria's June 23, 2005 *Interim Remediation Report.*

2004 DPE: In November 2004, Cambria conducted DPE in on-site wells MW-2 and MW-11 as an interim remedial action to reduce hydrocarbon concentrations in groundwater near the western corner of the site and to progress the site. Based on operating parameters and vapor sample analytical results, vapor phase mass removed was approximately 165 pounds TPHg, 0.291 pounds benzene, and 0.063 pounds MTBE. The total liquid-phase mass removed was approximately 5.31 pounds TPHg, 0.193 pounds benzene, and 0.143 pounds MTBE. DPE details are provided in Cambria's June 23, 2005 *Interim Remediation Report.*

2005 Temporary GWE System: Between January 10 and April 13, 2005, Cambria operated a temporary GWE system from MW-11. During these activities, approximately 19.04 pounds of TPHg, 1.69 pounds of benzene, and 3.94 pounds of MTBE were removed from the subsurface. Results of the remediation are reported in Cambria's June 23, 2005 *Interim Remediation Report.*

2005 Fuel System Upgrade: Between March and May 2005, Armer Norman replaced the fuel dispensers and piping and upgraded UST sumps. On March 22 and April 4, 2005, Cambria collected soil samples from beneath each of the four dispensers and the product piping joints. Up to 4,100 mg/kg TPHg (P-4-5.0) was detected in 11 samples, 11 mg/kg benzene (P-4-2.5) was detected in six samples, 0.18 mg/kg MTBE (D-1-3.5) was detected in five samples, and 75.7 mg/kg lead (D-1-3.5) was detected in four samples. Tertiary-butyl alcohol (TBA) was detected in sample D-3-3.5 at a concentration of 0.023 mg/kg. Results of the investigation are reported in Cambria's June 1, 2005 *Dispenser and Piping Upgrade Sampling Report.*

2005 Periodic GWE Restart: In September 2005, Cambria re-instated monthly GWE using monitoring well MW-11, and because of the observed presence of SPH in well MW-1, bimonthly extraction from MW-1 was initiated in September 2006. These activities are continued through August 2007 and are reported in the quarterly groundwater monitoring reports for this period.

2006 Waste Oil Tank Removal: On May 25, 2006, Wayne Perry, Inc. removed one 550-gallon, dual-wall fiberglass waste oil UST. Cambria collected one soil sample (WO-1-6.5) from the sidewall of the UST excavation at a depth of 6.5 fbg. The soil sample contained 45 mg/kg oil and grease, 4.3 mg/kg TPHd, 25.4 mg/kg chromium, 7.09 mg/kg lead, 19.0 mg/kg nickel, and 58.4 mg/kg zinc. Based on these concentrations, Shell submitted an Underground Storage Tank Unauthorized Release (Leak)/Site Contamination Report (Unauthorized Release Report) on June 6, 2006. All detections were below San Francisco Bay Regional Water Quality Control Board environmental screening levels (ESLs) for shallow soil (fewer than 3 meters below grade) where groundwater is a current or potential drinking water source with residential land use.[1] Based on these results, no further investigation of waste oil UST excavation was conducted. Results of the investigation are reported in Cambria's August 4, 2006 *Underground Storage Tank Removal Report.*

2006 Subsurface Investigation: In May 2006, Cambria drilled seven soil borings (SB-19 through SB-25) and installed groundwater monitoring wells (MW-12 & MW-13) in two of the borings to further investigate the vertical and horizontal extent of soil and groundwater impacts. Shallow soil samples collected from borings SB-19, SB-20, SB-21, SB-22, and SB-24 did not contain TPHg or BTEX concentrations exceeding ESLs. Up to 1,060 mg/kg TPHg and 1.38 mg/kg benzene were detected in soil samples collected from the capillary fringe zone in borings SB-19, SB-20, SB-21, SB-23, and SB-24. These

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

detections are considered to be more indicative of groundwater conditions. Fuel oxygenate concentrations were near or below their respective reporting limits in all soil samples collected, and none of the low detections exceeded applicable ESLs. Based on this, the horizontal extent of petroleum hydrocarbons has been adequately defined at the site, and the vertical extent has been defined to the typical groundwater table. TPHg, BTEX, and fuel oxygenate concentrations in grab groundwater samples collected from approximately 20 and 31 fbg in boring SB-25 were below ESLs. Based on this, the vertical extent of petroleum hydrocarbons in groundwater northwest of the site is adequately defined. Results of the investigation are reported in Cambria's July 26, 2006 *Subsurface Investigation Report.*

2007 Agency Response with Proposed Future Actions: In February 2007, Cambria responded to Alameda County Environmental Health's (ACEH's) August 29, 2006 letter which requested updated cross-sections and discussion of other issues. Cambria provided revised cross-sections A-A′ and C-C′, a discussion of delineation of the extent of petroleum hydrocarbons in soil and groundwater, and a risk evaluation based on these delineations. In addition, Cambria proposed delineation of the vertical extent of petroleum hydrocarbons in groundwater and a shallow soil vapor investigation at the site. The complete report is provided in Cambria's February 17, 2007 *Agency Response with Proposed Future Actions.*

2007 Subsurface Investigation: In August and September 2007, Conestoga-Rovers & Associates (CRA) drilled five cone penetrometer test borings (CPT-1 through CPT-3, CPT-5, and CPT-6) to delineate the vertical extent of petroleum hydrocarbons in groundwater, drilled one hollow-stem auger boring (B-1) to delineate the vertical extent of petroleum hydrocarbons in soil adjacent to the UST complex, and installed and sampled five soil vapor probes (SVP-1 through SVP-5). Soil samples from SVP-1 through SVP-3, and SVP-5 did not contain detectable levels of TPHg, BTEX, or MTBE. Soil samples from SVP-4 and B-1 contained concentrations below ESLs for shallow and deep soil where groundwater is not a potential source of drinking water with residential land use. Groundwater grab sample results were all below the ESLs. Based on the results from this investigation, the horizontal extent of petroleum hydrocarbons was adequately defined to below ESLs, and the vertical extent was found to be confined to the shallower groundwater intervals. All soil vapor sample results for TPHg, BTEX, and MTBE were below ESLs for residential land use, with the exception of TPHg in SVP-1, SVP-4, and SVP-5. The result from SVP-5 also exceeded the commercial ESL. Details of this investigation are presented in CRA's December 19, 2007 *Supplemental Subsurface Investigation Report.*

2008-2009 Soil Vapor Probe Sampling: CRA resampled soil vapor probes SVP-1 through SVP-3 and SVP-5 in March, May, and September 2008 and in January 2009 and soil vapor probe SVP-5 in July, and October 2009. SVP-4 could not be sampled due to water in the probe's tubing during the March, May, and September 2008 and in January 2009 events and SVP-5 contained water during the July 2009 event. All soil vapor sample concentrations were below ESLs for residential and commercial land use, with the exception of TPHg, benzene, ethylbenzene, and xylenes in the sample from SVP-5 in September 2008. Cumulative soil vapor sampling results are presented in CRA's December 7, 2009 *Soil Vapor Sampling Report.*

2008 Subsurface Investigation: In September and October 2008, CRA destroyed groundwater monitoring wells (MW-1 and MW-2) because their excessive screen length provided a potential conduit to deeper groundwater, installed three groundwater monitoring wells (MW-1A, MW-1B, and MW-2B) to replace MW-1 and MW-2, and installed two DPE wells (EW-1 and EW-2) and eight piezometers (P-1A through P-4A and P-1B through P-4B) for use in groundwater pump tests and a DPE pilot test. Soil samples did not contain benzene, MTBE, or TBA concentrations above ESLs. Four soil samples contained TPHg, ethylbenzene, and xylenes concentrations which exceed ESLs (P-3B at 27 fbg, EW-1 at 30 fbg, EW-2 at 27 fbg, and P-1B at 30 fbg). Toluene was detected at a concentration above the ESL in one sample (P-3B at 27 fbg). Based on the sample depths, these detections were likely related to groundwater. This investigation is detailed in CRA's February 5, 2009 *Subsurface Investigation Report.*

2008 Multi-Phase Extraction Pilot Test: In November 2008, CRA performed an aquifer pumping test and a multi-phase extraction test to assist in the selection of an appropriate remedial option to address dissolved-phase petroleum hydrocarbons detected in groundwater. This investigation is detailed in CRA's February 5, 2009 *Aquifer Pumping Test and Multi-Phase Extraction Pilot Test Report.*

Groundwater Monitoring Program: Groundwater quarterly groundwater sampling began in March 1990. Historically, separate phase hydrocarbons (SPHs) were observed intermittently in wells MW-1 and MW-2; however since the September 2007 sampling event, no SHPs have been observed. Groundwater is currently monitored and sampled semiannually during the first and third quarters.

APPENDIX B

AIR SPARGE AND SOIL VAPOR EXTRACTION WELL INSTALLATION

AIR SPARGE AND SOIL VAPOR EXTRACTION WELL INSTALLATION

1.0 WELL INSTALLATION

Conestoga-Rovers & Associates (CRA) installed an air sparge (AS) well (AS-1) and a soil vapor extraction (SVE) well (SVE-1) prior to completing an air sparging/soil vapor extraction remediation pilot test. For the AS well installation, CRA followed the scope of work and procedures presented in our November 6, 2009 *Air Sparge/Soil Vapor Extraction Pilot Test Work Plan* which was conditionally approved in Alameda County Environmental Health's (ACEH's) December 30, 2009 letter. For the SVE well installation, CRA followed the scope of work and procedures presented in CRA's *Revised Air Sparge/Soil Vapor Extraction Pilot Test Work Plan* which was approved in ACEH's August 19, 2010 letter.

1.1 PERMITS

CRA obtained drilling permits from Alameda County Public Works Agency (Attachment B-1).

1.2 FIELD DATES

March 1, 2010 (AS-1) and October 1, 2010 (SVE-1).

1.3 DRILLING COMPANY

Gregg Drilling and Testing, Inc.

1.4 PERSONNEL PRESENT

Geologist Erin Swan directed the drilling of AS-1, and Staff Scientist Kari Dupler directed the drilling of SVE-1 under the supervision of California Professional Geologist Peter Schaefer.

1.5 DRILLING METHOD

Hollow-stem auger.

1.6 NUMBER OF BORINGS

Two soil borings were drilled and converted to an air sparge well (AS-1) and soil vapor extraction well (SVE-1). The well specifications and soil types encountered are described on the boring logs contained in Attachment B-2. The well locations are shown on Figure 2.

1.7 BORING DEPTHS

31.0 feet below grade (fbg) (AS-1) and 23.0 fbg (SVE-1).

1.8 WASTE DISPOSAL

Soil and water-knifing sludge generated during field activities were stored on site in 55-gallon drums, sampled, and profiled for disposal. The laboratory analytical report is presented in Attachment B-3. The soil from the March 1, 2010 well installation was transported by American Integrated Services, Inc. (AIS) of Long Beach, California to TPS Technologies, Inc. in Adelanto, California for recycling, and the soil from the October 1, 2010 well installation was transported by AIS to Keller Canyon Landfill in Pittsburg, California for disposal. The water-knifing sludge from both events was transported by AIS to Crosby & Overton, Inc. in Long Beach, California for disposal. The waste disposal manifest for the soil is presented in Attachment B-4.

ATTACHMENTS

ATTACHMENT B-1	PERMITS
ATTACHMENT B-2	BORING LOGS
ATTACHMENT B-3	LABORATORY ANALYTICAL REPORTS
ATTACHMENT B-4	DISPOSAL MANIFESTS

ATTACHMENT B-1

PERMITS

Alameda County Public Works Agency - Water Resources Well Permit

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

Application Approved on: 03/01/2010 By jamesy

Permit Numbers: W2010-0121
Permits Valid from 03/01/2010 to 03/02/2010

Application Id: 1266531089377
Site Location: 1784 150th street
San Leandro, CA
City of Project Site: San Leandro
Project Start Date: 03/01/2010
Completion Date: 03/02/2010
Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org
Applicant: Conestoga Rovers & Associates - Erin Swan
5900 Hollis Street Suite A, Emeryville, CA 94608
Phone: 510-420-3372
Property Owner: Shell Oil Products US Denis Brown Equilon
Enterprises LLC c/o
1980 Post Oak Blvd, Suite 110, Houston, TX 77056
Phone: 707-865-0251
Client: ** same as Property Owner **

	Total Due:	$265.00
Receipt Number: WR2010-0055	**Total Amount Paid:**	$265.00
Payer Name : Constoga Rovers & Associates	Paid By: CHECK	**PAID IN FULL**

Works Requesting Permits:

Remediation Well Construction-Injection - 1 Wells
Driler: Gregg Drilling & Testing - Lic #: 485165 - Method: hstem

Work Total: $265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2010-0121	03/01/2010	05/30/2010	AS-1	6.00 in.	2.00 in.	27.00 ft	31.00 ft

Specific Work Permit Conditions

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

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

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

4. Applicant shall 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. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).

6. Minimum surface seal thickness is two inches of cement grout placed by tremie

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

8. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

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: 09/21/2010 By jamesy

Permit Numbers: W2010-0691 to W2010-0692
Permits Valid from 10/01/2010 to 10/01/2010

Application Id: 1283989953282
Site Location: 1784 150th ST / Shell Station
Project Start Date: 10/01/2010
Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

City of Project Site: San Leandro
Completion Date: 10/01/2010

Applicant: Conestoga-Rovers and Associates - Peter Schaefer
5900 Hollis St. Suite A, Emeryville, CA 94608
Phone: 510-420-0700

Property Owner: Shell Shell Oil Products US
20945 S Wilmington Ave, Carson, CA 90810
Phone: --

Client: ** same as Property Owner **
Contact: Kari Dupler
Phone: 707-933-2370
Cell: 510-459-6454

Receipt Number: WR2010-0317
Payer Name : Conestoga-Rovers and Associates
Paid By: CHECK

Total Due: $530.00
Total Amount Paid: $530.00
PAID IN FULL

Works Requesting Permits:

Remediation Well Construction-Vapor Remediation Well - 1 Wells
Driller: Greg Drilling and Testing - Lic #: 485165 - Method: hstem

Work Total: $265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2010-0691	09/21/2010	12/30/2010	SVE-1	10.00 in.	4.00 in.	8.00 ft	23.00 ft

Specific Work Permit Conditions

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

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

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

4. Applicant shall 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. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).

6. Minimum surface seal thickness is two inches of cement grout placed by tremie

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

Well Construction-Vapor monitoring well-Vapor monitoring well - 3 Wells
Driler: Greg Drilling and Testing - Lic #: 485165 - Method: air **Work Total: $265.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2010-0692	09/21/2010	12/30/2010	SVP-4	4.00 in.	0.25 in.	5.00 ft	5.10 ft
W2010-0692	09/21/2010	12/30/2010	SVP-6	4.00 in.	0.25 in.	5.00 ft	5.10 ft
W2010-0692	09/21/2010	12/30/2010	SVP-7	4.00 in.	0.25 in.	5.00 ft	5.10 ft

Specific Work Permit Conditions

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

2. Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate state reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days, including permit number and site map.

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

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

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

permits and requirements have been approved or obtained.

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

7. Applicant shall 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.

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

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

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

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

ATTACHMENT B-2

BORING LOGS

Boring/Well Log Legend

KEY TO SYMBOLS/ABBREVIATIONS

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

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

fbg = Feet below grade

Blow Counts = Number of blows required to drive a California-modified split-spoon sampler using a 140-pound hammer falling freely 30 inches, recorded per 6-inch interval of a total 18-inch sample interval

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

msl = Mean sea level

Soils logged according to the USCS.

UNIFIED SOILS CLASSIFICATION SYSTEM (USCS) SUMMARY

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

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

CONESTOGA-ROVERS
& ASSOCIATES

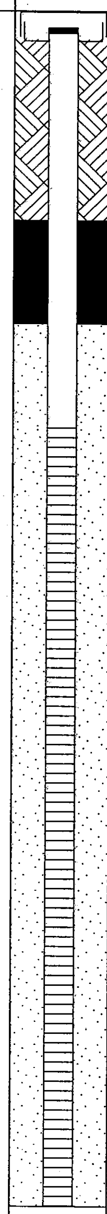
Conestoga Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING / WELL LOG

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME	SVE-1
JOB/SITE NAME	1784 150th Avenue, San Leandro, California	DRILLING STARTED	01-Oct-10
LOCATION	1784 150th Avenue, San Leandro, California	DRILLING COMPLETED	01-Oct-10
PROJECT NUMBER	240612	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Airknife	TOP OF CASING ELEVATION	NA
BORING DIAMETER	10"	SCREENED INTERVALS	8 to 23 fbg
LOGGED BY	K. Dupler	DEPTH TO WATER (First Encountered)	NA ∇
REVIEWED BY	P. Schaefer	DEPTH TO WATER (Static)	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							ASPHALT	0.5
0					SM		**Silty SAND with Gravel (SM)**; reddish brown (5YR 4/4); moist; 15% silt, 55% sand, 30% coarse gravel; non-plastic. @ 2' - 5% silt; 45% sand, 40% gravel.	4.0
				5			**CLAY (CL)**; black (N 2.5/); moist; 80% clay, 20% silt; medium plasticity.	
0				10			@ 9.5' -dark greenish grey (5GY 4/1)	
					GM			
				15			@ 14.5' - greenish grey (5GY 5/1)	
				20				
0								23.0

WELL DIAGRAM



Bottom of Boring @ 23 fbg

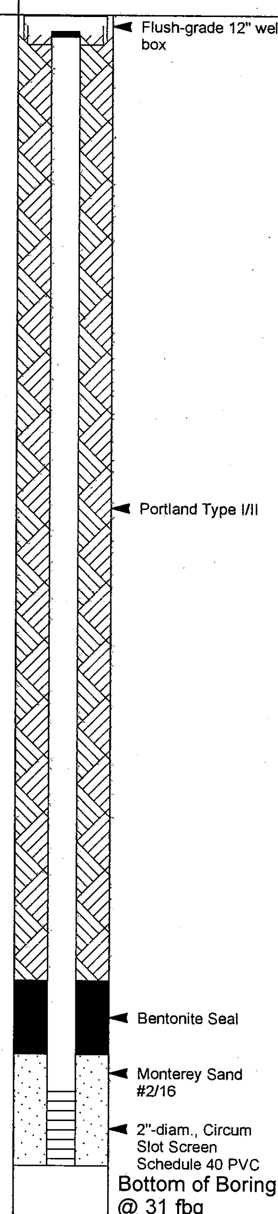
WELL LOG (PID) I:\SHELL\6-CHARS\2406-\240612~1\244BE8~1\240612 GINT (2).GPJ DEFAULT.GDT 12/22/10

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

BORING / WELL LOG

CLIENT NAME	Shell Oil Products Company (US)	**BORING/WELL NAME**	AS-1
JOB/SITE NAME	1784 150th Avenue	**DRILLING STARTED**	01-Mar-10
LOCATION	San Leandro, California	**DRILLING COMPLETED**	01-Mar-10
PROJECT NUMBER	240612	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	6"	**SCREENED INTERVALS**	29 to 31 fbg
LOGGED BY	E Swan	**DEPTH TO WATER (First Encountered)**	NA ∇
REVIEWED BY	P. Schaefer	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT	0.5	
				5					
				10					
				15					
				20					
				25					
				30					



ATTACHMENT B-3

LABORATORY ANALYTICAL REPORTS

Calscience Environmental Laboratories, Inc.

March 18, 2010

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

Subject: **Calscience Work Order No.:** **10-03-0308**
Client Reference: **1784 150th Ave., San Leandro, CA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 3/4/2010 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,

For

Calscience Environmental
Laboratories, Inc.
Xuan H. Dang
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Project: 1784 150th Ave., San Leandro, CA

Date Received:	03/04/10
Work Order No:	10-03-0308
Preparation:	EPA 3050B / EPA 7471A Total
Method:	EPA 6010B / EPA 7471A
Units:	mg/kg

Page 1 of 1

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-A	**10-03-0308-3-A**	**03/01/10 00:00**	**Solid**	**ICP 5300**	**03/08/10**	**03/09/10 21:25**	**100308L06**

Comment(s): -Mercury was analyzed on 3/9/2010 7:35:21 PM with batch 100309L05

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.750	1		Mercury	0.100	0.0835	1	
Arsenic	2.13	0.750	1		Molybdenum	ND	0.250	1	
Barium	65.6	0.500	1		Nickel	67.8	0.250	1	
Beryllium	ND	0.250	1		Selenium	ND	0.750	1	
Cadmium	ND	0.500	1		Silver	ND	0.250	1	
Chromium	78.2	0.250	1		Thallium	ND	0.750	1	
Cobalt	21.3	0.250	1		Vanadium	39.0	0.250	1	
Copper	45.7	0.500	1		Zinc	26.2	1.00	1	
Lead	2.47	0.500	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-04-007-6,880**	**N/A**	**Solid**	**Mercury**	**03/09/10**	**03/09/10 18:53**	**100309L05**

Parameter	Result	RL	DF	Qual
Mercury	ND	0.0835	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-13,280**	**N/A**	**Solid**	**ICP 5300**	**03/08/10**	**03/09/10 20:40**	**100308L06**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.750	1		Lead	ND	0.500	1	
Arsenic	ND	0.750	1		Molybdenum	ND	0.250	1	
Barium	ND	0.500	1		Nickel	ND	0.250	1	
Beryllium	ND	0.250	1		Selenium	ND	0.750	1	
Cadmium	ND	0.500	1		Silver	ND	0.250	1	
Chromium	ND	0.250	1		Thallium	ND	0.750	1	
Cobalt	ND	0.250	1		Vanadium	ND	0.250	1	
Copper	ND	0.500	1		Zinc	ND	1.00	1	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received:	03/04/10
Work Order No:	10-03-0308
Preparation:	T22.11.5. All
Method:	EPA 6010B

Project: 1784 150th Ave., San Leandro, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-A	**10-03-0308-3-A**	**03/01/10 00:00**	**Solid**	**ICP 5300**	**03/12/10**	**03/16/10 16:58**	**100315LA1B**

Parameter	Result	RL	DF	Qual	Units
Chromium	0.201	0.100	1		mg/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-05-006-5,059**	**N/A**	**Solid**	**ICP 5300**	**03/12/10**	**03/15/10 14:44**	**100315LA1B**

Parameter	Result	RL	DF	Qual	Units
Chromium	ND	0.100	1		mg/L

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	03/04/10
5900 Hollis Street, Suite A		Work Order No:	10-03-0308
Emeryville, CA 94608-2008		Preparation:	EPA 3550B
		Method:	EPA 8015B

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-A	**10-03-0308-3-A**	**03/01/10 00:00**	**Solid**	**GC 43**	**03/04/10**	**03/05/10 07:48**	**100304B13**

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.

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics	43	5.0	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	131	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-025-994**	**N/A**	**Solid**	**GC 43**	**03/04/10**	**03/05/10 04:48**	**100304B13**

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics	ND	5.0	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	134	61-145	

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received:	03/04/10
Work Order No:	10-03-0308
Preparation:	EPA 3550B
Method:	EPA 8015B (M)

Project: 1784 150th Ave., San Leandro, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-A	**10-03-0308-3-A**	**03/01/10 00:00**	**Solid**	**GC 43**	**03/04/10**	**03/05/10 07:48**	**100304B14**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	ND	25	1		mg/kg
Surrogates:	REC (%)	Control Limits		Qual	
Decachlorobiphenyl	131	61-145			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-254-1,045**	**N/A**	**Solid**	**GC 43**	**03/04/10**	**03/05/10 04:48**	**100304B14**

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	ND	25	1		mg/kg
Surrogates:	REC (%)	Control Limits		Qual	
Decachlorobiphenyl	134	61-145			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received:	03/04/10
Work Order No:	10-03-0308
Preparation:	EPA 5030B
Method:	LUFT GC/MS / EPA 8260B
Units:	mg/kg

Project: 1784 150th Ave., San Leandro, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-A	**10-03-0308-3-A**	**03/01/10 00:00**	**Solid**	**GC/MS W**	**03/05/10**	**03/05/10 15:43**	**100305L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	1.0	200		Xylenes (total)	30	1.0	200	
Ethylbenzene	5.8	1.0	200		TPPH	430	100	200	
Toluene	1.6	1.0	200						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
Dibromofluoromethane	100	71-137			1,2-Dichloroethane-d4	102	58-160		
Toluene-d8	101	87-111			1,4-Bromofluorobenzene	101	66-126		
Toluene-d8-TPPH	103	87-111							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-798-876**	**N/A**	**Solid**	**GC/MS W**	**03/05/10**	**03/05/10 13:18**	**100305L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	100		Xylenes (total)	ND	0.50	100	
Ethylbenzene	ND	0.50	100		TPPH	ND	50	100	
Toluene	ND	0.50	100						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
Dibromofluoromethane	102	71-137			1,2-Dichloroethane-d4	100	58-160		
Toluene-d8	102	87-111			1,4-Bromofluorobenzene	97	66-126		
Toluene-d8-TPPH	102	87-111							

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received: 03/04/10
Work Order No: 10-03-0308
Preparation: EPA 3050B
Method: EPA 6010B

Project 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-03-0521-1	**Solid**	**ICP 5300**	**03/08/10**	**03/09/10**	**100308S06**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	40	39	50-115	3	0-20	3
Arsenic	101	102	75-125	1	0-20	
Barium	110	108	75-125	1	0-20	
Beryllium	103	106	75-125	3	0-20	
Cadmium	96	99	75-125	3	0-20	
Chromium	111	100	75-125	6	0-20	
Cobalt	105	107	75-125	2	0-20	
Copper	106	108	75-125	2	0-20	
Lead	106	109	75-125	2	0-20	
Molybdenum	96	99	75-125	4	0-20	
Nickel	106	108	75-125	2	0-20	
Selenium	94	97	75-125	3	0-20	
Silver	113	111	75-125	2	0-20	
Thallium	98	102	75-125	3	0-20	
Vanadium	101	102	75-125	1	0-20	
Zinc	89	92	75-125	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received:	03/04/10
Work Order No:	10-03-0308
Preparation:	T22.11.5. All
Method:	EPA 6010B

Project 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-03-0726-10	**Solid**	**ICP 5300**	**03/11/10**	**03/15/10**	**100315SA1**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Chromium	97	92	75-125	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received:	03/04/10
Work Order No:	10-03-0308
Preparation:	EPA 3550B
Method:	EPA 8015B

Project 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CRA-A	Solid	GC 43	03/04/10	03/05/10	100304S13

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Diesel Range Organics	101	81	64-130	20	0-15	4

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received:	03/04/10
Work Order No:	10-03-0308
Preparation:	EPA 3550B
Method:	EPA 8015B (M)

Project 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CRA-A	**Solid**	**GC 43**	**03/04/10**	**03/05/10**	**100304S14**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	96	104	64-130	8	0-15	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received: 03/04/10
Work Order No: 10-03-0308
Preparation: EPA 7471A Total
Method: EPA 7471A

Project 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-03-0535-16	**Solid**	**Mercury**	**03/09/10**	**03/09/10**	**100309S05**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	105	108	71-137	2	0-14	

RPD - Relative Percent Difference , CL - Control Limit

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received:	03/04/10
Work Order No:	10-03-0308
Preparation:	EPA 5030B
Method:	LUFT GC/MS / EPA 8260B

Project 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-03-0254-1	**Solid**	**GC/MS W**	**03/05/10**	**03/05/10**	**100305S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	89	94	40-142	6	0-18	
Carbon Tetrachloride	90	100	37-139	11	0-20	
Chlorobenzene	84	95	43-127	12	0-26	
1,2-Dibromoethane	85	96	70-130	12	0-30	
1,2-Dichlorobenzene	84	90	40-160	8	0-36	
1,1-Dichloroethene	102	110	16-178	8	0-25	
Ethylbenzene	85	94	70-130	10	0-30	
Toluene	87	91	44-128	5	0-15	
Trichloroethene	111	114	47-131	2	0-19	
Vinyl Chloride	87	92	29-161	6	0-42	
Methyl-t-Butyl Ether (MTBE)	88	98	42-150	11	0-34	
Tert-Butyl Alcohol (TBA)	65	80	61-109	21	0-47	
Diisopropyl Ether (DIPE)	89	98	73-133	10	0-25	
Ethyl-t-Butyl Ether (ETBE)	87	97	73-132	11	0-25	
Tert-Amyl-Methyl Ether (TAME)	89	97	82-120	9	0-25	
Ethanol	71	87	39-117	21	0-99	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received:	N/A
Work Order No:	10-03-0308
Preparation:	EPA 3050B
Method:	EPA 6010B

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-002-13,280	**Solid**	**ICP 5300**	**03/08/10**	**03/09/10**	**100308L06**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Antimony	104	106	80-120	73-127	2	0-20	
Arsenic	110	109	80-120	73-127	1	0-20	
Barium	114	116	80-120	73-127	2	0-20	
Beryllium	109	111	80-120	73-127	2	0-20	
Cadmium	108	111	80-120	73-127	3	0-20	
Chromium	107	109	80-120	73-127	2	0-20	
Cobalt	113	115	80-120	73-127	2	0-20	
Copper	107	110	80-120	73-127	2	0-20	
Lead	115	117	80-120	73-127	1	0-20	
Molybdenum	107	109	80-120	73-127	3	0-20	
Nickel	116	117	80-120	73-127	1	0-20	
Selenium	104	104	80-120	73-127	0	0-20	
Silver	115	117	80-120	73-127	2	0-20	
Thallium	107	108	80-120	73-127	1	0-20	
Vanadium	110	112	80-120	73-127	2	0-20	
Zinc	109	110	80-120	73-127	2	0-20	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received: N/A
Work Order No: 10-03-0308
Preparation: T22.11.5. All
Method: EPA 6010B

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-05-006-5,059	**Solid**	**ICP 5300**	**03/12/10**	**03/15/10**	**100315LA1B**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Chromium	98	96	80-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received:	N/A
Work Order No:	10-03-0308
Preparation:	EPA 3550B
Method:	EPA 8015B

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-025-994	Solid	GC 43	03/04/10	03/05/10	100304B13

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Diesel Range Organics	92	93	75-123	1	0-12	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008	Date Received: N/A Work Order No: 10-03-0308 Preparation: EPA 3550B Method: EPA 8015B (M)

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-254-1,045	**Solid**	**GC 43**	**03/04/10**	**03/05/10**	**100304B14**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	101	103	75-123	2	0-12	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received:	N/A
Work Order No:	10-03-0308
Preparation:	EPA 7471A Total
Method:	EPA 7471A

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-04-007-6,880	**Solid**	**Mercury**	**03/09/10**	**03/09/10**	**100309L05**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	99	99	85-121	0	0-10	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received:	N/A
Work Order No:	10-03-0308
Preparation:	EPA 5030B
Method:	LUFT GC/MS / EPA 8260B

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-798-876	Solid	GC/MS W	03/05/10	03/05/10	100305L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	99	100	85-115	80-120	1	0-11	
Carbon Tetrachloride	101	107	68-134	57-145	6	0-14	
Chlorobenzene	104	102	83-119	77-125	2	0-9	
1,2-Dibromoethane	105	106	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	104	106	57-135	44-148	3	0-10	
1,1-Dichloroethene	115	120	72-120	64-128	4	0-10	
Ethylbenzene	104	102	80-120	73-127	2	0-20	
Toluene	99	98	67-127	57-137	1	0-10	
Trichloroethene	105	108	88-112	84-116	3	0-9	
Vinyl Chloride	90	93	57-129	45-141	2	0-16	
Methyl-t-Butyl Ether (MTBE)	102	106	76-124	68-132	4	0-12	
Tert-Butyl Alcohol (TBA)	89	91	31-145	12-164	2	0-23	
Diisopropyl Ether (DIPE)	103	108	74-128	65-137	5	0-10	
Ethyl-t-Butyl Ether (ETBE)	101	106	77-125	69-133	5	0-9	
Tert-Amyl-Methyl Ether (TAME)	105	107	81-123	74-130	2	0-10	
Ethanol	106	100	44-152	26-170	6	0-24	
TPPH	95	95	65-135	53-147	0	0-30	

Total number of LCS compounds : 17
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 10-03-0308

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
E	Concentration exceeds the calibration range.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ CALSCIENCE ( )
- ☐ SPL ( )
- ☐ XENCO ( )
- ☐ TEST AMERICA ( )
- ☐ OTHER ( )

Please Check Appropriate Box:
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&CM ☑ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Peter Schaefer

INCIDENT # (ENV SERVICES): 9 8 9 9 6 0 6 8 ☐ CHECK IF NO INCIDENT # APPLIES

PO #:

SAP #: 1 3 6 0 1 9

DATE: 3/1/10
PAGE: 1 of 1

SAMPLING COMPANY: Conestoga-Rovers & Associates	LOG CODE: CRAW
ADDRESS: 5900 Hollis Street, Suite A, Emeryville, CA 94608	
PROJECT CONTACT (Hardcopy or PDF Report to): Peter Schaefer	
TELEPHONE: 510-420-3319	FAX: 510-420-9170
E-MAIL: pschaefer@craworld.com	

SITE ADDRESS: Street and City: 1784 150th Ave., San Leandro	State: CA
GLOBAL ID NO.: T0600101230	
EDF DELIVERABLE TO (Name, Company, Office Location): Brenda Carter, CRA, Emeryville	PHONE NO.: 510-420-3343
E-MAIL: shell.em.edf@craworld.com	CONSULTANT PROJECT NO.: 240612 (~~240606~~)
SAMPLER NAME(S) (Print): Peter Schaefer	LAB USE ONLY: 10-03-0308

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 :

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED

Copy of final report to Shell.Lab.Billing@craworld.com & kdupler@craworld.com

Call Composite Sample "CRA-A.- Follow attached contingent analysis.

REQUESTED ANALYSIS

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	HCL	HNO3	H2SO4	NONE	Ice OTHER	NO. OF CONT.	TPH - Purgeable (8260B)	TPH - Extractable (8015M)	BTEX (8260B)	5 Oxygenates (8260B)	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	TPH - MO (8015M)	CAM17 Metals - Total (6010)					Container PID Readings or Laboratory Notes
1	CRA-3	3/1/10	15:00	Soil					X	1	X	X	X											X	X					
2	CRA-4	3/1/10	16:00	Soil					X	1	X	X	X											X	X					

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	secure location	3/1/10	18:30
[signature]	Tom Smalley CEL	3/3/10	1005
[signature] CEL 3-3-10 1730	[signature] CEL	030410	0830

06/2/06 Revision

0308

GSO

< WebShip > > > > >

800-322-5555 www.gso.com

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

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

COD:
$0.00

Reference:
ETIC, CRA, ERI, TRC

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 513676591

NPS

ORC

D

GARDEN GROVE

D92843A

79746948

Print Date : 03/03/10 14:03 PM

Package 1 of 1

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 10-03-0308

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: CRA

DATE: 03/04/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 1.8 °C + 0.5 °C (CF) = 2.3 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: ________).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs Only Initial: NC

CUSTODY SEALS INTACT:

☐ Cooler ☐________ ☐ No (Not Intact) ☑ Not Present ☐ N/A Initial: NC

☐ Sample ☐________ ☐ No (Not Intact) ☑ Not Present Initial: WSC

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

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☑Sleeve (5) ☐EnCores® ☐TerraCores® ☐________

Water: ☐VOA ☐VOAh ☐VOAna2 ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna2 ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna2 ☐________ ☐________ ☐________

Air: ☐Tedlar® ☐Summa® **Other:** ☐______ **Trip Blank Lot#:**____________ **Checked by:** WSC

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

Preservative: h: HCL n: HNO3 na2: $Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** WSC

Calscience Environmental Laboratories, Inc.

October 15, 2010

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

Subject: **Calscience Work Order No.: 10-10-0344**
Client Reference: 1784 150th Ave., San Leandro, CA

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 10/6/2010 and analyzed in accordance with the attached chain-of-custody.

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

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

Sincerely,

for

Calscience Environmental
Laboratories, Inc.
Xuan H. Dang
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	10/06/10
5900 Hollis Street, Suite A		Work Order No:	10-10-0344
Emeryville, CA 94608-2008		Preparation:	EPA 3550B
		Method:	EPA 8015B

Project: 1784 150th Ave., San Leandro, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-A	10-10-0344-4-A	10/01/10 00:00	Solid	GC 47	10/06/10	10/07/10 13:27	101006B11

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics	ND	5.0	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	99	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-025-1,442	N/A	Solid	GC 47	10/06/10	10/07/10 11:00	101006B11

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics	ND	5.0	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	90	61-145	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	10/06/10
5900 Hollis Street, Suite A		Work Order No:	10-10-0344
Emeryville, CA 94608-2008		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)

Project: 1784 150th Ave., San Leandro, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-A	10-10-0344-4-A	10/01/10 00:00	Solid	GC 47	10/06/10	10/07/10 13:27	101006B12

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	ND	25	1		mg/kg
Surrogates:	REC (%)	Control Limits		Qual	
Decachlorobiphenyl	99	61-145			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-254-1,574	N/A	Solid	GC 47	10/06/10	10/07/10 11:00	101006B12

Parameter	Result	RL	DF	Qual	Units
TPH as Motor Oil	ND	25	1		mg/kg
Surrogates:	REC (%)	Control Limits		Qual	
Decachlorobiphenyl	90	61-145			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates	Date Received: 10/06/10
5900 Hollis Street, Suite A	Work Order No: 10-10-0344
Emeryville, CA 94608-2008	Preparation: EPA 5030C
	Method: LUFT GC/MS / EPA 8260B
	Units: mg/kg

Project: 1784 150th Ave., San Leandro, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-A	10-10-0344-4-A	10/01/10 00:00	Solid	GC/MS UU	10/06/10	10/07/10 14:12	101007L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		TPPH	ND	0.50	1	
Toluene	ND	0.0050	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	93	63-141		1,2-Dichloroethane-d4	89	62-146	
Toluene-d8	97	80-120		1,4-Bromofluorobenzene	90	60-132	
Toluene-d8-TPPH	98	87-111					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-798-1,206	N/A	Solid	GC/MS UU	10/07/10	10/07/10 13:19	101007L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	ND	0.0050	1	
Ethylbenzene	ND	0.0050	1		TPPH	ND	0.50	1	
Toluene	ND	0.0050	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	97	63-141		1,2-Dichloroethane-d4	97	62-146	
Toluene-d8	96	80-120		1,4-Bromofluorobenzene	96	60-132	
Toluene-d8-TPPH	98	87-111					

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates	Date Received: 10/06/10
5900 Hollis Street, Suite A	Work Order No: 10-10-0344
Emeryville, CA 94608-2008	Preparation: EPA 3050B / EPA 7471A Total
	Method: EPA 6010B / EPA 7471A
	Units: mg/kg
Project: 1784 150th Ave., San Leandro, CA	Page 1 of 1

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-A	10-10-0344-4-A	10/01/10 00:00	Solid	ICP 5300	10/07/10	10/07/10 20:16	101007L02

Comment(s): -Mercury analysis was performed on 10/07/10 16:14 with batch 101007L03.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.750	1		Mercury	ND	0.0835	1	
Arsenic	ND	0.750	1		Molybdenum	ND	0.250	1	
Barium	78.3	0.500	1		Nickel	60.9	0.250	1	
Beryllium	ND	0.250	1		Selenium	ND	0.750	1	
Cadmium	ND	0.500	1		Silver	ND	0.250	1	
Chromium	55.2	0.250	1		Thallium	ND	0.750	1	
Cobalt	18.1	0.250	1		Vanadium	21.2	0.250	1	
Copper	28.4	0.500	1		Zinc	55.2	1.00	1	
Lead	3.68	0.500	1						

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-04-007-7,517	N/A	Solid	Mercury	10/07/10	10/07/10 13:44	101007L03

Comment(s): -Preparation/analysis for Mercury was performed by EPA 7471A.

Parameter	Result	RL	DF	Qual
Mercury	ND	0.0835	1	

Client Sample Number	Lab Sample Number	Date /Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	097-01-002-14,137	N/A	Solid	ICP 5300	10/07/10	10/07/10 16:25	101007L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.750	1		Lead	ND	0.500	1	
Arsenic	ND	0.750	1		Molybdenum	ND	0.250	1	
Barium	ND	0.500	1		Nickel	ND	0.250	1	
Beryllium	ND	0.250	1		Selenium	ND	0.750	1	
Cadmium	ND	0.500	1		Silver	ND	0.250	1	
Chromium	ND	0.250	1		Thallium	ND	0.750	1	
Cobalt	ND	0.250	1		Vanadium	ND	0.250	1	
Copper	ND	0.500	1		Zinc	ND	1.00	1	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	10/06/10
5900 Hollis Street, Suite A		Work Order No:	10-10-0344
Emeryville, CA 94608-2008		Preparation:	T22.11.5. All
		Method:	EPA 6010B

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CRA-A	10-10-0344-4-A	10/01/10 00:00	Solid	ICP 5300	10/08/10	10/11/10 18:43	101011LA6

Parameter	Result	RL	DF	Qual	Units
Chromium	0.334	0.100	1		mg/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	097-05-006-5,358	N/A	Aqueous	ICP 5300	10/08/10	10/12/10 13:10	101011LA6

Parameter	Result	RL	DF	Qual	Units
Chromium	ND	0.100	1		mg/L

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received:	10/06/10
Work Order No:	10-10-0344
Preparation:	EPA 3050B
Method:	EPA 6010B

Project 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-10-0458-1	Solid	ICP 5300	10/07/10	10/07/10	101007S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	11	10	50-115	2	0-20	3
Arsenic	93	93	75-125	0	0-20	
Barium	4X	4X	75-125	4X	0-20	Q
Beryllium	94	97	75-125	3	0-20	
Cadmium	93	95	75-125	3	0-20	
Chromium	100	104	75-125	2	0-20	
Cobalt	97	104	75-125	5	0-20	
Copper	100	104	75-125	2	0-20	
Lead	97	94	75-125	2	0-20	
Molybdenum	83	83	75-125	0	0-20	
Nickel	97	101	75-125	2	0-20	
Selenium	72	75	75-125	5	0-20	3
Silver	90	93	75-125	4	0-20	
Thallium	46	66	75-125	36	0-20	3,4
Vanadium	101	106	75-125	2	0-20	
Zinc	106	123	75-125	5	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

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

Date Received	10/06/10
Work Order No:	10-10-0344
Preparation:	EPA 3050B
Method:	EPA 6010B

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS / PDSD Batch Number
10-10-0458-1	Solid	ICP 5300	10/07/10	10/07/10	101007S02

Parameter	PDS %REC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	88	91	75-125	3	0-20	
Arsenic	95	97	75-125	2	0-20	
Barium	4X	4X	75-125	4X	0-20	Q
Beryllium	94	97	75-125	3	0-20	
Cadmium	91	93	75-125	2	0-20	
Chromium	95	98	75-125	1	0-20	
Cobalt	96	98	75-125	1	0-20	
Copper	107	110	75-125	1	0-20	
Lead	96	97	75-125	1	0-20	
Molybdenum	97	98	75-125	1	0-20	
Nickel	99	101	75-125	1	0-20	
Selenium	85	89	75-125	4	0-20	
Silver	92	95	75-125	3	0-20	
Thallium	90	92	75-125	2	0-20	
Vanadium	100	104	75-125	1	0-20	
Zinc	83	83	75-125	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Conestoga-Rovers & Associates		Date Received:	10/06/10
5900 Hollis Street, Suite A		Work Order No:	10-10-0344
Emeryville, CA 94608-2008		Preparation:	T22.11.5. All
		Method:	EPA 6010B

Project 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-09-2178-1	Solid	ICP 5300	10/08/10	10/12/10	101011SA6

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Chromium	103	103	75-125	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received: 10/06/10
Work Order No: 10-10-0344
Preparation: EPA 3550B
Method: EPA 8015B

Project 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-10-0303-3	Solid	GC 47	10/06/10	10/07/10	101006S11

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Diesel Range Organics	31	180	64-130	68	0-15	3,4

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Conestoga-Rovers & Associates		Date Received:	10/06/10
5900 Hollis Street, Suite A		Work Order No:	10-10-0344
Emeryville, CA 94608-2008		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)

Project 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-10-0303-3	Solid	GC 47	10/06/10	10/07/10	101006S12

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	292	221	64-130	18	0-15	3,4

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received: 10/06/10
Work Order No: 10-10-0344
Preparation: EPA 7471A Total
Method: EPA 7471A

Project 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
10-10-0163-4	Solid	Mercury	10/07/10	10/07/10	101007S03

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	100	99	71-137	1	0-14	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received: 10/06/10
Work Order No: 10-10-0344
Preparation: EPA 5030C
Method: LUFT GC/MS / EPA 8260B

Project 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CRA-A	Solid	GC/MS UU	10/06/10	10/07/10	101007S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	85	91	61-127	7	0-20	
Ethylbenzene	92	100	57-129	9	0-22	
Toluene	88	96	63-123	9	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates		Date Received:	N/A
5900 Hollis Street, Suite A		Work Order No:	10-10-0344
Emeryville, CA 94608-2008		Preparation:	EPA 3050B
		Method:	EPA 6010B

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-002-14,137	Solid	ICP 5300	10/07/10	10/07/10	101007L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Antimony	97	98	80-120	73-127	1	0-20	
Arsenic	98	100	80-120	73-127	2	0-20	
Barium	101	103	80-120	73-127	2	0-20	
Beryllium	93	96	80-120	73-127	3	0-20	
Cadmium	99	99	80-120	73-127	0	0-20	
Chromium	98	99	80-120	73-127	1	0-20	
Cobalt	107	107	80-120	73-127	0	0-20	
Copper	100	101	80-120	73-127	1	0-20	
Lead	101	103	80-120	73-127	1	0-20	
Molybdenum	100	100	80-120	73-127	0	0-20	
Nickel	106	108	80-120	73-127	1	0-20	
Selenium	93	94	80-120	73-127	1	0-20	
Silver	94	96	80-120	73-127	2	0-20	
Thallium	101	101	80-120	73-127	0	0-20	
Vanadium	97	98	80-120	73-127	1	0-20	
Zinc	103	103	80-120	73-127	0	0-20	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates	Date Received: N/A
5900 Hollis Street, Suite A	Work Order No: 10-10-0344
Emeryville, CA 94608-2008	Preparation: T22.11.5. All
	Method: EPA 6010B

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-05-006-5,358	Aqueous	ICP 5300	10/08/10	10/12/10	101011LA6

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Chromium	106	106	80-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates	Date Received: N/A
5900 Hollis Street, Suite A	Work Order No: 10-10-0344
Emeryville, CA 94608-2008	Preparation: EPA 3550B
	Method: EPA 8015B

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-025-1,442	Solid	GC 47	10/06/10	10/07/10	101006B11

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Diesel Range Organics	100	91	75-123	10	0-12	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates		Date Received:	N/A
5900 Hollis Street, Suite A		Work Order No:	10-10-0344
Emeryville, CA 94608-2008		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-254-1,574	Solid	GC 47	10/06/10	10/07/10	101006B12

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	87	90	75-123	4	0-12	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received:	N/A
Work Order No:	10-10-0344
Preparation:	EPA 7471A Total
Method:	EPA 7471A

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-04-007-7,517	Solid	Mercury	10/07/10	10/07/10	101007L03

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	100	100	85-121	0	0-10	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates		Date Received:	N/A
5900 Hollis Street, Suite A		Work Order No:	10-10-0344
Emeryville, CA 94608-2008		Preparation:	EPA 5030C
		Method:	LUFT GC/MS / EPA 8260B

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-798-1,206	Solid	GC/MS UU	10/07/10	10/07/10	101007L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	95	97	78-120	2	0-20	
Ethylbenzene	98	100	76-120	2	0-20	
Toluene	97	98	77-120	1	0-20	
TPPH	86	85	65-135	1	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 10-10-0344

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

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)

- [x] CALSCIENCE (______)
- [ ] SPL (______)
- [ ] XENCO (______)
- [ ] TEST AMERICA (______)
- [ ] OTHER (______)

Please Check Appropriate Box:

- [ ] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [x] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER ______

Print Bill To Contact Name: Peter Schaefer

PO #:

INCIDENT # (ENV SERVICES): 98996068

- [ ] CHECK IF NO INCIDENT # APPLIES

SAP #: 136019

DATE: 10-1-10

PAGE: 1 of 2

SAMPLING COMPANY	Conestoga-Rovers & Associates
LOG CODE	CRAW
SITE ADDRESS: Street and City	
State	CA
GLOBAL ID NO	T0600101230
ADDRESS	5900 Hollis Street, Suite A, Emeryville, CA 94608
EDF DELIVERABLE TO (Name, Company, Office Location)	Brenda Carter, CRA, Emeryville
PHONE NO	510-420-3343
E-MAIL	shelledf@craworld.com
CONSULTANT PROJECT NO	240012-95-10.C
PROJECT CONTACT (Hardcopy or PDF Report to)	Peter Schaeffer
SAMPLER NAME(S) (Print)	Kari Dupler
TELEPHONE	510-420-0700
FAX	510-420-9170
E-MAIL	PSchaefer@craworld.
LAB USE ONLY	10-0344

TURNAROUND TIME (CALENDAR DAYS):

- [x] 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 :

- [x] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] EDD NOT NEEDED
- [x] RECEIPT VERIFICATION REQUESTED

cc: Kari Dupler, kdupler@craworld.com and Shell.Lab.Billing@craworld.com

Marked TAT except for those contingent tests needed for Aquatic Bioassay determination (5 day TAT or better may apply)

Call composite sample ID and field point name: CRA-A

REQUESTED ANALYSIS

TEMPERATURE ON RECEIPT C°:

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	TPH - Purgeable (8260B)	TPH - Extractable (8015M)	BTEX (8260B)	5 Oxygenates (8260B)	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	TPH - MO (8015M)	CAM17 Metals - Total (6010)	SVOCs (8270C)	VOCs (8260)	PCBs (8082)		Container PID Readings or Laboratory Notes
1	CRA-3A	10/1	1115	SO						1	X	X	X											X	X					Please call
2	CRA-4A	10/1	1157	SO						1	X	X	X											X	X					composite
3	CRA-5A	10/1	1202	SO						1	X	X	X											X	X					sample
																														CRA-A

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Kari Dupler	SECURE LOCATION	10-1-10	1850
[signature]	Tom O'Malley CEL	100510	0940
[signature] TO (GSO) 10-5-10 1730	[signature]	10/6/10	1030

05/2/08 Revision

0344

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

Metal	Trigger level TTLC (mg/kg)	Requirement
Antimony	150	STLC required if TTLC ≥ 150 mg/kg
Arsenic	50/100	STLC required if TTLC ≥ 50 mg/kg; STLC and TCLP required if TTLC ≥ 100 mg/kg
Barium	1,000/2,000	STLC required if TTLC ≥ 1,000 mg/kg; STLC and TCLP required if TTLC ≥ 2,000 mg/kg
Beryllium	7.5	STLC required if TTLC ≥ 7.5 mg/kg
Cadmium	10/20	STLC required if TTLC ≥ 10 mg/kg; STLC and TCLP required if TTLC ≥ 20 mg/kg
Chromium	50/100	STLC required if TTLC ≥ 50 mg/kg; 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
Lead	50/100	STLC required if TTLC ≥ 50 mg/kg; STLC and TCLP required if TTLC ≥ 100 mg/kg
Mercury	2/4	STLC required if TTLC ≥ 2 mg/kg; 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
Selenium	10/20	STLC required if TTLC ≥ 10 mg/kg; STLC and TCLP required if TTLC ≥ 20 mg/kg
Silver	50/100	STLC required if TTLC ≥ 50 mg/kg; 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

03HH

GSO

< WebShip > > > > >

800-322-5555 www.gso.com

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

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

COD:
$0.00

Reference:
BTS, CRA, STANTEC, STRATUS

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 515087069

NPS

ORC

D

GARDEN GROVE

D92843A

85233173

Print Date : 10/05/10 15:03 PM

Package 1 of 1

Send Label To Printer ☑ Print All Edit Shipment Finish

LABEL INSTRUCTIONS:

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

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

STEP 2 - Fold this page in half.

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

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

ADDITIONAL OPTIONS:

Send Label Via Email Create Return Label

TERMS AND CONDITIONS:

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

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 10-10-0354

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: CRA

DATE: 10/06/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 2.6 °C + 0.5 °C (CF) = 3.1 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: ________).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter

Initial: JP

CUSTODY SEALS INTACT:

☑ Cooler ☐ ________ ☐ No (Not Intact) ☐ Not Present ☐ N/A Initial: JP

☐ Sample ☐ ________ ☐ No (Not Intact) ☑ Not Present Initial: PS

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

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☑Sleeve (5) ☐EnCores® ☐TerraCores® ☐________

Water: ☐VOA ☐VOAh ☐VOAna₂ ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna₂ ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna₂ ☐________ ☐________ ☐________

Air: ☐Tedlar® ☐Summa® **Other:** ☐______ **Trip Blank Lot#:** ________ **Labeled/Checked by:** PS

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

Preservative: h: HCL n: HNO_3 na₂: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** PS

ATTACHMENT B-4

DISPOSAL MANIFESTS

Manifest

TPST Soil Recyclers of CA
Non-Hazardous Soils

Manifest # 4

Date of Shipment:	Responsible for Payment:	Transporter Truck #:	Facility #:	Given by TPST:	Load #
	Transporter		A07	35086	1 0 0 1

Generator's Name and Billing Address:		
Shell Oil Products US One Shell Plaza, 910 Louisiana, Rm #673 Houston, TX 77002	Generator's Phone #: 713-241-7011 Person to Contact: FAX#:	Generator's US EPA ID No. Customer Account Number with TPST:

Consultant's Name and Billing Address:		
	Consultant's Phone #: Person to Contact: FAX#:	 Customer Account Number with TPST:

Generation Site (Transport from): *(name & address)*		
Shell Oil Products US RIPR# 82805 1784 150th Street SAP# 136019 San Leandro, CA 94578 Incident# 98996068	Site Phone #: Person to Contact: FAX#:	BTEX Levels TPH Levels AVG. Levels

Designated Facility (Transport to): *(name & address)*		
TPS Technologies 12328 Hibiscus Rd. Adelanto, CA 92301-1700	Facility Phone #: (800) 862-8001 Person to Contact: Deliona Jeffrey FAX#: (760) 246-8004	Facility Permit Numbers

Transporter Name and Mailing Address:		
American Integrated Services, Inc. P.O. Box 92316 Long Beach, CA 90809-2316	Transporter's Phone #: (310) 522-1168 Person to Contact: Melynda Borrego FAX#: (310) 522-1182	Transporter's US EPA ID No.: CAR000148338 Transporter's DOT No.: Customer Account Number with TPST: 7704908

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐	2		1920	780	1140
Sand ☐ Organic ☐ Clay ☐ Other ☐	0 - 10% ☐ 10 - 20% ☐ 20% - over ☐	Gas ☐ Diesel ☐ Other ☐					.57

List any exception to items listed above: AIS Project # 30038-14

Scale Ticket# 785413

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator ☐ Consultant ☐
AIS on behalf of SOPUS - J Sherman

Signature and date: Month 03 Day 25 Year 10

Transporter

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: Rigo Valencia

Signature and date: Month 03 Day 25 Year 10

Recycling Facility

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name:

Signature and date: 3-29-10

Please print or type

TPS INVOICING COPY

Generator and/or Consultant

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
NOT REQUIRED	1	800-424-9300	212808

5. Generator's Name and Mailing Address

Shell Oil Products US

One Shell Plaza, 910 Louisiana, Rm #673, Houston, TX 77002

Generator's Site Address (if different than mailing address)

1784 150th Street

San Leandro, CA 94578

Generator's Phone 713-241-7011

6. Transporter 1 Company Name

American Integrated Services, Inc.

U.S. EPA ID Number CAR000148338

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

Crosby & Overton, Inc.

1630 W. 16th Street

Long Beach, CA 90813

Facility's Phone: 562-432-5445

U.S. EPA ID Number CAD028409019

9a.	9b. U.S. DOT Description (including Proper Shipping Name)	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non-Hazardous Waste Liquid, (Sludge)	~~1~~ 2	TT ~~DM~~	90	G
	2.				
	3. THE REFERENCED WASTE WAS RECEIVED AND TREATED TO STANDARDS MANDATED BY THE FEDERAL CLEAN WATER ACT AND EFFLUENT REQUIREMENTS SET FORTH BY THE LOS ANGELES COUNTY SANITATION DISTRICTS WASTE TREATMENT IS PERFORMED UNDER PERMITS GRANTED TO CROSBY & OVERTON, INC. BY THE DEPARTMENT OF TOXIC SUBSTANCE CONTROL, TOGETHER WITH THE ENVIRONMENTAL PROTECTION AGENCY IN ACCORDANCE WITH THE PROVISIONS OF THE RESOURCE				
	4. CONSERVATION AND RECOVERY ACT OF 1976 TOGETHER WITH APPLICABLE FEDERAL AND STATE REGULATIONS. CROSBY & OVERTON HAS ALL OF THE NECESSARY PERMITS TO ACCEPT THE REFERENCED WASTE AND ALL THE WASTE HAS BEEN HANDLED IN ACCORDANCE WITH RCRA AND PROPOSITION 65 SUCH THAT THE CERTIFICATE [illegible] R'S LIABILITY HAS BEEN TERMINATED				

13. Special Handling Instructions and Additional Information

D28974 L#4433.

Wear protective equipment while handling. Weights or volumes are approximate. 24 hour emergency number (800) 424-9300 Chemtrec.

RIPR#: 82804
SAP#: 136019
Incident#: 98996068
Profile#: 27578
Project #: 30038-14

2 drums

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: AIS on behalf of SOPUS - J Sherman

Signature

Month Day Year: 03 25 10

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgement of Receipt of Materials

Transporter 1 Printed/Typed Name: Ryo Valencia

Signature

Month Day Year: 03 25 10

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

H135

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Laura Christensen

Signature

Month Day Year: 03 31 10

169-BLC-O 5 11977 (Rev. 9/09)

DESIGNATED FACILITY TO GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number NOT REQUIRED	2. Page 1 of 1	3. Emergency Response Phone 800-424-9300	4. Waste Tracking Number 215823

5. Generator's Name and Mailing Address
Shell Oil Products US
One Shell Plaza, 910 Louisiana, Room #673, Houston, TX 77002
Generator's Phone

Generator's Site Address (if different than mailing address)
1784 150th
San Leandro, CA. 94578

6. Transporter 1 Company Name
American Integrated Services, Inc.
U.S. EPA ID Number CAR000148338

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Keller Canyon Landfill
901 Bailey Road
Pittsburg, CA 94565 925-458-9800
Facility's Phone:
U.S. EPA ID Number Not Required

9a.	9b. U.S. DOT Description (including Proper Shipping Name)	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non-Hazardous Waste Solid (Soil)	3	DM	1150	P
	2.				
	3.				
	4.				

13. Special Handling Instructions and Additional Information

Wear protective equipment while handling. Weights or volumes are approximate. 24 hour emergency number (800) 424-9300 Chemtrec.

RIPR#: 85830
SAP#: 136019
Incident#: 98996068
Profile#: 4212107702
Project #: 38898-14

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: AIS on behalf of SOPUS - J Sherman
Signature: [signature]
Month/Day/Year: 10 / 19 / 10

15. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter Signature (for exports only):
Date leaving U.S.:

16. Transporter Acknowledgement of Receipt of Materials
Transporter 1 Printed/Typed Name: Rigo Valencia
Signature: [signature]
Month/Day/Year: 10 / 19 / 10
Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Felipe Corrego
Signature: [signature]
Month/Day/Year: 11 / 01 / 10

GENERATOR / INT'L / TRANSPORTER / DESIGNED FACILITY

169-BLC-O 5 11977 (Rev. 9/09)

TRANSPORTER #1

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: NOT REQUIRED
2. Page 1 of 1
3. Emergency Response Phone: 800-424-9300
4. Waste Tracking Number: 215824

5. Generator's Name and Mailing Address:
Shell Oil Products US
One Shell Plaza, 910 Louisiana, Room #673, Houston, TX 77002
Generator's Phone:

Generator's Site Address (if different than mailing address):
17784 150th
San Leandro, CA 94578

6. Transporter 1 Company Name: American Integrated Services, Inc.
U.S. EPA ID Number: CAR000148338

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address:
Crosby & Overton, Inc.
1630 W. 16th Street
Long Beach, CA 90813
Facility's Phone: 562-432-5445
U.S. EPA ID Number: CAD028409019

9a.	9b. U.S. DOT Description (including Proper Shipping Name)	10. Containers No	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. Non-Hazardous Waste Liquid (Sludge)	3	DM	150	G
	2.				
	3.				
	4.				

13. Special Handling Instructions and Additional Information
[illegible handwriting]

Wear protective equipment while handling. Weights or volumes are approximate. 24 hour emergency number (800) 424-9300 Chemtrec.

RIPR#: 85931
SAP#: 135019
Incident#: 98998088
Profile#: 27578
Project #: [illegible]

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: AIS on behalf of SOPUS J. Sherman
Signature: [signature]
Month / Day / Year: 10 / 19 / 10

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgement of Receipt of Materials
Transporter 1 Printed/Typed Name: Kiao Valencia
Signature: [signature]
Month / Day / Year: 10 / 19 / 10
Transporter 2 Printed/Typed Name:
Signature:
Month / Day / Year:

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month / Day / Year:

HIS

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: [illegible]
Signature: [signature]
Month / Day / Year: [illegible]

GENERATOR | INT'L | TRANSPORTER | DESIGNED FACILITY

169-BLC-O 5 11977 (Rev. 9/09)

TRANSPORTER #1

APPENDIX C

FIELD DATA SHEETS

CONESTOGA-ROVERS & ASSOCIATES

SOIL VAPOR EXTRACTION - SYSTEM DAT HEET

Client: Shell Oil Products US

Site ID & Location: 1784 150th Ave, San Leandro

Vapor Extraction Well(s): P-3A

Date: 3/8 3/9

Technician(s): Jeff / Tom

Sparge Well(s): AS-1

Elapsed Time (min)	Time	Hour-meter (hrs)	Pre-knockout (INF-1) Well Vapor Flow (acfm)	Well Vapor Temp. (° F)	Well Vapor Vacuum (in. WC)	Well Vapor Vapor Conc. (ppmv)	Dilution Air Flow (acfm)	Dilution Air Temp. (° F)	Dilution Air Vacuum (in. WC)	Blower (INF-2) Blower Vacuum (" Hg)	Vapor Flow (acfm)	Temp. (° F)	Pressure (in. WC)	Vapor Conc. (ppmv)	Oxidizer Temp. (° F)	Effluent Vapor Conc. (ppmv)	KO Totalizer (gals)	Notes
Start SVE system																		
0	11:00 PM	174475	50.5	45.0	108.1	950	43.0	45.0	109.7	7	21.0	142	1.7		910	Ø	NA	Collect samples
30	11:30	17447.1	34.3	46.0	107.7	940	41.2	46.7	109.0	8	19.5	143	0.9	78	908			
60	00:15	174465	32.9	44.0	107.7	x	41.3	44.9	107.8	8	23.9	144	1.0	x	915		NA	AS test @ 5psi, collect samples
90	00:30	missed data points assisting Jeff with sample collection of wells																x collect air samples missed data points
120	01:00	17445.9	33.4	46.2	107.3	x	42.1	45.8	108.0	8	28.1	142	1.0	x	925		NA	
150	1:30	17445.2	45	46.7	107.9	3300	51.0	42.1	107.1	8	26.0	146	1.6	334	935		NA	
180										8								
210	2:30		60.0	42.3	108.5					8								Collect samples
240	300		33.8	40.2	107.4	2560				8								
270	400		34.0	38.6	107.6	1265												
300																		
330																		Collect samples
360	600		44.0	38.6	107.5	837												
390																		
																		Continue test @ optimal pressure/flow

Continued on next sheet

NOTES: Open mw-11 @ 12:12
P-3a @ 12:17
P-4a @ 12:22
EW-2 @ 12:27
SVP-1 @ 12:40
SVP-2 @ 12:59

Rev 0, 05/21/2008

CONESTOGA-ROVERS & ASSOCIATES

SOIL VAPOR EXTRACTION / AIR SPARGE PILOT TEST
SOIL VAPOR EXTRACTION - SYSTEM DATA SHEET

Client: Shell Oil Products US

Site ID & Location: 1784 150th Ave, San Leandro

Vapor Extraction Well(s): P-3A

Page: ______ of ______ Date: ______

Technician(s): ______

Sparge Well(s): AS-1

Elapsed Time (min)	Time	Hour-meter (hrs)	Pre-knockout (INF-1) Well Vapor Flow (acfm)	Well Vapor Temp. (° F)	Well Vapor Vacuum (in. WC)	Well Vapor Vapor Conc. (ppmv)	Dilution Air Flow (acfm)	Dilution Air Temp. (° F)	Dilution Air Vacuum (in. WC)	Blower (INF-2) Blower Vacuum (" Hg)	Vapor Flow (acfm)	Temp. (° F)	Pressure (in. WC)	Vapor Conc. (ppmv)	Oxidizer Temp. (° F)	Effluent Vapor Conc. (ppmv)	KO Totalizer (gals)	Notes
Start AS constant test																		Continue test @ optimal pressure/flow
~~420~~	1130	174375	42.7	57.2	-153.1	653.4	0	0	0	-11.28	66	148.5	2.2	179.2	857			
~~480~~	1230	174365	42.0	60.3	-151.0	382.1	0	0	0	11.17	12	185.5	2.2	137.9	819			
~~540~~	1330	174354	42.1	62.3	-151.0	5223	0	0	0	11.09	12	153.5	2.2	141.6	762			
600																		
660																		
720																		
780																		
840																		
900																		Collect samples
960																		
1020																		
1080																		
1140																		
1200																		
1260																		
Start Helium Tracer Test																		
1320																		
1380																		
End Helium Tracer Test																		Allow Helium to dessipate
1440																		Collect samples, shut down AS
																		Shutdown system

NOTES:

CONESTOGA-ROVERS & ASSOCIATES

SOIL VAPOR EXTRACTION/AIR SPARGE FIELD TEST
SOIL VAPOR EXTRACTION - WELL DATA SHEET

Client: Shell Oil Products US
Site ID &Location: 1784 150th Ave, San Leandro
Extraction Well(s): P-3A

Page: 1 of ____
Date: 3/8 - 3/9
Technician(s): Jeff / Tom
Sparge Well(s): AS-1

Elapsed Time (min)	Time	P-3A Casing Vacuum (" WC)	P-3A DTW (ft)	P-3B (3'3" ft) Pressure / Vacuum (" H_2O)	P-3B DTW (ft)	P-4A (14'4" ft) Pressure / Vacuum (" H_2O)	P-4A DTW (ft)	P-4B (12'1" ft) Pressure / Vacuum (" H_2O)	P-4B arp/ DTW (ft)	MW-11 (12'2" ft) Pressure / Vacuum (" H_2O)	MW-11 DTW (ft)	EW-2 (10'10" ft) Pressure / Vacuum (" H_2O)	EW-2 DTW (ft)	AS-1 (7'10" ft) Pressure / Vacuum (" H_2O)	AS-1 DTW (ft)	Notes
STATIC DTW:			15.56		16.23		16.92		16.73		17.53		16.72		16.35	Record static depth to water measurements for all wells in this row prior to starting the test.
Start SVE system						YSI 600						YSI 600 w/ depth				
18 0	23:00	-108.1		Ø	m@16.31	Ø		Ø	16.79/16.80	-1.6	17.56	-0.6	16.78	Ø	unable	Collect samples
30	23:30	-107.7		0.5		Ø		0.5		-1.3		Ø		Ø		
19 60	0015	-107.2		-0.5	—	Ø		Ø	—	Ø	—	1.1	—	90.5	—	AS test @ 5psi, collect samples
90	00:30	missed data points Assisting Jeff with sample collection of wells														
120	01:00	-107.9		Ø	16.26	Ø	16.96	Ø	16.96	0.5	17.50'	0.5	16.77	91.4	unable	
150	01:30	-107.1		Ø		Ø		0.5		Ø		0.5		over scale		
180	02:00	-107.4		Ø	16.26	Ø	16.94	0.5	16.76	Ø	17.57	0.5	16.77	over scale	unable	
210	02:30	shut down Air sparge due after INF-1 sample (SVP-1 - 3500ppmv)														1430 collect sample Inf-1 shut down Air sparge
240	03:00															~~Collect samples~~ SVE only
~~270~~	04:00	-107.1		Ø		Ø		Ø		-0.9		Ø		Ø		
300																
330	0600	-107.2		Ø		Ø		Ø		-1.1		Ø		Ø		Collect samples
360																
390																Continue test @ optimal pressure/flow
Start ~~Air Sparge test~~				EW-2		SVP-1										
3/9/10	09:30			.1		1.0										
3/9/10	10:00			.0		1.1										
3/9/10	10:30			.0		1.0										
3/9/10	11:00			.0		.7										
Continued on next sheet																

CONESTOGA-ROVERS & ASSOCIATES

SOIL VAPOR EXTRACTION /AIR SPARGE PIL TEST
SOIL VAPOR EXTRACTION - WELL DAT HEET

Client: Shell Oil Products US

Site ID &Location: 1784 150th Ave, San Leandro

Extraction Well(s): P-3A

Page: ______ of ______ Date: ______

Technician(s): ______

Sparge Well(s): AS-1

Elapsed Time (min)	Time	P-3A Casing Vacuum (" WC)	P-3A DTW (ft)	P-3B ___ ft Pressure/ Vacuum (" H_2O)	P-3B DTW (ft)	P-4A ___ ft Pressure/ Vacuum (" H_2O)	P-4A DTW (ft)	P-4B yellow ___ ft Pressure/ Vacuum (" H_2O)	P-4B DTW (ft)	MW-11 ___ ft Pressure/ Vacuum (" H_2O)	MW-11 DTW (ft)	EW-2 ___ ft Pressure/ Vacuum (" H_2O)	EW-2 DTW (ft)	SVP-1 ___ ft Pressure/ Vacuum (" H_2O)	SVP-1 DTW (ft)	Notes
Start AS constant test																Continue test @ optimal pressure/flow
~~420~~	1130	154.5	4.75	.5	6.33	-.3		.3	17.01	1.2	17.54	.0	6.82			
~~480~~	1230	151.4		.0		.0		.0		1.2		.0		.5		Download Troll Data
540	1330	151.2		.0		.0		.0		1.3		.0		0		SVP-1 87.3
600																
660																
720																
780																
840																
900																Collect samples
960																Download Troll Data
1020																
1080																
1140																
1200																
1260																
Start Helium Tracer Test																
1320	No Measurements															
1380	No Measurements															
End Helium Tracer Test																Allow Helium to dessipate
1440																Collect samples, Download Troll Data, shut down AS
																Shutdown system

CONESTOGA-ROVERS & ASSOCIATES

SOIL VAPOR EXTRACTION / AIR SPARGE PILOT TEST
AIR SPARGE SYSTEM AND WELL DATA SHEET

Client: Shell Oil Products US

Site ID &Location: 1784 150th Ave, San Leandro

Extraction Well(s): P-3A

Page: 1 of ______

Date: 3/8 3/9

Technician(s): Jeff / Tom

Sparge Well(s): AS-1

Elapsed Time	Time	AS-1		P-4A						EW-2						P-3A	MW-11	SVP-1	SVP-2
		Sparge Pressure (psi)	Sparge flow rate (cfm)	pH	DO Conc. (mg/L)	ORP	Conduc-tivity	Temp.	Vapor Conc (ppmv)	pH	DO Conc. (mg/L)	ORP	Conduc-tivity	Temp.	Vapor Conc (ppmv)	Vapor Conc (ppmv)	Vapor Conc (ppmv)	Vapor Conc (ppmv)	Vapor Conc (ppmv)
STATIC:																			
Start SVE system																			
0	23:00																		
30	23:30																		
60	00:15	5	3													99[illegible]	[illegible]	[illegible]	[illegible]
90	00:30	5	3												40	992	96	9	10
120	—	—	—																
150	1:30	16	3																
180	2:00	16	3												3030			2100	
210	2:30	16	3																
240	300	0	0															1330	
270	400														56		5970	86	
300																			
330																			
360	600														21		160	65	
390																			
Start AS constant test																			
Continued on next sheet																			

Start long AS

Notes / Comments: Confirmed 2000+ reading on SVP-1 several times. Ran pump on ambient air for several minutes. Filled new tedlar bag w/ ambient air & Reads 0. Sampled SVP-1 again and reads 3000+.

CONESTOGA-ROVERS & ASSOCIATES

SOIL VAPOR EXTRACTION - WELL L[illegible] SHEET

Client: Shell Oil Products US

Page: 1/2

Date:

Site ID &Location: 1784 150th Ave, San Leandro

Technician(s):

Extraction Well(s): P-3A SVE-1

Sparge Well(s):

	Elapsed Time (min)	Time	P-3A Casing Vacuum (" WC)	P-3A DTW (ft)	SVE-1 Casing Vacuum (" WC)	SVE-1 DTW (ft)	AS-1 DTW (ft)	P-3B Pressure/Vacuum (" H_2O)	P-3B DTW (ft)	P-4A Pressure/Vacuum (" H_2O)	P-4B Pressure/Vacuum (" H_2O)	P-4B DTW (ft)	MW-11 Pressure/Vacuum (" H_2O)	MW-11 DTW (ft)	EW-2 Pressure/Vacuum (" H_2O)	EW-2 DTW (ft)	SVP-1 Pressure/Vacuum (" H_2O)	SVP-2 Pressure/Vacuum (" H_2O)	SVP-6 Pressure/Vacuum (" H_2O)	SVP-7 Pressure/Vacuum (" H_2O)	Notes
	Observation Wells (record distance from extraction well below observation well name)								ft	19.1		ft		ft		ft					
	STATIC DTW:			18.95		19.2	19.3		18.8			19.0		19.7		18.7					Record static depth to water measurements for all wells in this row prior to starting the test.
	Start SVE system							troll		YSI 600			troll		YSI 600 w/ depth						
11/16	0	12:00	0.0		0.0		19.3	0.0	18.8	0.0	0.0	19.0	0	19.7	0	18.7	0.0	0.0	0.0	0.0	Collect samples
	30	12:30																			
	60	13:00	90.0	13.25	95.5	12.45	NA	0.0	18.8	0.0	0.0	19.05	5.8	19.4	8.6	18.4	0.6	0.0	0.0	0.0	AS test @ 5psi, ~~collect samples~~
	90	13:30		13.00		12.90	NA	0.0	18.4	0.0	0.0	19.05	5.8	19.4	8.6	18.5	0.3	0.0	0.0	0.0	
	120	14:00	99.0	12.80	2.0	19.1	NA	0.0	18.8	0.0	0.0	19.05	3.9	19.4	4.3	18.5	0.3	0.0	0.0	0.0	
	150	14:30																			collect 5 PSI INF @ 2:50
	180	15:00	NOT GAUGED, RAISED TO 15 PSI																		
	210	15:30																			
	240	16:00	101	12.75	1.6	19.1	NA	0.0	18.4	0.0	0.0	19.05	1.8	19.4	3.4	18.5	.2	0.0	0.0	0.0	Collect samples 15 PSI INF @ 4:20
	270																				
20 psi	300	18:30	96.5	11.3	0.3	19.25	NA	0.0	18.8	0.0	0.0	19.06	3.0	19.95	1.0	18.69	0.0	0.0	0.0	0.0	
	330																				SVE-1 on @ 7:30pm
	360	20:00	109.8	11.50	100.5	15.32	NA	0.0	18.8	0.0	0.0	19.10	1.4	19.98	7.7	18.70	vac 0.2	0.0	0.0	0.0	Collect samples
	390																				
	Start AS constant test																				Continue test @ optimal pressure/flow
		2200	113.9	11.10	114.3	12.05	NA	0.0	18.83	0.0	0.0	19.05	1.4	19.83	6.1	18.48	vac 0.1	0.0	0.0	0.0	
		2400	112.2	11.00	112.9	12.05	NA	0.0	18.89	0.0	0.0	19.05	1.1	19.80	6.7	18.48	0.0	0.0	0.0	0.0	
		200	111.7	10.80	111.4	11.95	NA	0.0	18.86	0.0	0.0	19.07	1.1	19.60	6.9	18.45	0.0	0.0	0.0	0.0	
11/17		400	111.3	11.30	111.1	12.0	NA	0.0	18.86	0.0	0.0	19.05	1.1	19.68	7.0	18.50	0.0	0.0	0.0	0.0	
	Continued on next sheet																				
		600	111.0	13.05	110.9	12.1	NA	0.0	18.85	0.0	0.0	19.05	0.9	19.85	7.2	18.38	0.3	0.0	0.0	0.0	

Rev 0, 05/21/2008

\\Sfo-s1\shared\Shell\6-chars\2406--\240612-San Leandro 1784 150th\240612-REMEDIATION\240612-AS-SVE PT\2401623-AS-SVE PT II\240612-SVE-AS Pilot Test Data Sheets - SVE-well data-1

SOIL VAPOR EXTRACTION/AIR SPARGE ... TEST
SOIL VAPOR EXTRACTION - WELL D... SHEET

CONESTOGA-ROVERS & ASSOCIATES

Page: 2/2 Date:

Client: Shell Oil Products US

Technician(s):

Site ID &Location: 1784 150th Ave, San Leandro

Sparge Well(s):

Extraction Well(s): P-3A SVE-1

	Elapsed Time (min)	Time	P-3A Casing Vacuum (" WC)	P-3A DTW (ft)	SVE-1 Casing Vacuum (" WC)	SVE-1 DTW (ft)	AS-1 DTW (ft)	P-3B Pressure/Vacuum (" H2O)	P-3B DTW (ft)	P-4A Pressure/Vacuum (" H2O)	P-4B Pressure/Vacuum (" H2O)	P-4B DTW (ft)	MW-11 Pressure/Vacuum (" H2O)	MW-11 DTW (ft)	EW-2 Pressure/Vacuum (" H2O)	EW-2 DTW (ft)	SVP-1 Pressure/Vacuum (" H2O)	SVP-2 Pressure/Vacuum (" H2O)	SVP-6 Pressure/Vacuum (" H2O)	SVP-7 Pressure/Vacuum (" H2O)	Notes
	Start AS constant test																				Record static depth to water
am	420	9:00	107	9.65	105	12.25	NA	0.0	18.8	0.0	0.0	19.05	0.4	19.80	7.8	18.45	0.3	0.0	0.0	0.0	Continue test @ optimal pressure/flow
	480																				
	540																				Download Troll Data
	600																				
	660																				
	720																				
	780																				
	840																				
	900																				
	960																				Collect samples
	1020																				Download Troll Data
	1080																				
	1140																				
	1200																				
	1260																				
	Helium Tracer Test																				
15:15	~~1320~~	Measurements	106.5	13.0	0.4	19.25	NA	0.0	18.8	0.0	0.0	19.07	3.3	19.95	0.9	18.66	0.0	0.0	0.0	0.0	
16:15	1380	Measurements	107.8	13.0	0.2	19.25	NA	0.0	18.7	0.0	0.0	19.1	3.9	20.05	0.5	18.67	0.1	0.0	0.0	0.0	
	Helium Tracer Test																				
17:15	1440	17:15	108.1	13.27	0.4	19.25	↓	0.0	18.7	0.0	0.0	19.06	6.8	19.96	0.9	18.75	0.0	0.0	0.0	0.0	Allow Helium to dessipate
																					Collect samples, Download Troll Data, shut ...
																					Shutdown system

P-3A, hard to gauge dtw due to vacuum

Rev 0, 05/21/2008

\\Sfo-s1\shared\Shell\6-chars\2406--\240612-San Leandro 1784 150th\240612-REMEDIATION\240612-AS-SVE PT\2401623-AS-SVE PT II\240612-SVE-AS Pilot Test Data Sheets - SVE-well data-1

CONESTOGA-ROVERS & ASSOCIATES

SOIL VAPOR EXTRACTION / AIR SPARGE PILOT TEST
SOIL VAPOR EXTRACTION - SYSTEM DATA SHEET

Client: Shell Oil Products US

Site ID & Location: 1784 150th Ave, San Leandro

Vapor Extraction Well(s): P-3A SVE-1

 Date:

Technician(s):

Sparge Well(s): AS-1

Elapsed Time (min)	Time	Hour-meter (hrs)	Pre-knockout (INF-1) Well Vapor Flow (acfm)	Well Vapor Temp. (° F)	Well Vapor Vacuum (in. WC)	Well Vapor Vapor Conc. (ppmv)	Dilution Air Flow (acfm)	Dilution Air Temp. (° F)	Dilution Air Vacuum (in. WC)	Blower (INF-2) Blower Vacuum (" Hg)	Vapor Flow (acfm)	Temp. (° F)	Pressure (in. WC)	Vapor Conc. (ppmv)	Oxidizer Temp. (° F)	Effluent Vapor Conc. (ppmv)	KO Totalizer (gals)	Notes
Start SVE system																		
1/16 0	12:00	10528.0	18.1	72.5	100	1900	~~0~~	~~0~~	~~0~~	21	70.3	83	88.6	340	796	0		Collect samples
30	12:30	10528.5	18.0	72.3	100	1890	0	0	0	21	70.3	82.8	89.4	337	7~~45~~			
60	13:00	10529	18.1	72.5	100	1905	0	0	0	21	70.3	83.1	89.4	335	749			AS test @ 5psi, ~~collect samples~~
90	13:30	10529.5	18.1	71	101	1800	0	0	0	22	68	82	89.4	301	749			
120	INSUFFICIENT TIME TO GAUGE																	
150	14:30	10530.5	14.1	70.6	102	1630	0	0	0	22	64	80.0	103	215	747			collect 5 PSI INFC 2:30
180	NOT GAUGED, RAISED TO 15 PSI																	
210	15:30																	
240	16:00	10533	26.4	71.8	103.7	6260	0	0	0	22	62.7	77.3	105.8	728	802	0		Collect samples 15 PSI INFC 4:20
270	NOT GAUGED, RAISED TO 25 PSI																	
~~300~~	18:30	105354	13.0	67.6	96.8	5100	20	0	0	22	63.7	67.3	98.3	950	804			
~~330~~	20:00	10536.7	51.5	66.0	111.2	4100	0	NA	0	20.5	69.7	70.1	112.0	860	903			
~~360~~	22:00	10538.6	48.5	65.0	114.7	2240	0	NA	0	20.5	68.6	66.9	115.0	550	791			Collect samples
390	2400	10540.5	42.0	63.4	113.3	1950	0	NA	0	20.5	65.0	62.3	114.0	500	752			
1/17	2:00	10542.5	28.0	56.0	111.7	1083	0	NA	0	20.5	75.0	56.5	112.9	310	743			
	400	10544.4	29.5	55.9	111.5	890	0	NA	0	20.5	76.5	54.8	112.8	290	729			
	600	10546.4	27.8	55.7	111.3	735	0	NA	0	20.5	75.9	53.4	112.3	250	716			
	900	105500	27.0	64.5	106.0	725	0	NA	0	20.5	79.0	79.2	108	212	713			Continue test @ optimal pressure/flow
Continued on next sheet																		

NOTES:

If concentrations exceed 30 ppmv in SVP-6, SVP-7, or SVP-2 at anytime shutdown system per regulatory requirement.

Pressure taken above throttle valve @ (+) side sample port

CONESTOGA-ROVERS & ASSOCIATES

SOIL VAPOR EXTRACTION - SYSTEM DATA SHEET

Page: 2 of 2 Date:

Client: Shell Oil Products US

Technician(s):

Site ID & Location: 1784 150th Ave, San Leandro

Sparge Well(s): AS-1

Vapor Extraction Well(s): P-3A SVE-1

Elapsed Time (min)	Time	Hour-meter (hrs)	Pre-knockout (INF-1) Well Vapor Flow (acfm)	Well Vapor Temp. (° F)	Well Vapor Vacuum (in. WC)	Well Vapor Vapor Conc. (ppmv)	Dilution Air Flow (acfm)	Dilution Air Temp. (° F)	Dilution Air Vacuum (in. WC)	Blower (INF-2) Blower Vacuum (" Hg)	Vapor Flow (acfm)	Temp. (° F)	Pressure (in. WC)	Vapor Conc. (ppmv)	Oxidizer Temp. (° F)	Effluent Vapor Conc. (ppmv)	KO Totalizer (gals)	Notes
Start AS constant test																		Continue test @ optimal pressure/flow
420																		
480																		
540																		
600																		
660																		
720																		
780																		
840																		Collect samples
900																		
960																		
1020																		
1080																		
1140																		
1200																		
1260																		
Start Helium Tracer Test																		
1320	15:15	105535	14	69	107.5	2870	0	0	0	22	70.5	81.2	107.8	232	773			
1380	16:15	105543	23.6	69.5	109	1605	0	0	0	22	67.2	72	108	236	748			
End Helium Tracer Test																		Allow Helium to dessipate
1440	17:15	105554	17.1	66.5	108	1420	0	0	0	22	70.2	66	109	250	775	0		Collect samples, shut down AS
																		Shutdown system
18:00 END		105560																

NOTES:

If concentrations exceed 30 ppmv in SVP-6, SVP-7, or SVP-2 at anytime shutdown system per regulatory requirement.

CONESTOGA-ROVERS & ASSOCIATES

SOIL VAPOR EXTRACTION / AIR SPARGE PILOT TEST
HELIUM TRACER TEST DATA SHEET

Client: Shell Oil Products US

Site ID &Location: 1784 150th Ave, San Leandro

Extraction Well(s): P-3A

Page: 1 of 1 Date:

Technician(s):

Sparge Well(s): AS-1

117

Elapsed Time	Time	AS-1 Sparge Pressure (psi)	AS-1 Sparge flow rate (cfm)	AS-1 Helium Pressure (psi)	AS-1 Helium flow rate (cfm)	AS-1 Helium Conc (% v/v)	EW-2 Helium Conc (% v/v)	P-3A Helium Conc (% v/v)	SVE-1 Helium Conc (% v/v)	MW-11 Helium Conc (% v/v)	Notes / Comments:
Start Helium Tracer Test											
~~1320~~	15:15	20	5	20	6	1.32	0.0	0.02	0.0	1.5	
1335	15:30										
1350	15:45	20	5	20	10	.83	0.0	0.02	0.0	1.7	
1365	16:00	20	5	20	6	.41	0.0	0.01	0.0	2.4	
1380	16:15	20	5	20	6	.64	0.0	0.01	0.0	2.5	
1395	16:30	INSUFFICIENT		TIME							
1410	16:45	20	5	20	6	1.6	0.0	0.0	0.0	2.4	
1425	17:00	20	5	20	6	1.3	0.0	0.0	0.0	2.6	
											Allow Helium to dessipate
End Helium Tracer Test											

NOTES: For 2% (v/v) Helium injection flow use 0.02 cfm Helium per 1 cfm AS

If concentrations exceed 30 ppmv in SVP-6, SVP-7, or SVP-2 at anytime shutdown system per regulatory requirement.

CONESTOGA-ROVERS & ASSOCIATES

SOIL VAPOR EXTRACTION / AIR SPARGE PILOT TEST
AIR SPARGE SYSTEM AND WELL DATA SHEET

Client: Shell Oil Products US
Page: 1 of 2
Date:

Site ID &Location: 1784 150th Ave, San Leandro
Technician(s):

Extraction Well(s): P-3A SVE-1
Sparge Well(s): AS-1

Elapsed Time	Time	AS-1		P-3A						SVE-1						EW-2	P-4A	MW-11	SVP-1	SVP-2	SVP-6	SVP-7
		Sparge Pressure (psi)	Sparge flow rate (cfm)	pH	DO Conc. (mg/L)	ORP	Conduc-tivity	Temp.	Vapor Conc (ppmv)	pH	DO Conc. (mg/L)	ORP	Conduc-tivity	Temp.	Vapor Conc (ppmv)	Vapor Conc (ppmv)	Vapor Conc (ppmv)	Vapor Conc (ppmv)	Vapor Conc (ppmv)	Vapor Conc (ppmv)	Vapor Conc (ppmv)	Vapor Conc (ppmv)
STATIC																						
Start SVE system																						
11/16 0	12:00																					
30	12:30																					
60	13:00	5	0						2,020						well closed	2.5	284	1.0	0.0	0.0	0,0	0.0
90	13:30	5	0																			
120	14:00	5	0																			
150	14:30	5	0																			
180	15:00	15	NOT GAUGED, RAISED TO 15 PSI,																			
210	15:30	15																				
240	16:00	15	0						6260						Well closed	1.3	503	0.0	0.0	0.0	0.0	0.0
270			NOT GAUGED, RAISED TO 25 PSI,																			
300	18:30	20	5												Well closed	1.5	180	752	709	0.0	205	0.0
330	~~20:00~~	~~20~~	~~5~~																			
360																						
390																						
Start AS constant test																						
Continued on next sheet																						

Notes / Comments:

If concentrations exceed 30 ppmv in SVP-6, SVP-7, or SVP-2 modify system operation per discussion w/ Trey.

CONESTOGA-ROVERS & ASSOCIATES

SOIL VAPOR EXTRACTION / AIR SPARGE TEST
AIR SPARGE SYSTEM AND WELL DATA SHEET

Client: Shell Oil Products US

Site ID &Location: 1784 150th Ave, San Leandro

Extraction Well(s): P-3A SVE-1

Page: 2 of 2

Date:

Technician(s):

Sparge Well(s): AS-1

Elapsed Time	Time	AS-1 Sparge Pressure (psi)	AS-1 Sparge flow rate (cfm)	P-4A pH	P-4A DO Conc. (mg/L)	P-4A ORP	P-4A Conductivity	P-4A Temp.	P-4A Vapor Conc (ppmv)	EW-2 pH	EW-2 DO Conc. (mg/L)	EW-2 ORP	EW-2 Conductivity	EW-2 Temp.	EW-2 Vapor Conc (ppmv)	P-3A Vapor Conc (ppmv)	SVE-1 @ casing Vapor Conc (ppmv)	MW-11 Vapor Conc (ppmv)	SVP-1 Vapor Conc (ppmv)	SVP-2 Vapor Conc (ppmv)	SVP-6 Vapor Conc (ppmv)	SVP-7 Vapor Conc (ppmv)
Start AS constant test																						
420																						
480	20:00	20	5													4510	4280	902	48	0	22	0
540	22:00	20	5													4300	4020	790	21	0	8	0
600	24:00	20	5													2640	1350	860	16	0	7	0
11/17 660	2:00	20	5													1415	705	1220	6	0	5	0
720	4:00	20	5													1150	630	950	4	0	4	0
780	6:00	20	5													900	545	878	4	0	4	0
840	9:00	20	5													880	503	1260	0.0	0.0	0.0	0.0
900				Down,		No	FUEL															
960																						
1020																						
1080																						
1140																						
1200																						
1260																						
Start Helium Tracer Test																						
1320	No Measurements																					
1380	No Measurements																					
End Helium Tracer Test																						
1440	17:15	20	5													1411	0.0	1882	281	0.0	0.0	0.0

APPENDIX D

LABORATORY ANALYTICAL REPORTS

Calscience Environmental Laboratories, Inc.

March 22, 2010

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

Subject: **Calscience Work Order No.: 10-03-0732**
Client Reference: 1784 150th Ave., San Leandro, CA

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 3/10/2010 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.
Xuan H. Dang
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received:	03/10/10
Work Order No:	10-03-0732
Preparation:	N/A
Method:	EPA TO-3M

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	**10-03-0732-1-A**	**03/08/10 23:00**	**Air**	**GC 13**	**N/A**	**03/10/10 14:51**	**100310L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	1100	7.5	5		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11	**10-03-0732-2-A**	**03/09/10 00:05**	**Air**	**GC 13**	**N/A**	**03/10/10 15:16**	**100310L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	4900	30	20		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-3A	**10-03-0732-3-A**	**03/09/10 00:10**	**Air**	**GC 13**	**N/A**	**03/10/10 15:26**	**100310L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	2500	30	20		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-4A	**10-03-0732-4-A**	**03/09/10 00:15**	**Air**	**GC 13**	**N/A**	**03/10/10 13:45**	**100310L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	48	1.5	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-2	**10-03-0732-5-A**	**03/09/10 00:20**	**Air**	**GC 13**	**N/A**	**03/10/10 13:34**	**100310L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	10	1.5	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	**10-03-0732-6-A**	**03/09/10 00:25**	**Air**	**GC 13**	**N/A**	**03/10/10 13:56**	**100310L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	1.5	1		ppm (v/v)

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

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Conestoga-Rovers & Associates	Date Received: 03/10/10
5900 Hollis Street, Suite A	Work Order No: 10-03-0732
Emeryville, CA 94608-2008	Preparation: N/A
	Method: EPA TO-3M

Project: 1784 150th Ave., San Leandro, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2	**10-03-0732-7-A**	**03/09/10 00:30**	**Air**	**GC 13**	**N/A**	**03/10/10 14:07**	**100310L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	1.5	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	**10-03-0732-8-A**	**03/09/10 02:30**	**Air**	**GC 13**	**N/A**	**03/10/10 15:37**	**100310L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	4800	30	20		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	**10-03-0732-9-A**	**03/09/10 08:40**	**Air**	**GC 13**	**N/A**	**03/10/10 14:28**	**100310L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	220	1.5	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2	**10-03-0732-10-A**	**03/09/10 08:50**	**Air**	**GC 13**	**N/A**	**03/10/10 16:08**	**100310L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	1.5	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**098-01-005-2,152**	**N/A**	**Air**	**GC 13**	**N/A**	**03/10/10 08:44**	**100310L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	1.5	1		ppm (v/v)

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received:	03/10/10
Work Order No:	10-03-0732
Preparation:	N/A
Method:	EPA 8260B (M)
Units:	ppm (v/v)

Project: 1784 150th Ave., San Leandro, CA

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	**10-03-0732-1-A**	**03/08/10 23:00**	**Air**	**GC/MS II**	**N/A**	**03/10/10 15:17**	**100310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.15	0.050	10		Xylenes (total)	3.8	0.10	10	
Toluene	0.25	0.050	10		Methyl-t-Butyl Ether (MTBE)	ND	0.10	10	
Ethylbenzene	0.92	0.050	10						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	114	47-156		1,2-Dichloroethane-d4	126	47-156	
Toluene-d8	21	47-156	2				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11	**10-03-0732-2-A**	**03/09/10 00:05**	**Air**	**GC/MS II**	**N/A**	**03/11/10 02:26**	**100310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	3.5	1.2	250		Xylenes (total)	90	2.5	250	
Toluene	28	1.2	250		Methyl-t-Butyl Ether (MTBE)	ND	2.5	250	
Ethylbenzene	18	1.2	250						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	106	47-156		1,2-Dichloroethane-d4	103	47-156	
Toluene-d8	110	47-156					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-3A	**10-03-0732-3-A**	**03/09/10 00:10**	**Air**	**GC/MS II**	**N/A**	**03/11/10 08:41**	**100310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.088	0.050	10		Xylenes (total)	3.9	0.10	10	
Toluene	0.22	0.050	10		Methyl-t-Butyl Ether (MTBE)	ND	0.10	10	
Ethylbenzene	0.86	0.050	10						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	118	47-156		1,2-Dichloroethane-d4	178	47-156	2
Toluene-d8	16	47-156	2				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-4A	**10-03-0732-4-A**	**03/09/10 00:15**	**Air**	**GC/MS II**	**N/A**	**03/11/10 08:14**	**100310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.050	10		Xylenes (total)	0.13	0.10	10	
Toluene	ND	0.050	10		Methyl-t-Butyl Ether (MTBE)	ND	0.10	10	
Ethylbenzene	0.069	0.050	10						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	97	47-156		1,2-Dichloroethane-d4	100	47-156	
Toluene-d8	109	47-156					

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received:	03/10/10
Work Order No:	10-03-0732
Preparation:	N/A
Method:	EPA 8260B (M)
Units:	ppm (v/v)

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-2	**10-03-0732-5-A**	**03/09/10 00:20**	**Air**	**GC/MS II**	**N/A**	**03/11/10 00:12**	**100310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.028	0.020	4		Xylenes (total)	3.0	0.10	10	
Toluene	0.11	0.020	4		Methyl-t-Butyl Ether (MTBE)	ND	0.040	4	
Ethylbenzene	0.51	0.020	4						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	112	47-156		1,2-Dichloroethane-d4	102	47-156	
Toluene-d8	104	47-156					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	**10-03-0732-6-A**	**03/09/10 00:25**	**Air**	**GC/MS II**	**N/A**	**03/11/10 01:05**	**100310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	0.084	0.010	1	
Toluene	0.0053	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	0.014	0.0050	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	105	47-156		1,2-Dichloroethane-d4	104	47-156	
Toluene-d8	101	47-156					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2	**10-03-0732-7-A**	**03/09/10 00:30**	**Air**	**GC/MS II**	**N/A**	**03/11/10 01:32**	**100310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	0.033	0.010	1	
Toluene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	0.0053	0.0050	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	104	47-156		1,2-Dichloroethane-d4	105	47-156	
Toluene-d8	102	47-156					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	**10-03-0732-8-A**	**03/09/10 02:30**	**Air**	**GC/MS II**	**N/A**	**03/10/10 19:17**	**100310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1.9	1.2	250		Xylenes (total)	16	2.5	250	
Toluene	4.3	1.2	250		Methyl-t-Butyl Ether (MTBE)	ND	2.5	250	
Ethylbenzene	4.8	1.2	250						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	103	47-156		1,2-Dichloroethane-d4	103	47-156	
Toluene-d8	113	47-156					

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	03/10/10
5900 Hollis Street, Suite A		Work Order No:	10-03-0732
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA 8260B (M)
		Units:	ppm (v/v)

Project: 1784 150th Ave., San Leandro, CA

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	**10-03-0732-9-A**	**03/09/10 08:40**	**Air**	**GC/MS II**	**N/A**	**03/11/10 09:08**	**100310L01**

Comment(s): -The reporting limits are elevated due to high levels of non-target compounds.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.050	10		Xylenes (total)	ND	0.10	10	
Toluene	ND	0.050	10		Methyl-t-Butyl Ether (MTBE)	ND	0.10	10	
Ethylbenzene	ND	0.050	10						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	100	47-156		1,2-Dichloroethane-d4	102	47-156	
Toluene-d8	94	47-156					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2	**10-03-0732-10-A**	**03/09/10 08:50**	**Air**	**GC/MS II**	**N/A**	**03/11/10 01:59**	**100310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	0.067	0.010	1	
Toluene	0.0088	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	0.0095	0.0050	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	106	47-156		1,2-Dichloroethane-d4	106	47-156	
Toluene-d8	99	47-156					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-13-041-6**	**N/A**	**Air**	**GC/MS II**	**N/A**	**03/10/10 14:44**	**100310L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	ND	0.010	1	
Toluene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	98	47-156		1,2-Dichloroethane-d4	105	47-156	
Toluene-d8	101	47-156					

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

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

Date Received:	03/10/10
Work Order No:	10-03-0732
Preparation:	N/A
Method:	EPA TO-3M

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
P-4A	**Air**	**GC 13**	**N/A**	**03/10/10**	**100310D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
TPH as Gasoline	48	53	9	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received: N/A
Work Order No: 10-03-0732
Preparation: N/A
Method: EPA 8260B (M)

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-041-6	**Air**	**GC/MS II**	**N/A**	**03/10/10**	**100310L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	105	104	60-156	1	0-40	
Toluene	106	106	56-146	0	0-43	
Ethylbenzene	108	108	52-154	0	0-38	
p/m-Xylene	105	106	42-156	0	0-41	
o-Xylene	111	112	52-148	1	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 10-03-0732

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
E	Concentration exceeds the calibration range.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

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

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ CALSCIENCE ( )
- ☐ SPL ( )
- ☐ KIFF ( )
- ☐ TEST AMERICA ( )
- ☐ OTHER ( )

Please Check Appropriate Box:
- ☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM ☐ CONSULTANT ☐ LUBES
- ☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Peter Schaefer - 240612-95-10.05

PO #

INCIDENT # (ENV SERVICES): 9 8 9 9 6 0 6 8

☐ CHECK IF NO INCIDENT # APPLIES

SAP #: 1 3 6 0 1 9

DATE: 3/9/10

PAGE: 1 of 1

SAMPLING COMPANY	Conestoga-Rovers & Associates
LOG CODE	CRAW
ADDRESS	5900 Hollis Street, Suite A, Emeryville, California 94608
PROJECT CONTACT (Hardcopy or PDF Report to)	Luke Vermeire
TELEPHONE	510-420-3345
FAX	510-420-9170
E-MAIL	lvermeire@craworld.com
SITE ADDRESS: Street and City	1784 150th Ave, San Leandro
State	CA
GLOBAL ID NO.	
EDF DELIVERABLE TO (Name, Company, Office Location)	Brenda Carter, CRA, Emeryville
PHONE NO	510-420-3343
E-MAIL	shelledf@craworld.com
CONSULTANT PROJECT NO.	240612-95-10.05
SAMPLER NAME(S) (Print)	Mark Johnson
LAB USE ONLY	10-03-0732

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 :
Report results in PPMV. Use duplicate only if original is depleted.

cc reports to: pschaefer@craworld.com

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☑ RECEIPT VERIFICATION REQUESTED

TEMPERATURE ON RECEIPT C°

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	TPHg (TO-3)	Benzene (8260B)	Toluene (8260B)	Ethylbenzene (8260B)	Total xylenes (8260B)	MTBE (8260B)	BTEX	Container PID Readings or Laboratory Notes
1	INF-1	3/8/10	23:00	VA				X		1	X	X	X	X	X	X	X	
2	MW-11	3/9	00:05							1	X							
3	P-3A	3/9	00:10							1	X							
4	P-4A	3/9	00:15							1	X							
5	EW-2	3/9	00:20							1	X							
6	SVP-1	3/9	00:25							1	X							
7	SVP-2	3/9	00:30							1	X							
8	INF-1	3/9	02:30							1	X							
9	SVP-1	3/9	05:40							2	X	X	X	X	X	X	X	
10	SVP-2	3/9	08:50							2	X	X	X	X	X	X	X	

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Mark Johnson	CEL	3-9-10	1410
TO GSO 3-9-10 1730			
GSO		3/10/10	10:30

05/2/06 Revision

0732

GSO

< WebShip > > > > >

800-322-5555 www.gso.com

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

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

COD:
$0.00

Reference:
ERI, CRA

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 513717303

NPS

ORC

D

GARDEN GROVE

D92843A

79900400

Print Date : 03/09/10 17:09 PM

Package 1 of 1

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 10-03-0732

SAMPLE RECEIPT FORM

~~Cooler~~ Box 1 of 1

CLIENT: CRA

DATE: 03/10/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature ____.____ °C + 0.5 °C (CF) = ____.____ °C ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _______).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☑ Air ☐ Filter ☐ Metals Only ☐ PCBs Only **Initial:** PS

CUSTODY SEALS INTACT:

☐ Cooler ☐________ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Initial:** PS

☐ Sample ☐________ ☐ No (Not Intact) ☑ Not Present **Initial:** [illegible]

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

CONTAINER TYPE:

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

Water: ☐VOA ☐VOAh ☐VOAna₂ ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna₂ ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna₂ ☐_______ ☐_______ ☐_______

Air: ☑Tedlar® ☐Summa® **Other:** ☐______ **Trip Blank Lot#:**____________ **Checked by:** NC

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

Preservative: h: HCL n: HNO3 na₂: $Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** NC

Calscience Environmental Laboratories, Inc.

December 01, 2010

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

Subject: **Calscience Work Order No.: 10-11-1357**
Client Reference: 1784 150th Ave., San Leandro, CA

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 11/17/2010 and analyzed in accordance with the attached chain-of-custody.

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

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

Sincerely,

for

Calscience Environmental
Laboratories, Inc.
Xuan H. Dang
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates	Date Received: 11/17/10
5900 Hollis Street, Suite A	Work Order No: 10-11-1357
Emeryville, CA 94608-2008	Preparation: N/A
	Method: ASTM D-1946
	Units: %v

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11	10-11-1357-1-A	11/16/10 09:15	Air	GC 36	N/A	11/17/10 11:21	101117L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	0.636	0.500	1		Oxygen + Argon	6.33	0.500	1	
Carbon Dioxide	8.73	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-3A	10-11-1357-2-A	11/16/10 09:25	Air	GC 36	N/A	11/17/10 11:43	101117L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	7.46	0.500	1	
Carbon Dioxide	8.45	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-4A	10-11-1357-3-A	11/16/10 09:35	Air	GC 36	N/A	11/17/10 12:01	101117L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	21.6	0.500	1	
Carbon Dioxide	ND	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-2	10-11-1357-4-A	11/16/10 09:50	Air	GC 36	N/A	11/17/10 12:18	101117L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	4.46	0.500	1	
Carbon Dioxide	8.75	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVE-1	10-11-1357-5-A	11/16/10 10:00	Air	GC 36	N/A	11/17/10 12:37	101117L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	21.7	0.500	1	
Carbon Dioxide	ND	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	10-11-1357-6-A	11/16/10 10:10	Air	GC 36	N/A	11/17/10 12:54	101117L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	18.7	0.500	1	
Carbon Dioxide	1.81	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2	10-11-1357-7-A	11/16/10 10:40	Air	GC 36	N/A	11/17/10 13:16	101117L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	19.9	0.500	1	
Carbon Dioxide	2.25	0.500	1						

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

Calscience Environmental Laboratories, Inc.

Analytical Report

nelac

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

Date Received:	11/17/10
Work Order No:	10-11-1357
Preparation:	N/A
Method:	ASTM D-1946
Units:	%v

Project: 1784 150th Ave., San Leandro, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6	**10-11-1357-8-A**	**11/16/10 10:20**	**Air**	**GC 36**	**N/A**	**11/17/10 13:34**	**101117L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	21.1	0.500	1	
Carbon Dioxide	0.959	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-7	**10-11-1357-9-A**	**11/16/10 10:30**	**Air**	**GC 36**	**N/A**	**11/17/10 13:51**	**101117L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	21.6	0.500	1	
Carbon Dioxide	ND	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-03-002-1,177**	**N/A**	**Air**	**GC 36**	**N/A**	**11/17/10 08:39**	**101117L01**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	11/17/10
5900 Hollis Street, Suite A		Work Order No:	10-11-1357
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA TO-3M

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11	10-11-1357-1-A	11/16/10 09:15	Air	GC 13	N/A	11/17/10 14:40	101117L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	2800	30	20		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-3A	10-11-1357-2-A	11/16/10 09:25	Air	GC 13	N/A	11/17/10 14:51	101117L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	1200	30	20		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-4A	10-11-1357-3-A	11/16/10 09:35	Air	GC 13	N/A	11/17/10 11:54	101117L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	33	1.5	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-2	10-11-1357-4-A	11/16/10 09:50	Air	GC 13	N/A	11/17/10 14:30	101117L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	900	3.8	2.5		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVE-1	10-11-1357-5-A	11/16/10 10:00	Air	GC 13	N/A	11/17/10 12:45	101117L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	1.7	1.5	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	10-11-1357-6-A	11/16/10 10:10	Air	GC 13	N/A	11/17/10 13:17	101117L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	35	1.5	1		ppm (v/v)

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

Calscience Environmental Laboratories, Inc.

Analytical Report

nelac

Conestoga-Rovers & Associates		Date Received:	11/17/10
5900 Hollis Street, Suite A		Work Order No:	10-11-1357
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA TO-3M

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2	10-11-1357-7-A	11/16/10 10:40	Air	GC 13	N/A	11/17/10 13:34	101117L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	1.5	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6	10-11-1357-8-A	11/16/10 10:20	Air	GC 13	N/A	11/17/10 13:48	101117L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	1.5	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-7	10-11-1357-9-A	11/16/10 10:30	Air	GC 13	N/A	11/17/10 14:10	101117L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	1.5	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	098-01-005-2,755	N/A	Air	GC 13	N/A	11/17/10 08:32	101117L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	1.5	1		ppm (v/v)

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

Calscience Environmental Laboratories, Inc.

Analytical Report

nelac

Conestoga-Rovers & Associates		Date Received:	11/17/10
5900 Hollis Street, Suite A		Work Order No:	10-11-1357
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	ASTM D-1946 (M)

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11	10-11-1357-1-A	11/16/10 09:15	Air	GC 55	N/A	11/17/10 00:00	101117L01

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-3A	10-11-1357-2-A	11/16/10 09:25	Air	GC 55	N/A	11/17/10 00:00	101117L01

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-4A	10-11-1357-3-A	11/16/10 09:35	Air	GC 55	N/A	11/17/10 00:00	101117L01

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-2	10-11-1357-4-A	11/16/10 09:50	Air	GC 55	N/A	11/17/10 00:00	101117L01

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVE-1	10-11-1357-5-A	11/16/10 10:00	Air	GC 55	N/A	11/17/10 00:00	101117L01

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	10-11-1357-6-A	11/16/10 10:10	Air	GC 55	N/A	11/17/10 00:00	101117L01

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	11/17/10
5900 Hollis Street, Suite A		Work Order No:	10-11-1357
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	ASTM D-1946 (M)

Project: 1784 150th Ave., San Leandro, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2	10-11-1357-7-A	11/16/10 10:40	Air	GC 55	N/A	11/17/10 00:00	101117L01

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6	10-11-1357-8-A	11/16/10 10:20	Air	GC 55	N/A	11/17/10 00:00	101117L01

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-7	10-11-1357-9-A	11/16/10 10:30	Air	GC 55	N/A	11/17/10 00:00	101117L01

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-872-60	N/A	Air	GC 55	N/A	11/17/10 00:00	101117L01

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

nelac

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

Date Received:	11/17/10
Work Order No:	10-11-1357
Preparation:	N/A
Method:	EPA 8260B (M)
Units:	ppm (v/v)

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11	10-11-1357-1-A	11/16/10 09:15	Air	GC/MS NN	N/A	11/19/10 12:41	101118L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.28	0.080	16		Xylenes (total)	0.44	0.16	16	
Toluene	ND	0.080	16		Methyl-t-Butyl Ether (MTBE)	ND	0.16	16	
Ethylbenzene	0.16	0.080	16						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	72	47-156		1,2-Dichloroethane-d4	84	47-156	
Toluene-d8	35	47-156	2				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-3A	10-11-1357-2-A	11/16/10 09:25	Air	GC/MS YY	N/A	11/19/10 15:22	101119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.080	16		Xylenes (total)	0.19	0.16	16	
Toluene	ND	0.080	16		Methyl-t-Butyl Ether (MTBE)	ND	0.16	16	
Ethylbenzene	ND	0.080	16						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	111	47-156		1,2-Dichloroethane-d4	100	47-156	
Toluene-d8	39	47-156	2				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-4A	10-11-1357-3-A	11/16/10 09:35	Air	GC/MS NN	N/A	11/19/10 06:44	101118L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	0.023	0.010	1	
Toluene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	103	47-156		1,2-Dichloroethane-d4	104	47-156	
Toluene-d8	35	47-156	2				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-2	10-11-1357-4-A	11/16/10 09:50	Air	GC/MS YY	N/A	11/19/10 16:56	101119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.093	0.062	12.5		Xylenes (total)	0.58	0.12	12.5	
Toluene	ND	0.062	12.5		Methyl-t-Butyl Ether (MTBE)	ND	0.12	12.5	
Ethylbenzene	0.30	0.062	12.5						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	112	47-156		1,2-Dichloroethane-d4	97	47-156	
Toluene-d8	30	47-156	2				

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	11/17/10
5900 Hollis Street, Suite A		Work Order No:	10-11-1357
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA 8260B (M)
		Units:	ppm (v/v)

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVE-1	**10-11-1357-5-A**	**11/16/10 10:00**	**Air**	**GC/MS NN**	**N/A**	**11/19/10 08:40**	**101118L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	ND	0.010	1	
Toluene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	95	47-156			1,2-Dichloroethane-d4	102	47-156		
Toluene-d8	76	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-1	**10-11-1357-6-A**	**11/16/10 10:10**	**Air**	**GC/MS NN**	**N/A**	**11/19/10 09:41**	**101118L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	ND	0.010	1	
Toluene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	96	47-156			1,2-Dichloroethane-d4	113	47-156		
Toluene-d8	33	47-156	2						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-2	**10-11-1357-7-A**	**11/16/10 10:40**	**Air**	**GC/MS ZZ**	**N/A**	**11/17/10 22:40**	**101117L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0066	1.32		Xylenes (total)	ND	0.013	1.32	
Toluene	ND	0.0066	1.32		Methyl-t-Butyl Ether (MTBE)	ND	0.013	1.32	
Ethylbenzene	ND	0.0066	1.32						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	101	47-156			1,2-Dichloroethane-d4	110	47-156		
Toluene-d8	98	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-6	**10-11-1357-8-A**	**11/16/10 10:20**	**Air**	**GC/MS NN**	**N/A**	**11/19/10 10:42**	**101118L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	ND	0.010	1	
Toluene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	97	47-156			1,2-Dichloroethane-d4	86	47-156		
Toluene-d8	96	47-156							

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

nelac

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

Date Received:	11/17/10
Work Order No:	10-11-1357
Preparation:	N/A
Method:	EPA 8260B (M)
Units:	ppm (v/v)

Project: 1784 150th Ave., San Leandro, CA

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVP-7	10-11-1357-9-A	11/16/10 10:30	Air	GC/MS NN	N/A	11/19/10 11:45	101118L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	ND	0.010	1	
Toluene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	93	47-156			1,2-Dichloroethane-d4	77	47-156		
Toluene-d8	93	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-13-041-271	N/A	Air	GC/MS YY	N/A	11/19/10 12:59	101119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	ND	0.010	1	
Toluene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	103	47-156			1,2-Dichloroethane-d4	104	47-156		
Toluene-d8	100	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-13-041-272	N/A	Air	GC/MS ZZ	N/A	11/17/10 12:58	101117L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	ND	0.010	1	
Toluene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	95	47-156			1,2-Dichloroethane-d4	103	47-156		
Toluene-d8	95	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-13-041-280	N/A	Air	GC/MS NN	N/A	11/19/10 03:55	101118L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	ND	0.010	1	
Toluene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	84	47-156			1,2-Dichloroethane-d4	110	47-156		
Toluene-d8	97	47-156							

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

nelac

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

Date Received:	11/17/10
Work Order No:	10-11-1357
Preparation:	N/A
Method:	EPA TO-3M

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
P-4A	Air	GC 13	N/A	11/17/10	101117D01

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
TPH as Gasoline	33.37	31.93	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates	Date Received: N/A
5900 Hollis Street, Suite A	Work Order No: 10-11-1357
Emeryville, CA 94608-2008	Preparation: N/A
	Method: ASTM D-1946

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-03-002-1,177	Air	GC 36	N/A	11/17/10	101117L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Carbon Dioxide	97	95	80-120	2	0-30	
Oxygen + Argon	89	89	80-120	0	0-30	
Nitrogen	89	89	80-120	0	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

nelac

Conestoga-Rovers & Associates		Date Received:	N/A
5900 Hollis Street, Suite A		Work Order No:	10-11-1357
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	ASTM D-1946 (M)

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-872-60	Air	GC 55	N/A	11/17/10	101117L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Helium	97	94	80-120	3	0-30	
Hydrogen	113	109	80-120	3	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received: N/A
Work Order No: 10-11-1357
Preparation: N/A
Method: EPA 8260B (M)

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-041-272	Air	GC/MS ZZ	N/A	11/17/10	101117L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	106	107	60-156	1	0-40	
Toluene	108	112	56-146	4	0-43	
Ethylbenzene	105	110	52-154	4	0-38	
Xylenes (total)	105	110	52-148	4	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates		Date Received:	N/A
5900 Hollis Street, Suite A		Work Order No:	10-11-1357
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA 8260B (M)

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-041-280	Air	GC/MS NN	N/A	11/19/10	101118L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	103	60-156	1	0-40	
Toluene	100	101	56-146	1	0-43	
Ethylbenzene	104	106	52-154	2	0-38	
Xylenes (total)	105	107	52-148	2	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

nelac

Conestoga-Rovers & Associates		Date Received:	N/A
5900 Hollis Street, Suite A		Work Order No:	10-11-1357
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA 8260B (M)

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-041-271	Air	GC/MS YY	N/A	11/19/10	101119L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	109	60-156	4	0-40	
Toluene	116	119	56-146	3	0-43	
Ethylbenzene	118	122	52-154	3	0-38	
Xylenes (total)	120	123	52-148	3	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 10-11-1357

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)

- ☑ CALSCIENCE ( )
- ☐ SPL ( )
- ☐ KIFF ( )
- ☐ TEST AMERICA ( )
- ☐ OTHER ( )

Please Check Appropriate Box:

- ☑ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER

Print Bill To Contact Name: Peter Schaefer - 240612-95-10.05

INCIDENT # (ENV SERVICES): 9 8 9 9 6 0 6 8

☐ CHECK IF NO INCIDENT # APPLIES

PO #:

SAP #: 1 3 6 0 1 9

DATE: 11-16-10

PAGE: 1 of 1

SAMPLING COMPANY: Conestoga-Rovers & Associates

LOG CODE: CRAW

SITE ADDRESS: Street and City: 1784 150th Ave, San Leandro

State: CA

GLOBAL ID NO:

ADDRESS: 5900 Hollis Street, Suite A, Emeryville, California 94608

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

PHONE NO.: 510-420-3343

E-MAIL: shelledf@craworld.com

CONSULTANT PROJECT NO: 240612-95-10.05

PROJECT CONTACT (Hardcopy or PDF Report to): Luke Vermeire

SAMPLER NAME(S) (Print): Vartan Hanedanian

LAB USE ONLY: D-11-1357

TELEPHONE: 510-420-3341

FAX: 510-420-9170

E-MAIL: tjackson@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 :
Report results in PPMV. Use duplicate only if original is depleted.

cc reports to: pschaefer@craworld.com

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☑ RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	TPHg (8260B)	Benzene (8260B)	Toluene (8260B)	Ethylbenzene (8260B)	Total xylenes (8260B)	MTBE (8260B)	~~Helium ASTM D Method 1946 (M)~~	Oxygen, Carbon Dioxide, Methane, Helium ASTM D 1946	Methane (SCAWQMD 25.1)	Container PID Readings or Laboratory Notes
1	MW-11	11-16	9:15	Air						1	X	X	X	X	X	X		X		Tedlar Bag
2	P-3A		9:25	Air							X	X	X	X	X	X		X		" "
3	P-4A		9:35	Air							X	X	X	X	X	X		X		" "
4	EW-2		9:50	Air							X	X	X	X	X	X		X		" "
5	SVE-1		10:00	Air							X	X	X	X	X	X		X		" "
6	SVP-1		10:10	Air							X	X	X	X	X	X		X		" "
7	SVP-2		10:40	Air							X	X	X	X	X	X		X		" "
8	SVP-6		10:20	Air							X	X	X	X	X	X		X		" "
9	SVP-7		10:30	Air							X	X	X	X	X	X		X		" "

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature] 11/16/10	[signature] CEL	11/16/10	1245
Relinquished by: (Signature) [signature] 1730	Received by: (Signature) [signature]	11/17/10	10:30
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

05/2/06 Revision

1357

GSO

< WebShip > > > > >

800-322-5555 www.gso.com

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

Tracking #: 515372748

NPS

ORC

D

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

GARDEN GROVE

D92843A

COD:
$0.00

86390344

Reference:
BTS

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Print Date : 11/16/10 16:28 PM

Package 1 of 1

Send Label To Printer ☑ Print All Edit Shipment Finish

LABEL INSTRUCTIONS:

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

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
STEP 2 - Fold this page in half.
STEP 3 - Securely attach this label to your package, do not cover the barcode.
STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

Send Label Via Email Create Return Label

TERMS AND CONDITIONS:

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

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 10-11-[ ][3][5][7]

SAMPLE RECEIPT FORM

Box 1 of 1

CLIENT: CRA

DATE: 11/17/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature ____•____ °C + 0.5 °C (CF) = ____•____ °C ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: ________).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☑ Air ☐ Filter

Initial: PJ

CUSTODY SEALS INTACT:

☑ Box ☐ ________ ☐ No (Not Intact) ☐ Not Present ☐ N/A Initial: PJ

☐ Sample ☐ ________ ☐ No (Not Intact) ☑ Not Present Initial: PJ

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

CONTAINER TYPE:

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

Water: ☐VOA ☐VOAh ☐VOAna2 ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna2 ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna2 ☐________ ☐________ ☐________

Air: ☑Tedlar® ☐Summa® **Other:** ☐______ **Trip Blank Lot#:**________ **Labeled/Checked by:** PJ

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

Preservative: h: HCL n: HNO_3 na2: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** WB

Calscience Environmental Laboratories, Inc.

December 02, 2010

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

Subject: **Calscience Work Order No.: 10-11-1469**
Client Reference: 1784 150th Ave., San Leandro, CA

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 11/18/2010 and analyzed in accordance with the attached chain-of-custody.

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

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

Sincerely,

for

Calscience Environmental
Laboratories, Inc.
Xuan H. Dang
Project Manager

Calscience Environmental Laboratories, Inc.

CASE NARRATIVE

Calscience Work Order No.: 10-11-1469

EPA TO-3 TPH as Gasoline –Analysis Outside of Holding Time

Sample # 10-11-1469-2 (INF-1 @16:20): The dilution of 20x (DF20) for TPH as Gasoline for this sample was performed outside of the method recommended 72 hours holding time.

The sample was originally analyzed at dilution 5x (DF5) and within the holding time. However, at this dilution the result exceeded the calibration range and required a higher dilution. The chemist overlooked the problem and did not perform the higher dilution run until the sample was out of the recommended 72 hours holding time.

Both TPH as Gasoline results, DF5 and DF20, are included in this report. There's an E qualifier *(concentrations exceeded the calibration range)* for the DF5 analysis and a comment *Dilution analysis performed outside of the recommended holding time* for the DF20 analysis.

Calscience Environmental Laboratories, Inc.

Analytical Report

nelac

Conestoga-Rovers & Associates		Date Received:	11/18/10
5900 Hollis Street, Suite A		Work Order No:	10-11-1469
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA TO-3M

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	10-11-1469-1-A	11/16/10 14:50	Air	GC 13	N/A	11/18/10 13:34	101118L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	1700	7.5	5		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	10-11-1469-2-B	11/16/10 16:20	Air	GC 13	N/A	11/18/10 13:46	101118L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	5400	7.5	5	E	ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	10-11-1469-2-A	11/16/10 16:20	Air	GC 13	N/A	11/30/10 11:56	101130L01

Comment(s): -Dilution analysis was performed outside the recommended holding time.

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	6000	30	20		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	10-11-1469-3-C	11/16/10 19:25	Air	GC 13	N/A	11/18/10 14:34	101118L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	5700	30	20		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EFF	10-11-1469-4-D	11/16/10 19:30	Air	GC 13	N/A	11/18/10 12:57	101118L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	5.4	1.5	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	098-01-005-2,761	N/A	Air	GC 13	N/A	11/18/10 08:54	101118L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	1.5	1		ppm (v/v)

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

nelac

Conestoga-Rovers & Associates		Date Received:	11/18/10
5900 Hollis Street, Suite A		Work Order No:	10-11-1469
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA TO-3M

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**098-01-005-2,770**	**N/A**	**Air**	**GC 13**	**N/A**	**11/30/10 09:04**	**101130L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	1.5	1		ppm (v/v)

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

nelac

Conestoga-Rovers & Associates	Date Received: 11/18/10
5900 Hollis Street, Suite A	Work Order No: 10-11-1469
Emeryville, CA 94608-2008	Preparation: N/A
	Method: SCAQMD 25.1M

Project: 1784 150th Ave., San Leandro, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	10-11-1469-1-A	11/16/10 14:50	Air	GC 14	N/A	11/18/10 13:02	101118L01

Parameter	Result	RL	DF	Qual	Units
Methane	2700	10	10		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-07-024-753	N/A	Air	GC 14	N/A	11/18/10 10:43	101118L01

Parameter	Result	RL	DF	Qual	Units
Methane	ND	1.0	1		ppm (v/v)
Carbon Dioxide	ND	1.0	1		ppm (v/v)
Carbon Monoxide	ND	5.0	1		ppm (v/v)
TGNMO	ND	5.0	1		ppm (v/v)

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 11/18/10
Work Order No: 10-11-1469
Preparation: N/A
Method: EPA 8260B (M)
Units: ppm (v/v)

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	10-11-1469-1-A	11/16/10 14:50	Air	GC/MS II	N/A	11/19/10 16:32	101118L01

Comment(s): -The reporting limits are elevated due to high levels of non-target compounds.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.20	40		Xylenes (total)	ND	0.40	40	
Toluene	ND	0.20	40		Methyl-t-Butyl Ether (MTBE)	ND	0.40	40	
Ethylbenzene	ND	0.20	40						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	119	47-156		1,2-Dichloroethane-d4	93	47-156	
Toluene-d8	24	47-156	2				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	10-11-1469-2-B	11/16/10 16:20	Air	GC/MS II	N/A	11/18/10 17:37	101119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1.9	1.2	250		Xylenes (total)	22	2.5	250	
Toluene	2.9	1.2	250		Methyl-t-Butyl Ether (MTBE)	ND	2.5	250	
Ethylbenzene	7.2	1.2	250						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	112	47-156		1,2-Dichloroethane-d4	96	47-156	
Toluene-d8	39	47-156	2				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	10-11-1469-3-C	11/16/10 19:25	Air	GC/MS II	N/A	11/18/10 18:28	101119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	11	1.2	250		Xylenes (total)	65	2.5	250	
Toluene	12	1.2	250		Methyl-t-Butyl Ether (MTBE)	ND	2.5	250	
Ethylbenzene	21	1.2	250						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	117	47-156		1,2-Dichloroethane-d4	95	47-156	
Toluene-d8	40	47-156	2				

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EFF	10-11-1469-4-D	11/16/10 19:30	Air	GC/MS II	N/A	11/18/10 15:54	101119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.026	0.0050	1		Xylenes (total)	0.039	0.010	1	
Toluene	0.020	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	0.012	0.0050	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	100	47-156		1,2-Dichloroethane-d4	104	47-156	
Toluene-d8	81	47-156					

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

nelac

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

Date Received:	11/18/10
Work Order No:	10-11-1469
Preparation:	N/A
Method:	EPA 8260B (M)
Units:	ppm (v/v)

Project: 1784 150th Ave., San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-13-041-267	N/A	Air	GC/MS II	N/A	11/19/10 15:45	101119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	ND	0.010	1	
Toluene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	101	47-156		1,2-Dichloroethane-d4	100	47-156	
Toluene-d8	97	47-156					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-13-041-268	N/A	Air	GC/MS II	N/A	11/18/10 14:52	101118L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	ND	0.010	1	
Toluene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	99	47-156		1,2-Dichloroethane-d4	108	47-156	
Toluene-d8	96	47-156					

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

nelac

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

Date Received:	11/18/10
Work Order No:	10-11-1469
Preparation:	N/A
Method:	EPA TO-3M

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
EFF	Air	GC 13	N/A	11/18/10	101118D01

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
TPH as Gasoline	5.387	5.629	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

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

Date Received:	11/18/10
Work Order No:	10-11-1469
Preparation:	N/A
Method:	EPA TO-3M

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
10-11-2179-4	Air	GC 13	N/A	11/30/10	101130D01

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
TPH as Gasoline	166.7	158.2	5	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

nelac

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

Date Received:	N/A
Work Order No:	10-11-1469
Preparation:	N/A
Method:	SCAQMD 25.1M

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-024-753	Air	GC 14	N/A	11/18/10	101118L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Methane	109	108	80-120	1	0-20	
Carbon Monoxide	113	113	80-120	0	0-20	
TGNMO	110	110	80-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received:	N/A
Work Order No:	10-11-1469
Preparation:	N/A
Method:	EPA 8260B (M)

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-041-268	Air	GC/MS II	N/A	11/18/10	101118L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	107	104	60-156	2	0-40	
Toluene	114	108	56-146	5	0-43	
Ethylbenzene	112	106	52-154	5	0-38	
Xylenes (total)	116	110	52-148	6	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

nelac

Conestoga-Rovers & Associates		Date Received:	N/A
5900 Hollis Street, Suite A		Work Order No:	10-11-1469
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA 8260B (M)

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-041-267	Air	GC/MS II	N/A	11/19/10	101119L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	108	101	60-156	7	0-40	
Toluene	123	104	56-146	17	0-43	
Ethylbenzene	123	103	52-154	17	0-38	
Xylenes (total)	125	105	52-148	17	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 10-11-1469

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ CALSCIENCE ( )
- ☐ SPL ( )
- ☐ KIFF ( )
- ☐ TEST AMERICA ( )
- ☐ OTHER ( )

Please Check Appropriate Box:
- ☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM ☐ CONSULTANT ☐ LUBES
- ☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Peter Schaefer - 240612-95-10.05

INCIDENT # (ENV SERVICES): 9 8 9 9 6 0 6 8

☐ CHECK IF NO INCIDENT # APPLIES

PO #

SAP #: 1 3 6 0 1 9

DATE: 11-16-10

PAGE: 1 of 1

SAMPLING COMPANY	Conestoga-Rovers & Associates
LOG CODE	CRAW
SITE ADDRESS: Street and City	1784 150th Ave, San Leandro
State	CA
GLOBAL ID NO	
ADDRESS	5900 Hollis Street, Suite A, Emeryville, California 94608
EDF DELIVERABLE TO (Name, Company, Office Location)	Brenda Carter, CRA, Emeryville
PHONE NO	510-420-3343
E-MAIL	shelledf@craworld.com
CONSULTANT PROJECT NO	240612-95-10.05
PROJECT CONTACT (Hardcopy or PDF Report to)	~~Luke Vermeire~~
SAMPLER NAME(S) (Print)	VARTAN HANEDANIAN
LAB USE ONLY	10-11-1469
TELEPHONE	510-420-3341
FAX	510-420-9170
E-MAIL	tjackson@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 :
Report results in PPMV. Use duplicate only if original is depleted.

cc reports to: pschaefer@craworld.com

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☑ RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	TPHg (8260B)	Benzene (8260B)	Toluene (8260B)	Ethylbenzene (8260B)	Total xylenes (8260B)	MTBE (8260B)	Helium ASTM D Method 1946 (M)	Oxygen, Carbon Dioxide, Methane, Helium ASTM D 1946	Methane (SCAWQMD 25.1)	Container PID Readings or Laboratory Notes
1	INF-1	11-16	2:50 pm							1	X	X	X	X	X	X			X	Tedlar Bag
2	INF-1	↓	4:20 pm							1	X	X	X	X	X	X				" "
3	INF-1	↓	7:25 pm							1	X	X	X	X	X	X				" "
4	EFF	↓	7:30 pm							1	X	X	X	X	X	X				" "
																				" "

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Vartan Hanedanian	CEL	11/17/10	1305
CEL 11/17/10 1730	CEL	11/18/10	1020

05/2/06 Revision

GSO

< WebShip > > > > >

800-322-5555 www.gso.com

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

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

COD:
$0.00

Reference:
CRA

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 515382553

NPS

ORC

D

GARDEN GROVE

D92843A

86427951

Print Date : 11/17/10 16:29 PM

Package 1 of 1

Send Label To Printer ☑ Print All Edit Shipment Finish

LABEL INSTRUCTIONS:

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

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.
STEP 2 - Fold this page in half.
STEP 3 - Securely attach this label to your package, do not cover the barcode.
STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

Send Label Via Email Create Return Label

TERMS AND CONDITIONS:

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

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 10-11-1469

SAMPLE RECEIPT FORM

Box 1 of 1

CLIENT: CRA

DATE: 11/18/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature ____ . ____ °C + 0.5 °C (CF) = ____ . ____ °C ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: ________).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☑ Air ☐ Filter — Initial: NC

CUSTODY SEALS INTACT:

☐ Box	☐ ________	☐ No (Not Intact)	☑ Not Present	☐ N/A	Initial: NC
☐ Sample	☐ ________	☐ No (Not Intact)	☑ Not Present		Initial: NC

SAMPLE CONDITION:

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

CONTAINER TYPE:

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

Water: ☐VOA ☐VOAh ☐VOAna₂ ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna₂ ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna₂ ☐______ ☐______ ☐______

Air: ☑Tedlar® ☐Summa® **Other:** ☐______ **Trip Blank Lot#:**________ **Labeled/Checked by:** NC

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

Preservative: h: HCL n: HNO_3 na₂: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered — **Scanned by:** [initials]

Calscience Environmental Laboratories, Inc.

nelac

December 02, 2010

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

Subject: **Calscience Work Order No.: 10-11-1592**
Client Reference: 1784 150th Ave., San Leandro, CA

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 11/19/2010 and analyzed in accordance with the attached chain-of-custody.

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

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

Sincerely,

for

Calscience Environmental
Laboratories, Inc.
Xuan H. Dang
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received:	11/19/10
Work Order No:	10-11-1592
Preparation:	N/A
Method:	ASTM D-1946
Units:	%v

Project: 1784 150th Ave., San Leandro, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	10-11-1592-1-A	11/17/10 05:40	Air	GC 36	N/A	11/19/10 12:36	101119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	17.7	0.500	1	
Carbon Dioxide	2.71	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-2	10-11-1592-2-A	11/17/10 05:47	Air	GC 36	N/A	11/19/10 12:55	101119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	21.8	0.500	1	
Carbon Dioxide	ND	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11	10-11-1592-3-A	11/17/10 05:51	Air	GC 36	N/A	11/19/10 13:12	101119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	21.7	0.500	1	
Carbon Dioxide	ND	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-4A	10-11-1592-4-A	11/17/10 05:55	Air	GC 36	N/A	11/19/10 13:30	101119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	21.6	0.500	1	
Carbon Dioxide	ND	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-3A	10-11-1592-5-A	11/17/10 06:00	Air	GC 36	N/A	11/19/10 13:50	101119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	16.9	0.500	1	
Carbon Dioxide	3.21	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-03-002-1,183	N/A	Air	GC 36	N/A	11/19/10 08:42	101119L01

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received:	11/19/10
Work Order No:	10-11-1592
Preparation:	N/A
Method:	EPA TO-3M

Project: 1784 150th Ave., San Leandro, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	10-11-1592-1-A	11/17/10 05:40	Air	GC 53	N/A	11/19/10 13:59	101119L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	1500	7.5	5		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-2	10-11-1592-2-A	11/17/10 05:47	Air	GC 53	N/A	11/19/10 12:56	101119L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	170	1.5	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11	10-11-1592-3-A	11/17/10 05:51	Air	GC 53	N/A	11/19/10 14:14	101119L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	2000	7.5	5		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-4A	10-11-1592-4-A	11/17/10 05:55	Air	GC 53	N/A	11/19/10 14:53	101119L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	27	1.5	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-3A	10-11-1592-5-A	11/17/10 06:00	Air	GC 53	N/A	11/19/10 14:28	101119L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	1600	7.5	5		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	098-01-005-2,765	N/A	Air	GC 53	N/A	11/19/10 09:13	101119L01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	1.5	1		ppm (v/v)

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received:	11/19/10
Work Order No:	10-11-1592
Preparation:	N/A
Method:	ASTM D-1946 (M)

Project: 1784 150th Ave., San Leandro, CA

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	10-11-1592-1-A	11/17/10 05:40	Air	GC 55	N/A	11/19/10 00:00	101119L01

Parameter	Result	RL	DF	Qual	Units
Helium	0.0748	0.0100	1		%v

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-2	10-11-1592-2-A	11/17/10 05:47	Air	GC 55	N/A	11/19/10 00:00	101119L01

Parameter	Result	RL	DF	Qual	Units
Helium	0.0183	0.0100	1		%v

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11	10-11-1592-3-A	11/17/10 05:51	Air	GC 55	N/A	11/19/10 00:00	101119L01

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-4A	10-11-1592-4-A	11/17/10 05:55	Air	GC 55	N/A	11/19/10 00:00	101119L01

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-3A	10-11-1592-5-A	11/17/10 06:00	Air	GC 55	N/A	11/19/10 00:00	101119L01

Parameter	Result	RL	DF	Qual	Units
Helium	0.0662	0.0100	1		%v

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-872-64	N/A	Air	GC 55	N/A	11/19/10 00:00	101119L01

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	11/19/10
5900 Hollis Street, Suite A		Work Order No:	10-11-1592
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA 8260B (M)
		Units:	ppm (v/v)

Project: 1784 150th Ave., San Leandro, CA

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
INF-1	10-11-1592-1-A	11/17/10 05:40	Air	GC/MS II	N/A	11/20/10 17:24	101120L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	3.6	1.0	200		Xylenes (total)	38	2.0	200	
Toluene	4.7	1.0	200		Methyl-t-Butyl Ether (MTBE)	ND	2.0	200	
Ethylbenzene	10	1.0	200						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	108	47-156			1,2-Dichloroethane-d4	95	47-156		
Toluene-d8	63	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
EW-2	10-11-1592-2-A	11/17/10 05:47	Air	GC/MS II	N/A	11/20/10 14:53	101120L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.10	20		Xylenes (total)	2.1	0.20	20	
Toluene	0.18	0.10	20		Methyl-t-Butyl Ether (MTBE)	ND	0.20	20	
Ethylbenzene	0.33	0.10	20						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	110	47-156			1,2-Dichloroethane-d4	95	47-156		
Toluene-d8	63	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11	10-11-1592-3-A	11/17/10 05:51	Air	GC/MS II	N/A	11/20/10 15:44	101120L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	5.1	1.0	200		Xylenes (total)	44	2.0	200	
Toluene	7.6	1.0	200		Methyl-t-Butyl Ether (MTBE)	ND	2.0	200	
Ethylbenzene	11	1.0	200						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	106	47-156			1,2-Dichloroethane-d4	96	47-156		
Toluene-d8	79	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-4A	10-11-1592-4-A	11/17/10 05:55	Air	GC/MS II	N/A	11/20/10 13:14	101120L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.020	4		Xylenes (total)	0.89	0.040	4	
Toluene	0.044	0.020	4		Methyl-t-Butyl Ether (MTBE)	ND	0.040	4	
Ethylbenzene	0.19	0.020	4						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	102	47-156			1,2-Dichloroethane-d4	96	47-156		
Toluene-d8	52	47-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Conestoga-Rovers & Associates		Date Received:	11/19/10
5900 Hollis Street, Suite A		Work Order No:	10-11-1592
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	EPA 8260B (M)
		Units:	ppm (v/v)

Project: 1784 150th Ave., San Leandro, CA

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
P-3A	**10-11-1592-5-A**	**11/17/10 06:00**	**Air**	**GC/MS II**	**N/A**	**11/20/10 20:55**	**101120L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	4.1	1.0	200		Xylenes (total)	39	2.0	200	
Toluene	4.9	1.0	200		Methyl-t-Butyl Ether (MTBE)	ND	2.0	200	
Ethylbenzene	11	1.0	200						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	108	47-156		1,2-Dichloroethane-d4	97	47-156	
Toluene-d8	62	47-156					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-13-041-269**	**N/A**	**Air**	**GC/MS II**	**N/A**	**11/20/10 12:27**	**101120L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Xylenes (total)	ND	0.010	1	
Toluene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	101	47-156		1,2-Dichloroethane-d4	98	47-156	
Toluene-d8	99	47-156					

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

nelac

Conestoga-Rovers & Associates	Date Received: 11/19/10
5900 Hollis Street, Suite A	Work Order No: 10-11-1592
Emeryville, CA 94608-2008	Preparation: N/A
	Method: EPA TO-3M

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
P-4A	Air	GC 53	N/A	11/19/10	101119D01

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
TPH as Gasoline	27.13	26.33	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608-2008	Date Received: N/A Work Order No: 10-11-1592 Preparation: N/A Method: ASTM D-1946

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-03-002-1,183	Air	GC 36	N/A	11/19/10	101119L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Carbon Dioxide	98	95	80-120	3	0-30	
Oxygen + Argon	90	89	80-120	1	0-30	
Nitrogen	91	90	80-120	1	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

nelac

Conestoga-Rovers & Associates		Date Received:	N/A
5900 Hollis Street, Suite A		Work Order No:	10-11-1592
Emeryville, CA 94608-2008		Preparation:	N/A
		Method:	ASTM D-1946 (M)

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-872-64	Air	GC 55	N/A	11/19/10	101119L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Helium	81	82	80-120	1	0-30	
Hydrogen	105	107	80-120	2	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

nelac

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

Date Received:	N/A
Work Order No:	10-11-1592
Preparation:	N/A
Method:	EPA 8260B (M)

Project: 1784 150th Ave., San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-041-269	Air	GC/MS II	N/A	11/20/10	101120L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	101	103	60-156	2	0-40	
Toluene	103	102	56-146	1	0-43	
Ethylbenzene	104	104	52-154	0	0-38	
Xylenes (total)	101	101	52-148	0	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 10-11-1592

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)

- ☑ CALSCIENCE ( )
- ☐ SPL ( )
- ☐ KIFF ( )
- ☐ TEST AMERICA ( )
- ☐ OTHER ( )

Please Check Appropriate Box:

☑ ENV. SERVICES	☐ MOTIVA RETAIL	☐ SHELL RETAIL
☐ MOTIVA SD&CM	☐ CONSULTANT	☐ LUBES
☐ SHELL PIPELINE	☐ OTHER	

Print Bill To Contact Name: Peter Schaefer - 240612-95-10.05

PO #

INCIDENT # (ENV SERVICES): 9 8 9 9 6 0 6 8

☐ CHECK IF NO INCIDENT # APPLIES

SAP #: 1 3 6 0 1 9

DATE:

PAGE: ____ of ____

SAMPLING COMPANY	Conestoga-Rovers & Associates
LOG CODE	CRAW
ADDRESS	5900 Hollis Street, Suite A, Emeryville, California 94608
PROJECT CONTACT (Hardcopy or PDF Report to)	TREY JACKSON ~~Luke Vermeire~~
TELEPHONE	510-420-3341
FAX	510-420-9170
E-MAIL	tjackson@craworld.com
SITE ADDRESS: Street and City	1784 150th Ave, San Leandro
State	CA
GLOBAL ID NO	
EDF DELIVERABLE TO (Name, Company, Office Location)	Brenda Carter, CRA, Emeryville
PHONE NO	510-420-3343
E-MAIL	shelledf@craworld.com
CONSULTANT PROJECT NO	240612-95-10.05
SAMPLER NAME(S) (Print)	C, HEE
LAB USE ONLY	10-11-1592

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 :
Report results in PPMV. Use duplicate only if original is depleted.

cc reports to: pschaefer@craworld.com

- ☐ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☑ RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	TPHg (8260B)	Benzene (8260B)	Toluene (8260B)	Ethylbenzene (8260B)	Total xylenes (8260B)	MTBE (8260B)	Helium ASTM D Method 1946 (M)	Oxygen, Carbon Dioxide, Methane, Helium ASTM D 1946	Methane (SCAWQMD 25.1)	Container PID Readings or Laboratory Notes
1	INF-1	11/17/10	5:40	AIR						1	X	X	X	X	X	X		X		
2	EW-2	↓	5:47	↓						↓	↓	↓	↓	↓	↓	↓		↓		
3	MW-11	↓	5:51	↓						↓	↓	↓	↓	↓	↓	↓		↓		
4	P-4A	↓	5:55	↓						↓	↓	↓	↓	↓	↓	↓		↓		
5	P-3A	↓	6:00	↓						↓	↓	↓	↓	↓	↓	↓		↓		

TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	[signature] CEL	11/18/10	1320
[signature] 11/18/10 1730	[signature]	11/19/10	10:30

05/2/06 Revision

GSO

< WebShip > > > > >

800-322-5555 www.gso.com

1592

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

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

COD:
$0.00

Reference:
ERI, CRA

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 515390331

NPS

ORC

D

GARDEN GROVE

D92843A

86463365

Print Date : 11/18/10 15:15 PM

Package 1 of 1

Send Label To Printer ☑ Print All Edit Shipment Finish

LABEL INSTRUCTIONS:

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

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

STEP 2 - Fold this page in half.

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

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

ADDITIONAL OPTIONS:

Send Label Via Email Create Return Label

TERMS AND CONDITIONS:

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

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 10-11-1592

SAMPLE RECEIPT FORM

Box 1 of 1

CLIENT: CRA DATE: 11/19/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature ____.____ °C + 0.5 °C (CF) = ____.____ °C ☐ **Blank** ☐ **Sample**

☐ Sample(s) outside temperature criteria (PM/APM contacted by: ______).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☑ Air ☐ Filter **Initial:** PS

CUSTODY SEALS INTACT:

☑ Box ☐ ________ ☐ No (Not Intact) ☐ Not Present ☐ N/A **Initial:** PS

☐ Sample ☐ ________ ☐ No (Not Intact) ☑ Not Present **Initial:** PS

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

CONTAINER TYPE:

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

Water: ☐VOA ☐VOAh ☐VOAna$_2$ ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐________ ☐________ ☐________

Air: ☑Tedlar® ☐Summa® **Other:** ☐______ **Trip Blank Lot#:**________ **Labeled/Checked by:** PS

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

Preservative: h: HCL n: HNO_3 na$_2$: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** bL