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## TRANSMITTAL

**DATE:** 9-17-10 **REFERENCE NO.:** 631916  
**PROJECT NAME:** Park Street Landing (former Chevron 20-6127)

**TO:** Mr. Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502--6577

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3:32 pm, Sep 21, 2010

Alameda County  
Environmental Health

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QUANTITY	DESCRIPTION
1	SOIL VAPOR, SUB-SLAB, AND INDOOR AIR SAMPLING REPORT

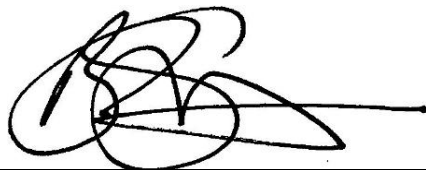
As Requested  For Review and Comment  
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 \_\_\_\_\_

**COMMENTS:**

We appreciate the opportunity to work with you on this project. Please contact Mr. Brian Silva at (916) 889-8908 if you have any questions or require additional information.

**Copy to:** Mr. Mike Bauer (electronic)  
Ms. Julie Beck Ball  
Mr. Peter Reinhold Beck  
Mr. Monroe Wingate  
Mr. Tom Foley

**Completed by:** B. Silva  
[Please Print]

**Signed:** 

**Filing:** **Correspondence File**



**Mike Bauer**  
Project Manager  
Marketing Business Unit

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September 17, 2010

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

Re: Former Signal Oil Marine Storage and Distribution Facility  
(Former Chevron Bulk Plant 20-6127)  
2301-2311 Blanding Avenue  
Alameda, California  
LOP Case RO0002466

Dear Mr. Wickham:

The purpose of this letter is to verify that as a representative for Chevron Environmental Management Company (Chevron), I reviewed, and concur with, the comments in the *Soil Vapor, Sub-Slab, and Indoor Air Sampling Report* for the referenced facility, prepared on behalf of Chevron by Conestoga-Rovers & Associates. I declare under penalty of perjury that the foregoing is true and correct.

Please feel free to contact me at (714) 671-3207 if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Mike Bauer".

---

Mike Bauer  
Project Manager



# SOIL VAPOR, SUB-SLAB, AND INDOOR AIR SAMPLING REPORT

FORMER SIGNAL OIL MARINE STORAGE  
AND DISTRIBUTION FACILITY  
(CHEVRON FACILITY 20-6127)  
2301-2311 BLANDING AVENUE  
ALAMEDA, CALIFORNIA

**Prepared For:**

**Mr. Jerry Wickham  
Alameda County Health Care Services Agency  
Environmental Health Services**

**SEPTEMBER 17, 2010**

**REF. NO. 631916 (15)**

This report is printed on recycled paper.

**Prepared by:  
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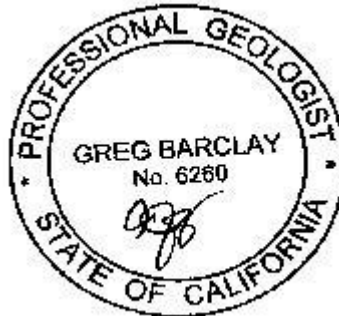


# SOIL VAPOR, SUB-SLAB, AND INDOOR AIR SAMPLING REPORT

FORMER SIGNAL OIL MARINE STORAGE  
AND DISTRIBUTION FACILITY  
(CHEVRON FACILITY 20-6127)  
2301-2311 BLANDING AVENUE  
ALAMEDA, CALIFORNIA

Brian Silva

Greg Barclay, PG 6260



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## 1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) is submitting this *Soil Vapor, Sub Slab, and Indoor-Air Sampling Report* on behalf of Chevron Environmental Management Company (Chevron) for the former Signal Oil Marine Storage and Distribution facility (former Chevron facility 20-6127) located at 2301-2311 Blanding Avenue in Alameda, California. The work was performed in accordance with Alameda County Health Care Services Agency, Environmental Health Services (ACEH) correspondence dated April 19, 2010 (Appendix A).

The purpose of the work was to evaluate the temporal variability in vapor samples previously collected and to assess the need for additional sub-slab and indoor air sampling at the site. The work was performed in general accordance with CRA's April 1, 2010 *Revised Vapor Sampling Plan* (including the provisions outlined in ACEH's April 19, 2010 letter in which the work plan was approved). This report includes the results of the vapor sampling, indoor and outdoor air analyses, and air quality assessment, as well as a summary of the site background, previous environmental work, and conclusions and recommendations.

## 2.0 SITE BACKGROUND

The following sections provide a description of the site and a summary of the geologic and hydrogeologic setting at the site.

### 2.1 SITE DESCRIPTION

The approximately 3.5-acre site is located on the northeast side of Blanding Avenue between Oak and Park Streets in Alameda, California (Figures 1 and 2). Land use in the site vicinity is primarily commercial and industrial. The Alameda Canal and a marina are located adjacent to the northeast side of the site. The site is currently occupied by three large commercial buildings, which are used for office, retail, and storage space, and identified as Park Street Landing at 2307-2337 Blanding Avenue. A summary of the site history dating back to 1897 is included in Appendix B.

## **2.2 SITE GEOLOGY AND HYDROGEOLOGY**

Based on past investigation, the soils encountered beneath the site generally consist of silty sand and clayey sand from just beneath grade to approximately 5 to 9 feet below grade (fbg). Fill consisting of black sand and debris, including concrete fragments, has been reported in several borings at shallow depths. A 4 to 5 foot-thick layer of clay with some sand underlies the silty sand and clayey sand. Below the clay is silty sand and sandy silt to the maximum depth of explored of approximately 20.5 fbg. Groundwater is typically encountered in site borings at approximately 14.5 to 15 fbg within the silty sand and sandy silt, and subsequently rises in the borings/wells to approximately 7 to 10 fbg suggesting the groundwater beneath the site is semi-confined.

## **2.3 PREVIOUS ENVIRONMENTAL WORK**

To date, seven groundwater monitoring wells, one replacement groundwater monitoring well, six vapor wells, and seven sub-slab vapor wells have been installed at the site. Additionally, twenty eight soil borings have been advanced and three surface soil samples have been collected at the site. Quarterly monitoring and sampling of wells MW-1 through MW-5 initiated in 2001 is ongoing. Newly installed wells MW-1RA, MW-1RB (which were installed to replace well MW-1), and MW-6 will be added to the quarterly monitoring and sampling program, beginning in the fourth quarter 2010. A summary of previous environmental work performed at the site is presented in Appendix B.

## **3.0 VAPOR SAMPLING ACTIVITIES AND LABORATORY ANALYSIS**

CRA collected vapor samples from site vapor wells and sub-slab vapor probes as well as indoor and outdoor air samples. Samples were collected to evaluate temporal variability in previously collected subsurface vapor and to compare subsurface conditions with indoor and ambient air conditions. Details of this work are described below.

### **3.1 SOIL AND SUB-SLAB VAPOR SAMPLING**

On June 29, 2010, CRA collected vapor samples from vapor well VP-2 and sub-slab vapor wells VP-7 through VP-13 (Figure 2) in 1-liter Summa™ canisters connected to the vapor wells using dedicated flow regulators set at 167 milliliters per minute (mL/min). Approximately three volumes of stagnant air in the sub-slab vapor wells and the soil



vapor wells (approximately 10 or 100 mL, respectively) were purged prior to sample collection. The Summa™ canister valves were opened and the vacuum of the canisters was used to draw the soil vapor through the flow regulator until a negative pressure of approximately 5 inches of mercury was observed on the vacuum gauge. A field duplicate sample was collected simultaneously from VP-2. In accordance with the DTSC *Advisory-Active Soil Gas Investigations* guidance document, dated January 28, 2003, leak testing was performed during sampling using helium.

Samples could not be collected from vapor wells VP-1 and VP-3 through VP-6 due to excess moisture in the vapor well tubing. This is likely due to the wet weather that was experienced this spring through the month of May.

### **3.2 INDOOR AND OUTDOOR AIR SAMPLING**

On June 29, 2010, CRA collected eight-hour indoor air samples from sampling points IA-1, IA-2 and IA-4, and an eight-hour outdoor air sample from sampling point OA-1 (Figure 2) in 6-liter Summa™ canisters using dedicated flow regulators set at 12.5 mL/min. Indoor air sampling was conducted in conditions representative of normal use by suite occupants.

Abnormal conditions were observed inside “Suite E” where sampling point IA-3 is located (Figure 2). The previous lessee of the suite (who had recently vacated) had apparently poured paint products on tarpaulins to dry out (rather than disposing of the paint prior to vacating the suite), likely compromising the indoor air sample. The property owner was notified, the paint products and tarpaulins were removed, and an eight-hour indoor air sample from IA-3 was collected on July 9, 2010 after normal ambient conditions were restored in the suite.

Additionally, a survey of the four suites from which the indoor air samples were collected was made prior to conducting indoor air sampling and an inventory of potential VOC contributors were noted on the Building Survey Form (Appendix C) from the California Environmental Protection Agency and Department of Toxic Substances Control’s *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air – Interim Final* dated December 15, 2004 and revised February 7, 2005. Several potential background sources such as paint and paint thinners were noted in each of the suites.

Indoor air sampling was conducted in conditions representative of normal use by suite occupants. This meant that heating or cooling systems were operated normally, and

doors or windows may have been opened during the sampling event. During sample collection, the back door at the Enterprise Rent-a-Car suite was open all day, as is typical during business hours. The back door at the Mark's Paints suite was left open during sampling, and is typically open 90 percent of the time during business hours. Interior doors were open in the empty suite (Suite E), but all exterior doors were closed. All doors were open in the Hansen Rigging suite for approximately 10 percent of the sampling duration.

Outside ambient air conditions were warm at 65 to 75 degrees Fahrenheit with a slight breeze in a predominantly westerly direction. An eight-hour upwind outdoor air (ambient air) sample was collected from sampling point OA-1 (Figure 2), located in a landscaped area in the vicinity of VP-2.

### **3.3            LABORATORY ANALYSIS**

Samples were transported, under chain-of-custody, to Air Toxics, LTD, a California certified laboratory in Folsom, California for the following analyses:

- Total petroleum hydrocarbons as gasoline (TPHg) and Volatile Organic Compounds (VOCs) by EPA Method TO-15 (soil vapor and sub-slab vapor samples)
- TPHg and VOCs by EPA Method TO-15 Selective Ion Monitoring (SIM) (indoor and outdoor air samples)
- Oxygen, nitrogen, carbon dioxide, methane, and helium (leak check compound) by American Society for Testing and Materials (ASTM) Method D-1946

Due to a laboratory oversight, the Summa™ canisters for IA-1, IA-2, IA-4, and OA-1 were released to the cleaning department prior to performing ASTM Method D-1946 analysis. However, this laboratory oversight should not affect the validity of the samples since they are all ambient air samples and not soil or sub-slab vapor samples.

Pressure readings from the laboratory confirmed the residual vacuum, ensuring that the canisters had not been compromised during the shipment to, and storage at, the laboratory.

#### 4.0 SOIL VAPOR AND INDOOR/OUTDOOR AIR ANALYTICAL RESULTS

Analytical results for TPHg, benzene, and helium (leak check compound) are summarized below. Shallow soil vapor and indoor air analytical results were compared to the Regional Water Quality Control Board (RWQCB) - San Francisco Region's Environmental Screening Levels (ESLs) for indoor air and shallow soil gas in a commercial/industrial land use reported in Table E of RWQCB's May 2008 *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*. In addition, sub-slab vapor results were compared to shallow soil gas ESLs and the indoor air ESLs, adjusted by an attenuation factor of 0.01 to account for attenuation from sub-slab to indoor air and are considered overly conservative. Cumulative soil vapor analytical data compared to ESLs are summarized in Table 1 and indoor and outdoor air analytical data compared to ESLs are summarized in Table 2. Laboratory analytical reports are included in Appendix D.

##### ***Total Petroleum Hydrocarbons as Gasoline***

- No TPHg was detected in the vapor samples from vapor well VP-2, from sub-slab vapor points VP-7, VP-9 through VP-13, and from outdoor air sample, OA-1.
- TPHg was detected in vapor samples from the field duplicate sample for VP-2 and from sub-slab vapor point VP-8 at concentrations of 820 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) and 310  $\mu\text{g}/\text{m}^3$ , respectively.
- The TPHg results from vapor well VP-2 and sub-slab vapor point VP-8 are well below the shallow soil gas and sub-slab vapor ESLs of 29,000  $\mu\text{g}/\text{m}^3$  and 1,400  $\mu\text{g}/\text{m}^3$ .
- TPHg was also detected in all indoor air samples collected at concentrations ranging from 110  $\mu\text{g}/\text{m}^3$  in IA-3 through 490  $\mu\text{g}/\text{m}^3$  in IA-2 and IA-4.
- The TPHg results for the indoor air sampling are above the indoor air ESL for commercial and industrial sites of 14  $\mu\text{g}/\text{m}^3$ .

##### ***Benzene***

- No benzene was detected in the vapor samples from vapor well VP-2 and sub-slab vapor points VP-7 and VP-9 through VP-13.
- Benzene was detected in the vapor sample from sub-slab vapor point VP-8 at concentration of 24  $\mu\text{g}/\text{m}^3$ .
- The benzene detection in sub-slab vapor point VP-8 is slightly above the sub-slab vapor ESL of 14  $\mu\text{g}/\text{m}^3$ , but is well below the shallow soil gas ESL of 280  $\mu\text{g}/\text{m}^3$ .
- Benzene was also detected in all indoor and outdoor air samples collected at concentrations ranging from 0.24  $\mu\text{g}/\text{m}^3$  in OA-1 to 1.8  $\mu\text{g}/\text{m}^3$  in IA-4.

- The benzene results for the indoor air sampling are above the indoor air ESL for commercial and industrial sites of 0.14  $\mu\text{g}/\text{m}^3$ .

### *Helium*

- No helium was detected in the vapor samples from vapor well VP-2, sub-slab vapor points VP-9, and VP-11 through VP-13, and indoor air sample IA-3.
- Helium was only detected in vapor samples from sub-slab vapor points VP-7, VP-8 and VP-10 at 0.21 percent, 0.57 percent, 7.3 percent, respectively (indicating that there was a leak of ambient air into the sampling apparatus). Given the low percentage of helium reported and low concentrations of hydrocarbon vapor detected (well below any commercial/industrial ESLs for shallow soil gas), the minor detection of helium does not nullify results of the sub-slab samples.

In addition to the target compounds listed above, several non-target analytes (e.g. toluene, ethylbenzene, and xylenes) were detected (Appendix D). However, the majority of these detections were below the applied ESLs.

## 5.0 AIR QUALITY ASSESSMENT

The following sections assess the results of the laboratory analysis of the soil vapor, sub-slab vapor, indoor air, and outdoor air samples.

### 5.1 CONTAMINANTS OF CONCERN IN SOIL VAPOR

To assess the results of the laboratory analysis of the soil vapor samples, the California Regional Water Quality Control Board – San Francisco Region (SFRWQCB) Environmental Screening Levels (ESLs) for shallow soil gas under a commercial/industrial land use reported in Table E<sup>1</sup>, are typically applied as screening values. Comments received from the Alameda County Health Care Services Agency dated February 5, 2010, regarding CRA's *Soil Vapor Sampling Report*, dated December 2, 2009, indicate that comparing the sub-slab soil vapor analytical results directly to the ESLs for shallow soil gas is inappropriate, and that an attenuation factor of 0.01 should be applied to the sub-slab soil vapor analytical results such that they may be compared directly to the ESLs for indoor air. However, as indicated in the ESL guidance, both sub-slab and shallow gas soil data (i.e. < 1.5 m bgs) should be compared to the shallow soil gas screening levels presented in Table E. For conservatism, the sub-slab soil vapor and shallow soil vapor analytical results are compared to both the Table E standards for shallow soil gas, as well as the indoor air screening levels adjusted by an attenuation factor of 100 to account for attenuation from sub-slab to indoor air (i.e., indoor ESLs were multiplied by 100 or divided by 0.01 to result in the corresponding sub-slab soil gas ESLs).

The applied soil gas screening levels are presented in Table 1. A comparison of the chemical concentrations detected in soil vapor samples to these screening criteria is also presented in Table 1. Chemicals with a maximum detected concentration in sub-slab or shallow soil vapor greater than the applied screening concentrations were identified as contaminants of concern (COCs) in the soil vapor at the site. As indicated in Table 1, although the concentration of benzene measured in sub-slab soil vapor sample VP-8 exceeded the adjusted sub-slab ESL based on indoor air (multiplied by an attenuation factor of 100 to account for attenuation between sub-slab and indoor air), it did not exceed the ESL for shallow soil gas. As a result, there were no COCs identified in sub-slab soil vapor and/or soil vapor at the site during the most recent sampling event.

---

<sup>1</sup> SFRWQCB, 2008. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, California Regional Water Quality Control Board – San Francisco Bay Region, Interim Final – November 2007 (Revised May 2008).

An evaluation of site-specific data suggest that the attenuation factor of 0.01 is overly conservative for the site. Table 3 presents a comparison of the measured indoor air and sub-slab soil vapor concentrations for those analytes that were analyzed for in both media. The estimated sub-slab soil vapor concentrations that would be expected, based on multiplying the measured indoor air concentrations by an attenuation factor of 100, are also presented for comparative purposes. As shown in Table 3, the estimated sub-slab soil vapor concentrations are higher than those measured in the sub-slab soil vapor probes. In addition, TPHg concentrations measured in the indoor air are typically higher than the measured soil vapor concentrations. With the exception of VP-8, no analytes were detected above the detection limits in sub-slab soil vapor.

## **5.2 CONTAMINANTS OF CONCERN IN AIR**

To assess the results of the laboratory analysis of the indoor and outdoor (ambient) air samples, the SFRWQCB ESLs for indoor air in a commercial/industrial land use reported in Table E, were applied. The applied indoor air screening levels are presented in Table 2. A comparison of the chemical concentrations detected in indoor and ambient air samples to these screening criteria is also presented in Table 2. Chemicals with a maximum detected concentration in indoor or ambient air greater than the applied screening concentration were identified as COCs in the indoor and/or ambient air at the site. As indicated in Table 2, this included TPHg, benzene, and ethylbenzene.

As shown in Table 2, the indoor air and ambient air concentrations are fairly consistent and of the same order of magnitude. Note that except for the empty suite (Suite E), exterior doors were often opened during the sampling event. As each unit is located in close proximity to the parking lot, emissions from passing or idling vehicle traffic could impact the indoor air quality.

## **6.0 CONCLUSIONS AND RECOMMENDATIONS**

As indicated in Table 2, TPHg, benzene, and ethylbenzene were identified as COCs in indoor air at the site. The only COC identified in ambient air at the site was benzene. The concentration of benzene measured in ambient air was less than those measured in the indoor air of the sampled suites. However, the indoor air and ambient air results are of similar magnitude, which indicates that background and outside sources are contributing to the indoor air quality at the site. The measured indoor air concentrations could exceed the levels considered acceptable for human health based on the indoor air inhalation pathway and may require further investigation.

As indicated in Table 1, there were no COCs identified in sub-slab soil vapor or soil vapor at the site based on the ESLs for shallow soil gas. The measured concentrations are therefore within the levels considered acceptable for human health based on the indoor air inhalation pathway. There was one exceedance of the indoor air ESL (adjusted by an attenuation factor of 100 to account for attenuation from sub-slab soil vapor to indoor air) for benzene measured in VP-8. As indicated above, the adjusted screening concentration of 14 µg/m<sup>3</sup> for benzene is thought to be overly conservative for the site. Benzene was detected at levels below the adjusted ESL in the previous sampling event at VP-8, and has not been detected in sub-slab soil vapor in samples from nearby VP-7.

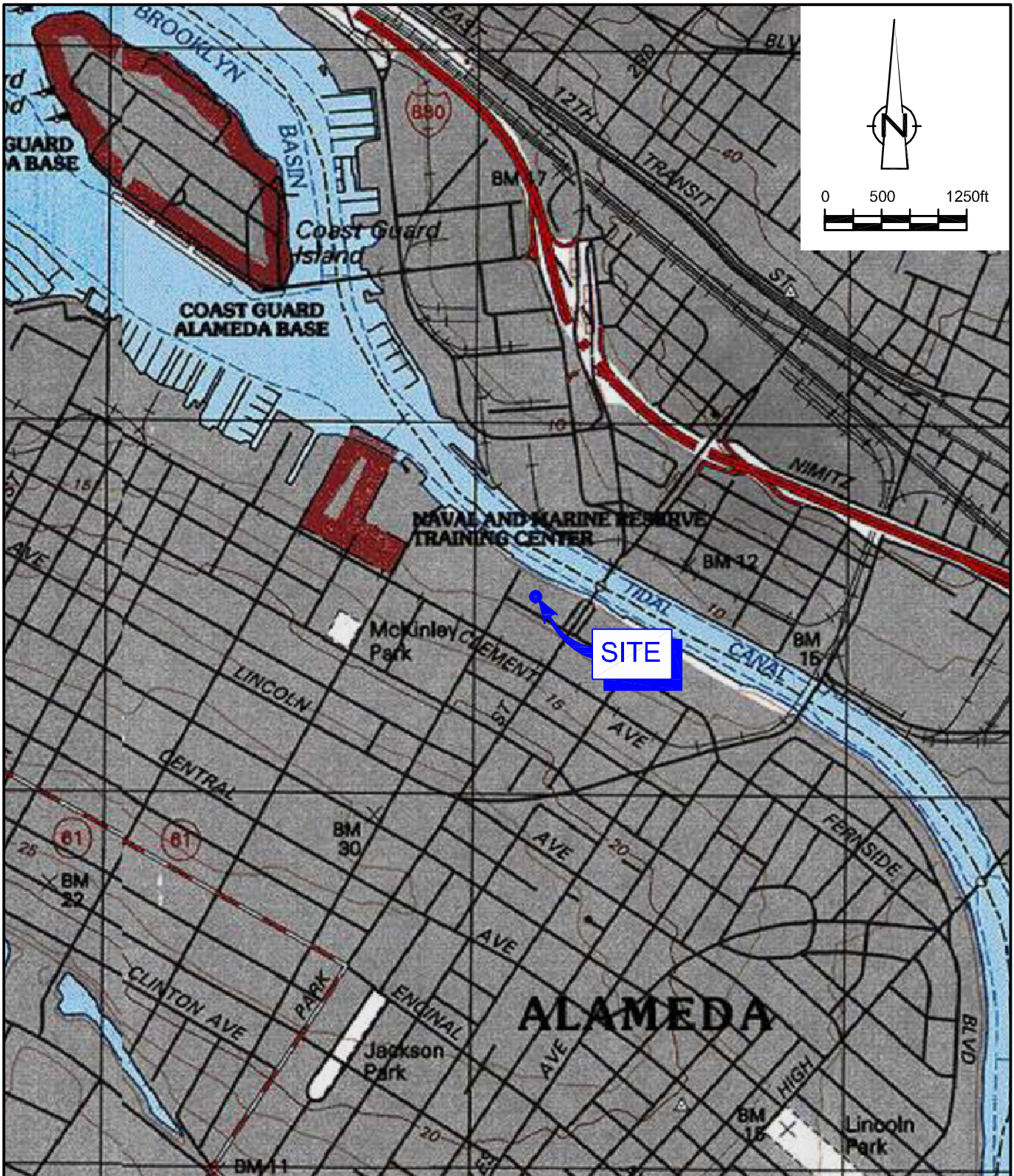
Although it is difficult to make comparisons between indoor air and sub-slab soil vapor analytical data due to the difference in detection limits, a relative comparison does indicate that concentrations are often higher in indoor air samples as compared to sub-slab soil vapor probes (Table 3). The indoor air samples were analyzed with EPA method TO-15 SIM, while the soil vapor samples were analyzed with EPA method TO-15, accounting for the differences in the detection limits attained. Regardless of detection limits, the comparison suggests that the COCs in indoor air may be attributable to background indoor air sources, rather than from soil vapor beneath the site.

Table 1 presents the complete soil vapor data set for the site, which includes historical data as well as data from additional soil vapor probes at the site that were not considered in the air quality assessment. Table 1 also presents a comparison of the data to the ESLs, showing that concentrations of TPHd, TPHg, benzene, toluene, ethylbenzene, m,p-xylenes, chloromethane and bromomethane have exceeded one or both of the applicable ESLs in the time that soil vapor has been monitored at the site. As shown in Table 1, concentrations appear to have decreased since 2008.

As outlined in CRA's *Revised Vapor Sampling Plan*, dated April 1, 2010, a second indoor air evaluation will be completed in November 2010 to confirm the initial results discussed above.

## FIGURES





SOURCE: TOPOI MAPS.

figure 1

VICINITY MAP  
 FORMER SIGNAL OIL MARINE STORAGE AND DISTRIBUTION FACILITY  
 (CHEVRON FACILITY 20-6127)  
 2301-2311 BLANDING AVENUE  
 Alameda, California



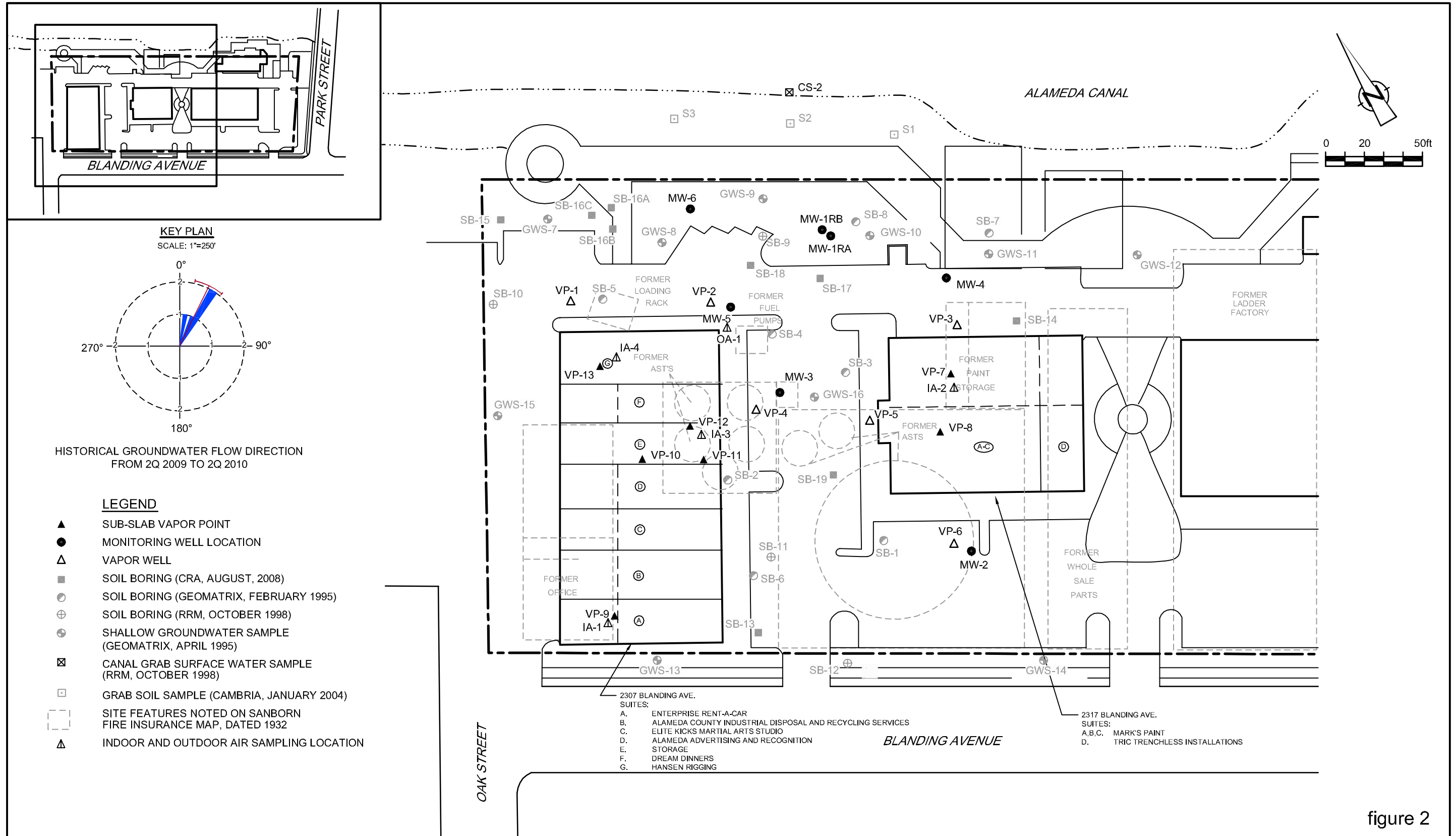


figure 2  
 SITE PLAN  
 FORMER SIGNAL OIL MARINE STORAGE AND DISTRIBUTION FACILITY  
 (CHEVRON FACILITY 20-6127)  
 2301-2311 BLANDING AVENUE  
 Alameda, California

NOTE:  
 WELL LOCATIONS ARE BASED ON MAP PROVIDED BY MORROW SURVEYING  
 (DWG NO.0857-149 ct, DATED 7-30-09).  
 ALL OTHER LOCATIONS ARE APPROXIMATE.

## TABLES

TABLE 1

SOIL VAPOR ANALYTICAL RESULTS  
FORMER SIGNAL OIL BULK PLANT  
(CHEVRON FACILITY 20-6127)  
2301-2311 BLANDING AVENUE  
ALAMEDA, CALIFORNIA

Vapor Well	Sample Date	TPHd	TPHg	Benzene	Toluene	Ethyl- benzene	m,p- Xylene	Naphthalen e	Chloromethane	Bromomethane	Hexane	Cyclohexane	Heptane	Cumene	Propyl- benzene	1,3,5- Trimethy l-benzene	4-Ethyl- toluene	O <sub>2</sub>	N <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	He
		(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(%)	(%)	(%)	(%)	(%)
<b>Soil Vapor Probes</b>																						
VP-1	08/19/08	13,000	<b>1,300,000</b>	<u>300</u>	140	240	540	--	<160	<75	9,400	12,000	27,000	1,600	2,800	<95	660	17	--	4.0	--	<0.12
VP-1	10/22/09	--	<88	<3.4	<4.1	<4.7	<4.7	--	<8.9	<4.2	<3.8	<3.7	<4.4	<5.3	<5.3	<5.3	<5.3	9.4	--	5.7	--	<0.11
VP-2	08/19/08	24,000	<b>1,500,000</b>	<u>140</u>	<86	130	300	--	<190	<89	5,500	19,000	12,000	900	1,700	<110	370	8.9	--	11	--	<0.11
VP-2	10/22/09	--	<95	<3.7	<4.4	<5.0	<5.0	--	<9.6	<4.5	<4.1	<4.0	<4.8	<5.7	<5.7	<5.7	<5.7	13	--	8.0	--	<0.12
VP-2	06/29/10	--	<280	<4.3	<5	<5.9	<5.9	<28	--	--	--	--	--	--	--	--	--	16	79	5.1	0.00050	<0.14
VP-2 (lab duplicate)	06/29/10*	--	820	<4.3	<5.0	<5.8	<5.8	<28	--	--	--	--	--	--	--	--	--	16	79	5.1	<0.00027	<0.13
VP-3	08/19/08	<b>53,000E</b>	<b>4,100,000</b>	<700	<830	<960	1,200	--	<1,800	<850	38,000	47,000	77,000	4,000	5,700	1,200	<1100	1.7	--	11	--	<0.11
VP-3	10/22/09	--	<b>1,800,000</b>	<130	<150	<180	<180	--	<330	<160	6,200	6,200	1,800	<200	<200	<200	<200	1.4	--	8.1	--	<0.12
VP-4	08/19/08	<u>91,000S</u>	<u>220,000,000</u>	<u>1,100,000</u>	49,000	<u>570,000</u>	<u>70,000</u>	--	<u>3,900,000</u>	<u>70,000</u>	8,400,000	3,600,000	5,100,000	57,000	84,000	<19,000	37,000	0.55	--	16	--	<0.13
VP-4	10/22/09	--	<u>140,000,000</u>	<u>1,100,000</u>	<48,000	<u>650,000</u>	<u>71,000</u>	--	<100,000	<49,000	7,700,000	3,400,000	4,900,000	64,000	110,000	<62,000	<62,000	0.64	--	15	--	<0.13
VP-4	10/22/09*	--	<u>130,000,000</u>	<u>1,000,000</u>	<46,000	<u>540,000</u>	57,000	--	<100,000	<47,000	7,300,000	3,200,000	4,600,000	<59,000	92,000	<59,000	<59,000	0.62	--	14	--	<0.12
VP-5	08/19/08	<u>110,000S</u>	<u>29,000,000</u>	<u>28,000</u>	<4,400	<5,000	<5,000	--	<9,600	<4,500	630,000	430,000	660,000	7,000	<5,700	<5,700	<5,700	2.0	--	15	--	<0.12
VP-5	10/22/09	--	<u>20,000,000</u>	<u>16,000</u>	<4,800	<5,500	<5,500	--	<10,000	<4,900	370,000	310,000	490,000	12,000	15,000	<6,200	<6,200	1.3	--	17	--	<0.13
VP-6	08/19/08	<u>96,000S</u>	<u>150,000,000</u>	<u>20,000</u>	<10,000	<12,000	<12,000	--	<u>1,200,000</u>	<u>25,000</u>	3,300,000	3,200,000	2,800,000	17,000	<14,000	<14,000	<14,000	3.9	--	9.8	--	<0.11
VP-6	08/19/08*	<u>22,000</u>	<u>840,000</u>	<u>100</u>	<86	130	290	--	<190	<89	4,400	9,800	12,000	890	1,700	<110	390	9.2	--	10	--	<0.11
<b>Sub-Slab Soil Vapor Probes</b>																						
VP-7	07/24/09	--	<95	<3.7	<4.4	<5.0	<5.0	--	<9.6	<4.5	<4.1	<4.0	<4.8	<5.7	<5.7	<5.7	<5.7	19	--	0.6	--	<0.12
VP-7	06/29/10	--	<240	<3.7	<4.3	<5.0	<5.0	<24	--	--	--	--	--	--	--	--	--	21	78	0.30	<0.00023	0.21
VP-8	07/24/09	--	490	<3.5	<4.1	<4.8	<4.8	--	<9.1	<4.3	<3.9	<3.8	<4.5	<5.4	<5.4	<5.4	<5.4	21	--	0.56	--	<0.11
VP-8	07/24/09*	--	<u>8,200</u>	7	48	24	100	--	<9.1	<4.3	<3.9	<3.8	<4.5	<5.4	14	33	79	21	--	0.56	--	<0.11
VP-8	06/29/10	--	310	<u>24</u>	71	5.9	47	<25	--	--	--	--	--	--	--	--	--	20	79	0.61	<0.00024	0.57
VP-8 (lab duplicate)	06/29/10	--	340	<u>24</u>	70	5.3	44	<25	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VP-9	07/24/09	--	<u>8,800</u>	<3.8	38	<5.3	19	--	<9.8	<4.6	<4.2	<4.1	<4.9	<5.8	<5.8	<5.8	<5.8	15	--	0.14	--	29
VP-9	10/22/09	--	<90	<3.5	<4.1	<4.8	<4.8	--	<9.1	<4.3	<3.9	<3.8	<4.5	<5.4	<5.4	<5.4	<5.4	20	--	0.73	--	<0.11
VP-9	06/29/10	--	<230	<3.6	<4.3	<4.9	<5.0	<24	--	--	--	--	--	--	--	--	--	19	80	1.1	<0.00023	<0.11
VP-10	07/24/09	--	<u>2,500B</u>	<3.7	7	52	130	--	<9.6	<4.5	<4.1	<4.0	12	<5.7	12	21	59	17	--	0.48	--	16
VP-10	10/22/09	--	<u>2,100</u>	16	6.1	12	<5.2	--	<10	<4.7	100	45	91	<5.9	<5.9	<5.9	<5.9	20	--	0.29	--	2.4
VP-10	06/29/10	--	<250	<3.8	<4.5	<5.2	<5.2	<25	--	--	--	--	--	--	--	--	--	19	73	0.43	<0.00024	7.3
<b>Sub-Slab Soil Vapor Probes (cont'd)</b>																						
VP-11	07/24/09	--	450B	<3.9	13	<5.2	8	--	<10	<4.7	<4.3	<4.2	<5.0	<5.9	<5.9	<5.9	<5.9	16	--	0.26	--	22

TABLE 1

SOIL VAPOR ANALYTICAL RESULTS  
 FORMER SIGNAL OIL BULK PLANT  
 (CHEVRON FACILITY 20-6127)  
 2301-2311 BLANDING AVENUE  
 ALAMEDA, CALIFORNIA

Vapor Well	Sample Date	TPHd	TPHg	Benzene	Toluene	Ethyl- benzene	m,p- Xylene	Naphthalen e	Chloromethane	Bromomethane	Hexane	Cyclohexane	Heptane	Cumene	Propyl- benzene	1,3,5- Trimethy l-benzene	4-Ethyl- toluene	O <sub>2</sub>	N <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	He
		(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(%)	(%)	(%)	(%)	(%)
<b>Soil Vapor Probes</b>																						
VP-1	08/19/08	13,000	<b>1,300,000</b>	<u>300</u>	140	240	540	--	<160	<75	9,400	12,000	27,000	1,600	2,800	<95	660	17	--	4.0	--	<0.12
VP-11	10/22/09	--	<99	<3.9	<4.6	<5.2	<5.2	--	<10	<4.7	<4.3	<4.2	<5.0	<5.9	<5.9	<5.9	<5.9	14	--	4.0	--	<0.12
VP-11	06/29/10	--	<240	<3.8	<4.5	<5.1	<5.1	<25	--	--	--	--	--	--	--	--	--	18	80	1.9	<0.00024	<0.12
VP-12	07/24/09	--	190B	<3.6	<4.2	<4.9	<4.9	--	<9.2	<4.3	<3.9	<3.8	<4.6	<5.5	<5.5	<5.5	<5.5	19	--	0.73	--	0.43
VP-12	07/24/09*	--	<u>1,600B</u>	<3.6	<4.2	<4.9	<4.9	--	<9.2	<4.3	<3.9	<3.8	<4.6	<5.5	<5.5	<5.5	<5.5	19	--	0.73	--	0.44
VP-12	10/22/09	--	<95	<3.7	<4.4	<5.0	<5.0	--	<9.6	<4.5	<4.1	<4.0	<4.8	<5.7	<5.7	<5.7	<5.7	18	--	1.4	--	<0.12
VP-12	06/29/10	--	<220	<3.5	<4.1	<4.8	<4.8	<23	--	--	--	--	--	--	--	--	--	20	80	0.45	<0.00022	<0.11
VP-13	07/24/09	--	<u>8,600B</u>	<3.6	200	<5.0	9	--	<9.4	<4.4	<4.0	<3.9	<4.7	<5.6	<5.6	<5.6	<5.6	15	--	0.16	--	26
VP-13	10/22/09	--	<95	<3.7	<4.4	<5.0	<5.0	--	<9.6	<4.5	<4.1	<4.0	<4.8	<5.7	<5.7	<5.7	<5.7	20	--	1.3	--	<0.12
VP-13	06/29/10	--	<240	<3.8	<4.4	<5.1	<5.1	<25	--	--	--	--	--	--	--	--	--	16	82	2.0	<0.00024	<0.12
<b>SFRWQCB ESLs<sup>a</sup></b>		<b>29,000</b>	<b>29,000</b>	<b>280</b>	<b>180,000</b>	<b>3,300</b>	<b>58,000**</b>	<b>240</b>	<b>53,000</b>	<b>2,900</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
<b>SFRWQCB ESLs<sup>b</sup></b>		<b>1,400</b>	<b>1,400</b>	<b>14</b>	<b>8,800</b>	<b>160</b>	<b>2,900**</b>	<b>12</b>	<b>2,600</b>	<b>150</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>

Abbreviations and Notes:

**Bold** = indicates that measured concentration exceeds the ESL for shallow soil gas under commercial/industrial land use.

Underline = indicates that measured concentration exceeds the ESL for indoor air under commercial/industrial land use adjusted by a factor of 100 to account for attenuation between sub-slab and indoor air.

TPHd = Total petroleum hydrocarbons as diesel by EPA Method TO-17

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method TO-3 (8/19/08) or TO-15 GC/MS

Volatile Organic Compounds by EPA Method TO-15

Oxygen (O<sub>2</sub>), nitrogen (N<sub>2</sub>), carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and helium (He) by ASTM Method D-1946

<sup>a</sup> = Environmental Screening Levels for shallow soil gas associated with potential vapor intrusion concerns at commercial/industrial sites (Table E, SFRWQCB, 2008).

<sup>b</sup> = Environmental Screening Levels for indoor air under commercial/industrial land use adjusted by a factor of 100 to account for attenuation between sub-slab and indoor air (Table E, SFRWQCB, 2008).

NE = Not established

\* = Field duplicate sample

\*\* = ESL is for total xylenes

E = Laboratory data qualifier; exceeds instrument calibration range

S = Laboratory data qualifier; saturated peak, data reported as estimated

TABLE 2

**INDOOR AND OUTDOOR AIR ANALYTICAL RESULTS  
FORMER SIGNAL OIL BULK PLANT  
(CHEVRON FACILITY 20-6127)  
2301-2311 BLANDING AVENUE  
ALAMEDA, CALIFORNIA**

<i>Vapor Well</i>	<i>Sample Date</i>	<i>TPHg</i>	<i>Benzene</i>	<i>Toluene</i>	<i>Ethylbenzene</i>	<i>m,p-Xylene</i>	<i>Naphthalene</i>	<i>O<sub>2</sub></i>	<i>N<sub>2</sub></i>	<i>CO<sub>2</sub></i>	<i>CH<sub>4</sub></i>	<i>He</i>
		<i>(<math>\mu\text{g}/\text{m}^3</math>)</i>										
IA-1	06/29/10	<b>290</b>	<b>0.52</b>	4.5	0.27	0.97	<4.0	--	--	--	--	--
IA-2	06/29/10	<b>490</b>	<b>0.57</b>	5.2	<b>2.3</b>	8.3	<4.1	--	--	--	--	--
IA-3	07/09/10	<b>110</b>	<b>0.39</b>	1.8	0.27	0.92	<4.3	22	78	0.040	0.00019	<0.082
IA-3 (lab duplicate)	07/09/10	<b>100</b>	<b>0.41</b>	2.0	0.26	0.91	<4.3	--	--	--	--	--
IA-4	06/29/10	<b>490</b>	<b>1.8</b>	16	<b>2.1</b>	7.9	<4.0	--	--	--	--	--
OA-1	06/29/10	<160	<b>0.24</b>	0.78	0.15	0.48	<4.0	--	--	--	--	--
<b>SFRWQCB ESLs</b>		<b>14</b>	<b>0.14</b>	<b>88</b>	<b>1.6</b>	<b>29*</b>	<b>0.12</b>	<i>NE</i>	<i>NE</i>	<i>NE</i>	<i>NE</i>	<i>NE</i>

Abbreviations and Notes:

**Bold** = indicates that measured concentration exceeds the ESL for indoor air under commercial/industrial land use.

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method TO-15 GC/MS SIM.

Volatile organic compounds by EPA Method TO-15 GC/MS SIM.

Oxygen (O<sub>2</sub>), nitrogen (N<sub>2</sub>), carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and helium (He) by ASTM Method D-1946.

ESLs = Environmental Screening Levels associated with ambient and indoor air at commercial/industrial sites (Table E, SFRWQCB, 2008).

\* = ESL is for total xylenes.

**COMPARISON OF SOIL VAPOR AND AIR SAMPLING ANALYTICAL DATA  
FOMER SIGNAL OIL MARINE STORAGE AND DISTRIBUTION FACILITY  
(CHEVRON FACILITY 20-6127)  
2301-2311 BLANDING AVENUE  
ALAMEDA, CALIFORNIA**

<b>Enterprise Rent-A-Car Suite</b>		<i>Sub-Slab Soil Gas</i>			
		<i>Vapor Well</i>	<i>Indoor Air</i>	<i>Predicted</i>	<i>Actual</i>
			<i>Sample Date</i>	<i>IA-1</i>	<i>Based on Indoor Air</i>
<i>Units</i>	<i>Sample Date</i>	<i>6/29/2010</i>	<i>Air<sup>1</sup></i>	<i>6/29/2010</i>	
TPHg	(µg/m <sup>3</sup> )		290	29,000	<230
Benzene	(µg/m <sup>3</sup> )		0.52	52	<3.6
Toluene	(µg/m <sup>3</sup> )		4.5	450	<4.3
Ethylbenzene	(µg/m <sup>3</sup> )		0.27	27	<4.9
m,p-Xylene	(µg/m <sup>3</sup> )		0.97	97	<5.0
Naphthalene	(µg/m <sup>3</sup> )		<4.0	<400	<24

<b>Mark's Paints Suite</b>		<i>Sub-Slab Soil Gas</i>				
		<i>Vapor Well</i>	<i>Indoor Air</i>	<i>Predicted</i>	<i>Actual</i>	
			<i>Sample Date</i>	<i>IA-2</i>	<i>Based on Indoor Air</i>	<i>VP-7</i>
<i>Units</i>	<i>Sample Date</i>	<i>6/29/2010</i>	<i>Air<sup>1</sup></i>	<i>6/29/2010</i>	<i>6/29/2010</i>	
TPHg	(µg/m <sup>3</sup> )		490	49,000	<240	310/340
Benzene	(µg/m <sup>3</sup> )		0.57	57	<3.7	24/24
Toluene	(µg/m <sup>3</sup> )		5.2	520	<4.3	71/70
Ethylbenzene	(µg/m <sup>3</sup> )		2.3	230	<5.0	5.9/5.3
m,p-Xylene	(µg/m <sup>3</sup> )		8.3	830	<5.0	47/44
Naphthalene	(µg/m <sup>3</sup> )		<4.1	<410	<24	<25/<25

<b>Empty Suite (Suite E)</b>		<i>Sub-Slab Soil Gas</i>					
		<i>Vapor Well</i>	<i>Indoor Air</i>	<i>Predicted</i>	<i>Actual</i>		
			<i>Sample Date</i>	<i>IA-3</i>	<i>Based on Indoor Air</i>	<i>VP-10</i>	<i>VP-11</i>
<i>Units</i>	<i>Sample Date</i>	<i>7/9/2010</i>	<i>Air<sup>1</sup></i>	<i>6/29/2010</i>	<i>6/29/2010</i>	<i>6/29/2010</i>	
TPHg	(µg/m <sup>3</sup> )		110/100	11,000/10,000	<250	<240	<220
Benzene	(µg/m <sup>3</sup> )		0.39/0.41	39/41	<3.8	<3.8	<3.5
Toluene	(µg/m <sup>3</sup> )		1.8/2	180/200	<4.5	<4.5	<4.1
Ethylbenzene	(µg/m <sup>3</sup> )		0.27/0.26	27/26	<5.2	<5.1	<4.8
m,p-Xylene	(µg/m <sup>3</sup> )		0.92/0.91	92/91	<5.2	<5.1	<4.8
Naphthalene	(µg/m <sup>3</sup> )		<4.3/<4.3	<430/<430	<25	<25	<23

<b>Hansen Rigging Suite</b>		<i>Sub-Slab Soil Gas</i>			
		<i>Vapor Well</i>	<i>Indoor Air</i>	<i>Predicted</i>	<i>Actual</i>
			<i>Sample Date</i>	<i>IA-4</i>	<i>Based on Indoor Air</i>
<i>Units</i>	<i>Sample Date</i>	<i>6/29/2010</i>	<i>Air<sup>1</sup></i>	<i>6/29/2010</i>	
TPHg	(µg/m <sup>3</sup> )		490	49,000	<240
Benzene	(µg/m <sup>3</sup> )		1.8	180	<3.8
Toluene	(µg/m <sup>3</sup> )		16	1,600	<4.4
Ethylbenzene	(µg/m <sup>3</sup> )		2.1	210	<5.1
m,p-Xylene	(µg/m <sup>3</sup> )		7.9	790	<5.1
Naphthalene	(µg/m <sup>3</sup> )		<4.0	<400	<25

Note:

1 Predicted sub-slab soil gas concentrations calculated by multiplying the measured indoor air concentrations by an attenuation factor of 100, as indicated by Alameda County Health Care Services.

APPENDIX A

REGULATORY CORRESPONDENCE





ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

April 19, 2010

Mr. Mike Bauer  
Chevron Environmental Management Company  
145 S. State College Blvd.  
Brea, CA 92821

Ms. Julie Beck Ball  
Mr. Peter Reinhold Beck  
2720 Broderick Street  
San Francisco, CA 94123

Subject: SLIC Case No. RO0002466 and Geotracker Global ID T06019744728, Park Street Landing 2301-2337 Blanding Avenue, Alameda, CA 94501 – Revised Vapor Sampling Plan

Dear Mr. Bauer and Ms. Ball:

Alameda County Environmental Health (ACEH) staff has reviewed the Spills, Leaks, Investigations, and Cleanups (SLIC) case file for the above referenced site including the recently submitted document entitled, "*Revised Vapor Sampling Plan*," dated April 1, 2010. The document, which was prepared on Chevron's behalf by Conestoga-Rovers & Associates, proposes sampling the vapor wells and sub-slab vapor points twice (April and November) and concurrently conducting an indoor and outdoor air survey. The two sampling events would be in lieu of conducting quarterly vapor sampling for a period of one year. The two proposed vapor and indoor and outdoor air sampling events and methods are acceptable and may be implemented as proposed.

Our previous February 5, 2010 correspondence contained technical comments regarding sub-slab sampling methods, comparison of sub-slab vapor sampling results to ESLs, temporal variability of soil vapor sampling results, groundwater monitoring, and evaluation of shallow groundwater. The proposed vapor and indoor and outdoor air sampling generally addresses our comment regarding variability of soil vapor sampling results. The remaining technical comments in our February 5, 2010 remain applicable and are to be considered and addressed in future work.

### **TECHNICAL REPORT REQUEST**

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **30 days after end of each quarter** – Groundwater Monitoring Report
- **May 12, 2010** – Well Installation Report or Work Plan to Assess Potential Discharges to Alameda Canal
- **July 23, 2010** – Soil Vapor, Sub-slab, and Indoor Air Sampling Report

Mr. Mike Bauer  
Ms. Julie Beck Ball  
RO0002466  
April 19, 2010  
Page 2

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at [jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org).

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297  
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Mr. Brian Silva, Conestoga-Rovers & Associates, 10969 Trade Center Drive, Suite 107, Rancho Cordova, CA 95670 (*Sent via E-mail to: [bsilva@croworld.com](mailto:bsilva@croworld.com)*)

Mr. Monroe Wingate, C/o Alan Wingate, 18360 Carriger Road, Sonoma, CA 95476

Donna Drogos, ACEH (*Sent via E-mail to: [donna.drogos@acgov.org](mailto:donna.drogos@acgov.org)*)  
Jerry Wickham, ACEH  
Geotracker, File

Attachment 1  
**Responsible Party(ies) Legal Requirements/Obligations**

**REPORT REQUESTS**

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

**ELECTRONIC SUBMITTAL OF REPORTS**

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and [other](#) data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.swrcb.ca.gov/ust/electronic\\_submittal/report\\_rqmts.shtml](http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml)).

**PERJURY STATEMENT**

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

**PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS**

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

**UNDERGROUND STORAGE TANK CLEANUP FUND**

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

**AGENCY OVERSIGHT**

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)</b>	<b>ISSUE DATE:</b> July 5, 2005
	<b>REVISION DATE:</b> March 27, 2009
	<b>PREVIOUS REVISIONS:</b> December 16, 2005, October 31, 2005
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

#### REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:  
RO#\_Report Name\_Year-Month-Date (e.g., RO#5555\_WorkPlan\_2005-06-14)

#### Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

#### Submission Instructions

- 1) Obtain User Name and Password:
  - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
    - i) Send an e-mail to [dehloptoxic@acgov.org](mailto:dehloptoxic@acgov.org)
    - Or
    - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
  - b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.
- 2) Upload Files to the ftp Site
  - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
    - (i) Note: Netscape and Firefox browsers will not open the FTP site.
  - b) Click on File, then on Login As.
  - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
  - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
  - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
  - a) Send email to [dehloptoxic@acgov.org](mailto:dehloptoxic@acgov.org) notify us that you have placed a report on our ftp site.
  - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
  - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
  - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

APPENDIX B

PREVIOUS ENVIRONMENTAL INVESTIGATION

**PREVIOUS ENVIRONMENTAL INVESTIGATION  
FORMER SIGNAL OIL MARINE STORAGE AND DISTRIBUTION  
FACILITY 20-6127(CHEVRON 20-6127)**

***Site History***

A Sanborn map dated 1897 showed the site as occupied by several residential structures and outbuildings; the southeast portion of the site was shown as occupied by a laundry facility and a blacksmith. From at least 1930 until approximately 1961, the northwestern portion of the site was occupied by a petroleum bulk plant operated by Signal Oil & Gas Company. Former bulk plant facilities consisted of one large and seven smaller gasoline aboveground storage tanks (ASTs) within concrete secondary containment, underground piping, an office building, a loading rack, and a small structure containing gasoline pumps (Figure 2). The northeast portion of the facility was shown as occupied by a structure identified as an auto garage and also used for paint storage on Sanborn maps dated between 1932 and 1950. A rail spur was shown to service the facilities on Blanding Avenue. The central portion of the site was shown as occupied by two structures identified as wholesale tires and a can warehouse. An additional larger structure was shown in the central portion of the site that was identified as vacant on the 1948 Sanborn map and as a ladder factory on the 1950 Sanborn map. Several structures appeared to be present in the southeast portion of the site in the 1939 aerial photograph. However, only one or two small sheds were shown in this area on the 1948 and 1950 Sanborn maps. In the 1958 aerial photograph, the ladder factory structure no longer appeared present and the southeast portion of the site appeared vacant and used for parking. Between 1957 and 1963, the buildings at the site were reportedly removed; it is assumed that the ASTs and piping were also removed at this time. In the 1965 aerial photograph, all the bulk plant facilities appear to have been removed and the majority of the site appears occupied by a construction materials yard with several small structures. Several additional structures also appear present in the southeast portion of the site. From 1973 to 1983, the northwestern portion of the site reportedly was used as a construction yard and for boat repair activities; and the southeastern portion was occupied by a restaurant, paved parking area, and a possible automobile sales lot. In 1987, the site was redeveloped with the current configuration.

***1995 Soil and Groundwater Investigation***

In February 1995, Geomatrix Consultants, Inc. (Geomatrix) advanced eight soil borings (SB-1 through SB-8) to approximately 10 feet below grade (fbg) in the northwestern portion of the site to evaluate if previous site uses had impacted soil and groundwater quality. Groundwater was not encountered in the borings. Two to three soil samples were collected at various depths from each boring for laboratory analysis. Nineteen samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd); and benzene, toluene, ethylbenzene, and xylenes (BTEX). TPHg was detected in six of the samples at concentrations ranging from 4.0 to 2,000 milligrams per kilogram (mg/kg). TPHd was detected in the majority of the samples at concentrations ranging from 10 to 250 mg/kg. BTEX were also detected in several of the samples (benzene up to 3.7 mg/kg). The highest concentrations of petroleum hydrocarbons generally were detected in borings SB-2 and SB-4 located in the vicinity of the former ASTs and

gasoline pump, respectively, between 4 and 7 fbg. One sample from each boring (depths ranging from 0.5 to 3 fbg) was also analyzed for CAM 17 metals. The detected metals concentrations generally appeared to be within the range of natural background levels with the exception of slightly elevated arsenic in a few samples. Arsenic was detected in the samples collected at 1 fbg from borings SB-3, SB-4, and SB-6 at 68 mg/kg, 46 mg/kg, and 130 mg/kg, respectively. As a result, deeper samples collected from borings SB-3 (6.5 fbg) and SB-6 (8 fbg) were also analyzed for arsenic; arsenic was not detected in the sample collected from SB-3, but was detected at 2.5 mg/kg in the sample collected from SB-6. Based on these results, the soil impacted with arsenic appeared to be of limited vertical extent. Three soil samples (SB-4-7', SB-5-6', and SB-8-7') were also analyzed for VOCs, which were not detected. Based on the soil analytical results, a shallow groundwater survey was recommended to evaluate if groundwater had been impacted by petroleum hydrocarbons.

In April 1995, Geomatrix collected grab-groundwater samples from 10 shallow borings (GWS-7 through GWS-16) drilled to depths of 15 to 21.5 fbg at the site. Borings GWS-7 through GWS-12 were located in the northeastern portion of the site adjacent to Alameda Canal to evaluate if impacted groundwater was flowing toward the canal; based on an assumed groundwater flow direction toward the canal. Borings GWS-13 through GWS-15 were located on the southwest and northwest property boundaries in the assumed upgradient and perimeter crossgradient directions to evaluate the quality of groundwater coming onto the site. Boring GWS-16 was located to the northeast of the former ASTs and was drilled approximately 6 feet deeper than the remaining borings to evaluate deeper groundwater quality. The groundwater samples were analyzed for TPHg, BTEX, and TPHd; the samples were filtered by the laboratory to remove turbidity and a silica-gel cleanup was performed to remove non-petroleum organic matter prior to the TPHd analysis. TPHg was detected in the samples collected from borings GWS-8 through GWS-11 and GWS-16 at concentrations ranging from 70 (GWS-16) to 22,000 micrograms per liter ( $\mu\text{g/L}$ ) (GWS-9). TPHd was detected in the samples collected from borings GWS-8 through GWS-11 at concentrations ranging from 60 (GWS-8) to 1,200  $\mu\text{g/L}$  (GWS-9). Benzene was detected in the samples collected from borings GWS-8 through GWS-10 and GWS-16 at concentrations of 36  $\mu\text{g/L}$ , 6,200  $\mu\text{g/L}$ , and 880  $\mu\text{g/L}$ , respectively. Toluene, ethylbenzene, and xylenes (up to 1,200  $\mu\text{g/L}$ ) were also detected in several of the samples. The maximum concentrations were detected in boring GWS-9 located downgradient of the gasoline pump and loading rack. Petroleum hydrocarbons were not detected in the upgradient borings GWS-13 through GWS-15. The deeper sample (GWS-16) contained only low to trace hydrocarbon concentrations.

A black granular material was encountered in boring GWS-7 in the northern corner of the site from approximately 2.5 to 6 fbg. This material appeared similar to a small pile of black granular material observed on the northwestern property boundary that appeared to have originated from the adjacent property (a metal fabrication company). A sample of this material was collected and analyzed for TPHd, VOCs, semi-VOCs, and CAM 17 metals. An elevated concentration of copper (1,700 mg/kg) was detected in the sample. The detected concentration did not exceed the Total Threshold Limit Concentration (TTL) of 2,500 mg/kg, which is the concentration above which a waste may be considered hazardous in California. The sample was also analyzed for soluble copper using the Waste Extraction Test (WET) method; which

was detected at 0.04 milligrams per liter (mg/L). The detected soluble lead concentration did not exceed the Soluble Threshold Limit Concentration (STLC) of 25 mg/L, which is also the concentration above which a waste may be considered hazardous in California. Details of this investigation were presented in the report titled *Soil Investigation and Shallow Groundwater Survey, Northwestern Portion of the Park Street Landing Site*, prepared by Geomatrix and dated September 1995.

#### **1998 RBCA Tier 1 Evaluation**

In July 1998, RRM, Inc. (RRM) performed a Tier 1 Risk-Based Corrective Action (RBCA) assessment to evaluate the potential health risks posed by residual petroleum hydrocarbons in soil and groundwater at the site. Based on the results, RRM recommended the collection of site-specific data to complete a Tier 2 RBCA evaluation; the identification of the beneficial uses of groundwater beneath the site; an evaluation of background water quality in Alameda Canal; and to provide evidence that biodegradation was reducing hydrocarbon concentrations. Details of this investigation were presented in the report entitled *Risk-Based Corrective Action (RBCA) Tier 1 Evaluation, Park Street Landing Site*, prepared by RRM and dated July 24, 1998.

#### **1998 Soil and Groundwater Investigation**

In October 1998, RRM performed an additional soil and groundwater investigation at the site. The purpose of the investigation was to

1) collect site-specific data to complete a Tier 2 RBCA evaluation; 2) identify the beneficial uses of groundwater beneath the site; 3) evaluate the background water quality in Alameda Canal; and 4) evaluate whether biodegradation of petroleum hydrocarbons was occurring beneath the site. Four additional borings (SB-9 through SB-12) were advanced to depths of 15 to 18 fbg during the investigation. A total of eight soil samples were collected at various depths from the borings and analyzed for TPHg, TPHd, BTEX, and methyl tertiary butyl ether (MTBE). TPHg was detected in the soil samples collected at 5 and 13 fbg from boring SB-9 (130 and 900 mg/kg, respectively); and in the sample collected at 6 fbg from boring SB-11 (140 mg/kg). TPHd was detected in the soil samples collected at 5, 13, and 15 fbg from boring SB-9 (3,300 mg/kg, 1,300 mg/kg, and 1.2 mg/kg, respectively); in the sample collected at 5.5 fbg from boring SB-10 (130 mg/kg); and in the sample collected at 6 fbg from boring SB-11 (60 mg/kg). BTEX (up to 3.3 mg/kg) were detected in the soil samples collected from borings SB-9 and SB-11; MTBE (using EPA Method 8020) was only detected in the sample collected at 13 fbg from boring SB-9 (12 mg/kg). Following the initial TPHd analysis, two rounds of silica gel cleanup followed by TPHd analysis were performed on the soil samples from boring SB-9. The detected TPHd concentrations were reduced after each round, indicating that biodegradation was occurring, and natural organic matter was present in the subsurface.

Grab-groundwater samples were collected from each boring and analyzed for TPHg, TPHd, BTEX, and MTBE. TPHg was only detected in the samples collected from borings SB-9 (14,000 µg/L) and SB-11 (310 µg/L). TPHd was detected in the samples collected from borings SB-9 (83,000 µg/L), SB-10 (97 µg/L), and SB-11 (270 µg/L). Benzene and MTBE (using



EPA Method 8020) were only detected in the sample collected from boring SB-9 (1,400 and 260 µg/L, respectively); the sample was re-analyzed for MTBE using EPA Method 8260, and MTBE was not detected. Toluene, ethylbenzene, and xylenes (up to 630 µg/L) were detected in the samples collected from borings SB-9 and SB-11. As with the soil samples, a silica-gel cleanup reduced the detected TPHd concentrations. Based on the depth to water in the borings, and the elevation of the borings, the groundwater flow direction was calculated to be northerly. Based on natural biodegradation indicator parameters in groundwater (dissolved oxygen, oxidation-reduction potential, nitrate, and sulfate), it appeared that petroleum hydrocarbons were being degraded both aerobically and anaerobically; although it appeared that anaerobic processes dominated.

Three grab-water samples (CS-1 through CS-3) were collected from Alameda Canal (Figure 2) and analyzed for TPHg, TPHd, BTEX, and MTBE; which were not detected. Water level measurements were collected from the Alameda Canal and the four temporary wells placed in borings SB-9 through SB-12 to evaluate potential tidal influence on groundwater beneath the site. The fluctuations in borings SB-10 through SB-12 were minimal indicating that groundwater was tidally influenced to a limited degree in these areas. A more significant fluctuation was observed in SB-9; suggesting that groundwater in this area was tidally influenced, and tidal fluctuations would tend to stabilize the petroleum hydrocarbon plume in this area. Two concrete sea walls separated shallow groundwater beneath the site from canal water; likely causing the limited tidal influence. Based on the site data, relevant beneficial uses, and associated water quality parameters, the most applicable beneficial use of groundwater beneath the site was determined to be freshwater replenishment to surface water.

A well survey was performed for a ½-mile radius around the site. Nine wells were identified within the search radius (one recovery well, one irrigation well, five extraction wells, and two industrial wells). All the wells were either located up-gradient of the site or across the Alameda Canal. Based on the results of the Tier 2 RBCA evaluation, soil and groundwater petroleum hydrocarbon concentrations at the site did not exceed the site-specific target levels (SSTLs). Details of this investigation were presented in the report entitled *Soil and Groundwater Investigation Results, Former Signal Oil Marine Terminal*, prepared by RRM and dated May 7, 1999.

### **2000 Monitoring Well Installation**

In December 2000 Gettler-Ryan Inc., under the supervision of Delta Environmental Consultants, Inc. (Delta), installed one groundwater monitoring well (MW-1) along the northeastern portion of the site adjacent to the Alameda Canal. Soil samples were collected at depths of 5, 10, and 15 fbg from the well boring and analyzed for TPHg, TPHd, BTEX, and MTBE. TPHg was only detected in the sample collected at 10 fbg (320 mg/kg). TPHd was only detected in the samples collected at 5 and 10 fbg (30 and 160 mg/kg, respectively). Low concentrations of BTEX were detected in all the samples; MTBE was not detected in any of the samples. The initial groundwater sample collected from the well contained TPHg, TPHd, and benzene at 5,210 µg/L, 1,100 µg/L, and 868 µg/L, respectively. Details of this investigation were presented

in the report entitled *Monitoring Well Installation Report*, prepared by Delta and dated April 10, 2001.

#### **2004 Soil Investigation**

In January 2004, Cambria Environmental Technology, Inc. (Cambria) collected three surface soil samples (S1, S2, and S3) from the bank above the western shore of the Alameda Canal. Sample S2 was collected directly down-slope of well MW-1 near a water seep observed on the slope above the canal. Samples S1 and S3 were collected approximately 70 feet east and 90 feet north of well MW-1, respectively, to evaluate background concentrations. The three samples were analyzed for TPHg, TPHd, BTEX, and MTBE. TPHg, BTEX, and MTBE were not detected in any of the samples. TPHd was detected in samples S1, S2, and S3 at 14 mg/kg, 220 mg/kg, and 220 mg/kg, respectively. The laboratory chromatographs indicated that the hydrocarbon pattern observed in these soil samples was not typical of diesel fuel. Therefore, it was concluded the TPHd detections may have represented either highly-degraded diesel fuel from various historical onsite and nearby operations, or residual organic material of unknown origin present in local fill material. Details of this investigation were presented in the report entitled *Soil Sampling Report*, prepared by Cambria and dated February 18, 2004.

Based on generally decreasing petroleum hydrocarbon concentrations in well MW-1 observed during quarterly monitoring, Cambria submitted a case closure request to ACEH dated January 10, 2006. In response to this request, and in a letter dated October 17, 2007, the ACEH requested the collection of additional data to substantiate the conclusion that petroleum hydrocarbons were not migrating and discharging into Alameda Canal. In addition, the potential for vapor intrusion was to be evaluated. Therefore, CRA prepared and submitted *Soil Boring and Vapor Point Installation Work Plan*, dated January 10, 2008. In a letter dated January 30, 2008, the ACEH approved the work plan, with several provisions.

#### **2008 Site Investigation**

In July 2008, CRA advanced six soil borings (SB-13 through SB-15 and SB-17 through SB-19) to a maximum depth of 16 fbg, and installed and sampled six permanent soil vapor wells (VP-1 through VP-6) to depths of 4.5 to 6 fbg. Soil boring SB-16 was cleared to 3 fbg but could not be completed due to refusal encountered at three locations (16A, B, and C).

Soil boring SB-16 was cleared to 3 fbg but could not be completed due to refusal encountered at three locations (16A, B, and C).

Soil analytical data indicated that the majority of TPHd and TPHg concentrations in soil are generally located in the area of and downgradient of the former ASTs. The highest concentrations were detected in boring VP-4 at 5 fbg. Relatively low concentrations of TPHd and TPHg were detected in the perimeter borings. Low concentrations of petroleum-related VOCs were also detected in the majority of the soil samples. The BTEX and VOC concentrations generally did not exceed the ESLs, with the exception of a few samples. Concentrations generally appeared to attenuate or were significantly reduced at 10 fbg. Generally, concentrations of metals were consistent with background levels and only exceeded

the ESLs in a few of the samples. Metals in shallow soil across the northwest portion of the site do not appear to be a result of former bulk plant operations. The metals do not appear to have impacted groundwater as only barium was detected in well MW-1.

The highest concentrations of hydrocarbons in groundwater were generally located downgradient of the former ASTs. TPHd, TPHg, and benzene were detected in downgradient boring SB-18 at 19,000 µg/L, 3,800 µg/L, and 590 µg/L, respectively; but only at 1,600 µg/L, 650 µg/L, and 3 µg/L, respectively, in boring SB-19 adjacent to the former large AST. Only relatively low concentrations of TPHd (up to 750 µg/L) were detected in perimeter borings SB-13, SB-14, and SB-15; and as evidenced by the work performed by RRM, some or most of the detected TPHd may be due to natural organic matter. The extent of the impacted groundwater is well-defined by borings GWS-7, GWS-12 through GWS-15, SB-10 (following silica gel cleanup), and SB-12. Chlorinated solvents were not detected in any of the soil samples collected, and generally were not detected in the groundwater samples with the exception of low concentrations of TCE, cis-1,2-DCE, and vinyl chloride in the sample collected from boring SB-15 in the northeast corner of the site.

The highest hydrocarbon concentrations in soil gas were detected in vapor wells VP-4, VP-5, and VP-6 located in the area of the former ASTs. Significantly lower concentrations were detected in vapor wells VP-1 and VP-2 located downgradient of VP-4. Chlorinated solvents were not detected in the soil vapor samples. Additional details of this investigation are presented in CRA's report entitled *Site Investigation Report*, dated October 2008.

#### ***2009 Monitoring Well Installation and Sub-Slab Vapor Sampling***

In June 2009, CRA installed monitoring wells MW-2 through MW-5 to total depths of 16 to 20.5 fbg in order to further evaluate groundwater quality beneath the site. The new monitoring wells were installed within the former ASTs (MW-3), and north (MW-5), south (MW-2), and east (MW-4) of the former ASTs. Soil analytical data indicated that the majority of TPHd and TPHg concentrations in soil are located north to south through the former ASTs and generally decreases with depth. The highest TPHd concentration detected was from well boring MW-3 at 4 fbg at a concentration of 610 mg/kg. The highest TPHg concentration detected was from well boring MW-2 at 4.5 fbg at 1,100 mg/kg. No petroleum hydrocarbons were detected in perimeter well boring MW-4. No grab-groundwater samples were collected.

CRA also installed sub-slab vapor points beneath the two western buildings at the site in order to further evaluate potential vapor intrusion beneath the buildings. Two sub-slab vapor points (VP-7 and VP-8) were installed inside 2317 Blanding Avenue and five sub-slab vapor points (VP-9 through VP-13) were installed inside 2307 Blanding Avenue. The highest hydrocarbon concentrations in soil gas were detected in vapor points VP-9 and VP-13, located west-southwest of the former ASTs. Lower concentrations were detected in vapor points VP-8, and VP-10 through VP-12. All detected concentrations were below the shallow soil gas ESL of 29,000 micrograms per cubic meter (µg/m<sup>3</sup>). Target chlorinated solvents were not detected in the soil vapor samples. Additional details of this investigation are presented in CRA's *Well Installation and Sub-Slab Vapor Sampling Report*, dated September 8, 2009.

### ***2009 Vapor Sampling***

In October 2009, CRA re-install and re-sample sub-slab vapor points VP-9 through VP-13 due to ambient air leaks detected during the initial sampling and to further evaluate the elevated soil vapor concentrations detected in vapor wells VP-1 through VP-6. The results of the re-sampling of the vapor wells VP-1 through VP-5 located outside of the buildings were consistent with previous results for vapor wells VP-3 through VP-5. However, results of the re-sampling of vapor wells VP-1 and VP-2 indicated no TPHg or benzene vapor concentrations at each of these locations, which is not consistent with the initial sample results from August 2008. Additional details of this investigation are presented in CRA's *Vapor Sampling Report*, dated December 2, 2009.

APPENDIX C

BUILDING SURVEY FORMS

### APPENDIX K - BUILDING SURVEY FORM

This form must be completed for each building involved in an indoor air investigation.

Preparer's name IAN HULL Date prepared 06/29/2010

Preparer's affiliation CRA FOR CHEVRON EMC

Telephone number 510-420-0700

#### 1. OCCUPANT

Name MARK'S PAINTS

Address 2317 BLANDING AVE

SUITE A-C

City ALAMEDA

Home telephone number 510-522-0717

Office telephone number -

#### 2. OWNER OR LANDLORD

Name JULIE BALL, PETER BECK, TITSY BECK  
(if different than occupant)

Address P.O. Box 278 #220

MEADOW VALLEY, CA 95956

Telephone number -

#### A. Type of Building Construction

Type (circle appropriate responses): Single Family Multiple Dwelling Commercial

Ranch	Two-family
Raised Ranch	Duplex
Split Level	Office
Colonial	<u>Warehouse</u>
Mobile Home	Strip Mall <u>KM</u>
Apartment Building:	Number of units <u>8</u>
Other	

Building Age \_\_\_\_\_ Number of stories ONE, VAULTED CEILING

Area of the Building (square feet) ~6,400

Is the building insulated? yes/ no How sealed is the building? MODERATE, BACK DOORS LEFT OPEN

Number of elevators in the building 0

Condition of the elevator pits (sealed, open earth, etc.) N/A

General description of building construction materials METAL, WOOD, DRYWALL

**B. Foundation Characteristics (circle all that apply)**

1. Full basement, crawlspace, slab on grade, other \_\_\_\_\_
2. Basement floor description: concrete, dirt, wood, other N/A
  - a. The basement is: wet, damp, dry \_\_\_\_\_
  - b. Sump present? yes / no \_\_\_\_\_ Water in sump? yes / no \_\_\_\_\_
  - c. The basement is: finished, unfinished \_\_\_\_\_
  - d. Is the basement sealed? Provide a description \_\_\_\_\_

3. Concrete floor description: unsealed, painted, covered with TILE

4. Foundation walls: poured concrete, block, stone, wood, other METAL

5. Identify all potential soil gas entry points and their size (e.g., cracks, voids, pipes, utility ports, sumps, drain holes, etc.). Include these points on the building diagram.

**C. Heating, Ventilation, and Air Conditioning (circle all that apply)**

1. The type of heating system(s):

- |                            |                          |
|----------------------------|--------------------------|
| <u>Hot Air Circulation</u> | Heat Pump                |
| Hot Water Radiation        | Unvented Kerosene Heater |
| Steam Radiation            | Wood Stove               |
| Electric Baseboard         | Other (specify) _____    |

2. The type of fuel used: Natural Gas Fuel Oil, Electric, Wood, Coal, Solar  
Other (specify) \_\_\_\_\_

3. Location of heating system: ABOVE FRONT ROOM, NOT USED OFTEN

4. Is there air-conditioning? yes no Central Air or Window Units?

Specify the location. NIA

5. Are there air distribution ducts present? (yes) / no
6. Describe the supply and cold air return duct work including whether there is a cold air return and comment on the tightness of duct joints.  
INSULATED, RUN ABOVE FRONT ROOM AND OFFICES IN BACK,  
NO COLD AIR RETURN
7. Is there a whole house fan? yes / no NO  
What is the rated size of the fan? -
8. Temperature settings inside during sampling. Note day and night temperatures.  
a. Daytime temperature(s) NIA  
b. Nighttime temperature(s) NIA  
(Note times if system cycles during non-occupied hours during the day)
9. Estimate the average time doors and windows are open to allow fresh outside air into the building. Note rooms that frequently have open windows or doors.  
BACK ROOM FOR PAINT MIXING IS OPEN ~90%. NO OTHER  
DOORS/WINDOWS OPEN OFTEN

**D. Potential Indoor Sources of Pollution**

1. Is the laundry room located inside the home? yes / (no)
2. Has the house ever had a fire? yes / (no)
2. Is there an attached garage? (yes) / no
3. Is a vehicle normally parked in the garage? (yes) / no
4. Is there a kerosene heater present? yes / (no)
5. Is there a workshop, hobby or craft area in the residence? (yes) / no
6. An inventory of all products used or stored in the home should be performed. Any products that contain volatile organic compounds or chemicals similar to the target compounds should be listed. The attached product inventory form should be used for this purpose.
7. Is there a kitchen exhaust fan? yes (no) Where is it vented? NIA
8. Is the stove gas or electric? NIA Is the oven gas or electric? -
9. Is there an automatic dishwasher? yes (no)
10. Is smoking allowed in the building? yes (no)
11. Has the house ever been fumigated or sprayed for pests? If yes, give date, type and location of treatment.
- \_\_\_\_\_



**E. Water and Sewage (Circle the appropriate response)**

**Source of Water**

Public Water Drilled Well Driven Well Dug Well Other (Specify) \_\_\_\_\_

**Water Well Specifications**

Well Diameter <u>N/A</u>	Grouted or Ungouted <u>N/A</u>
Well Depth _____	Type of Storage Tank _____
Depth to Bedrock _____	Size of Storage Tank _____
Feet of Casing _____	Describe type(s) of Treatment _____

**Water Quality**

Taste and/or odor problems with water? yes no If so, describe \_\_\_\_\_

Is the water chlorinated, brominated, or ozonated? yes / no \_\_\_\_\_

How long has the taste and/or odor problem been present? N/A

**Sewage Disposal:** Public Sewer Septic Tank Leach Field Other (Specify) \_\_\_\_\_

Distance from well to septic system N/A Type of septic tank additives N/A

**F. Plan View**

Sketch each floor and if applicable, indicate air sampling locations, possible indoor air pollution sources, preferential pathways and field instrument readings.

**G. Potential Outdoor Sources of Pollution**

Draw a diagram of the area surrounding the building being sampled. If applicable, provide information on the spill locations (if known), potential air contamination sources (industries, service stations, repair shops, retail shops, landfills, etc.), outdoor air sampling locations, and field instrument readings.

Also, on the diagram, indicate barometric pressure, weather conditions, ambient and indoor temperatures, compass direction, wind direction and speed during sampling, the locations of the water wells, septic systems, and utility corridors if applicable, and a statement to help locate the site on a topographical map.

APPENDIX L – HOUSEHOLD PRODUCTS INVENTORY FORM

Occupant of Building MARK'S PAINT

Address 2317 BLANDING AVE, SUITES A-C

City ALAMEDA

Field Investigator JAN HULL Date 06/29/2010

Product Description (commercial name, dispenser type, container size, manufacturer, etc.)	Volatile Ingredients in the Product	Field Instrument Reading
PAINT		
PAINT HARDENERS		
PAINT DYE		
PAINT THINNER		

Comments:  
\_\_\_\_\_  
\_\_\_\_\_

### APPENDIX K - BUILDING SURVEY FORM

This form must be completed for each building involved in an indoor air investigation.

Preparer's name David Grenat Date prepared 6/29/10

Preparer's affiliation CRA

Telephone number 510-420-3353

#### 1. OCCUPANT

Name Enterprise Car Rental

Address 2307 BLANDING AVENUE  
SUITE A

City ALAMEDA

Home telephone number -

Office telephone number 510-523-7457

#### 2. OWNER OR LANDLORD

Name JULIE BELL, PETER BECK, TITSY BECK  
(If different than occupant)

Address P.O. Box 278 #220  
MEADOW VALLEY, CA 95956

Telephone number -

#### A. Type of Building Construction

Type (circle appropriate responses): Single Family Multiple Dwelling Commercial

Ranch	Two-family
Raised Ranch	Duplex
Split Level	<u>Office</u>
Colonial	Warehouse
Mobile Home	Strip Mall
Apartment Building:	Number of Units _____
Other _____	

Building Age \_\_\_\_\_ Number of stories 1

Area of the Building (square feet) ~ 2,500

Is the building insulated? (yes) no How sealed is the building? MODERATELY

Number of elevators in the building 0

Condition of the elevator pits (sealed, open earth, etc.) NA

General description of building construction materials METAL, WOOD, DRY WALL  
IN GOOD DESCRIPTION

**B. Foundation Characteristics (circle all that apply)**

1. Full basement, crawlspace, slab on grade, other \_\_\_\_\_
2. Basement floor description: concrete, dirt, wood, other \_\_\_\_\_
  - a. The basement is: wet, damp, dry \_\_\_\_\_
  - b. Sump present? yes / no \_\_\_\_\_ Water in sump? yes / no \_\_\_\_\_
  - c. The basement is: finished, unfinished \_\_\_\_\_
  - d. Is the basement sealed? Provide a description \_\_\_\_\_
3. Concrete floor description: unsealed, Back Room painted, covered; with Tile/Carpet (front room)
4. Foundation walls: poured concrete, block, stone, wood, other unknown
5. Identify all potential soil gas entry points and their size (e.g., Back Room cracks, voids, pipes, utility ports, sumps, drain holes, etc.). Include these points on the building diagram.

**C. Heating, Ventilation, and Air Conditioning (circle all that apply)**

1. The type of heating system(s):

<u>Hot Air Circulation</u>	Heat Pump
Hot Water Radiation	Unvented Kerosene Heater
Steam Radiation	Wood Stove
Electric Baseboard	Other (specify) _____
2. The type of fuel used: Natural Gas, Fuel Oil, Electric, Wood, Coal, Solar  
Other (specify) \_\_\_\_\_
3. Location of heating system: Back Room
4. Is there air-conditioning? yes no Central Air or Window Units?

Specify the location Backroom

5. Are there air distribution ducts present? (yes) / no

6. Describe the supply and cold air return duct work including whether there is a cold air return and comment on the tightness of duct joints.

UNKNOWN - ALL DUCTS LOCATED IN INACCESSIBLE LOCATION

7. Is there a whole house fan? yes / (no)  
What is the rated size of the fan? \_\_\_\_\_

8. Temperature settings inside during sampling. Note day and night temperatures.

a. Daytime temperature(s) ~70

b. Nighttime temperature(s) ~70

(Note times if system cycles during non-occupied hours during the day)

9. Estimate the average time doors and windows are open to allow fresh outside air into the building. Note rooms that frequently have open windows or doors.

FRONT OF BUILDING = 20% , BACK ROOM 100% WHILE BUSINESS OPEN

#### D. Potential Indoor Sources of Pollution

1. Is the laundry room located inside the home? yes / (no)

2. Has the house ever had a fire? yes / (no)

2. Is there an attached garage? (yes) / no

3. Is a vehicle normally parked in the garage? (yes) / no

4. Is there a kerosene heater present? yes / (no)

5. Is there a workshop, hobby or craft area in the residence? yes / (no)

6. An inventory of all products used or stored in the home should be performed. Any products that contain volatile organic compounds or chemicals similar to the target compounds should be listed. The attached product inventory form should be used for this purpose.

7. Is there a kitchen exhaust fan? yes / (no) Where is it vented? \_\_\_\_\_

8. Is the stove gas or electric? N/A Is the oven gas or electric? -

9. Is there an automatic dishwasher? yes / (no)

10. Is smoking allowed in the building? yes / (no)

11. Has the house ever been fumigated or sprayed for pests? If yes, give date, type and location of treatment.

**E. Water and Sewage (Circle the appropriate response)**

**Source of Water**

Public Water Drilled Well Driven Well Dug Well Other (Specify) \_\_\_\_\_

**Water Well Specifications**

Well Diameter _____	Grouted or Ungouted _____
Well Depth _____	Type of Storage Tank _____
Depth to Bedrock _____	Size of Storage Tank _____
Feet of Casing _____	Describe type(s) of Treatment _____

**Water Quality**

Taste and/or odor problems with water? yes no If so, describe \_\_\_\_\_

Is the water chlorinated, brominated, or ozonated? yes / no \_\_\_\_\_

How long has the taste and/or odor problem been present? \_\_\_\_\_

**Sewage Disposal:** Public Sewer Septic Tank Leach Field Other (Specify) \_\_\_\_\_

Distance from well to septic system \_\_\_\_\_ Type of septic tank additives \_\_\_\_\_

**F. Plan View**

Sketch each floor and if applicable, indicate air sampling locations, possible indoor air pollution sources, preferential pathways and field instrument readings.

**G. Potential Outdoor Sources of Pollution**

Draw a diagram of the area surrounding the building being sampled. If applicable, provide information on the spill locations (if known), potential air contamination sources (industries, service stations, repair shops, retail shops, landfills, etc.), outdoor air sampling locations, and field instrument readings.

Also, on the diagram, indicate barometric pressure, weather conditions, ambient and indoor temperatures, compass direction, wind direction and speed during sampling, the locations of the water wells, septic systems, and utility corridors if applicable, and a statement to help locate the site on a topographical map.

**APPENDIX L – HOUSEHOLD PRODUCTS INVENTORY FORM**

Occupant of Building Enterprise Rental

Address 2307 BLANDING AVE, SUITE A

City ALAMEDA, CA

Field Investigator DAVE GRUNAT Date 06/29/2010

Product Description (commercial name, dispenser type, container size, manufacturer, etc.)	Volatile Ingredients in the Product	Field Instrument Reading
2x Gasoline canisters	Gasoline	
Various car washing cleaners		
↳ Glade		
Red Star Detergent <sup>1 Health</sup>	Sodium Hydroxide	
Bug-A-Way <sup>Health 2 Flammability 1</sup>		
Wash + wax AB <sup>Health 1</sup>		
Terminator <sup>Health 1</sup>		
Tuffstuff		
Glass cleaner		

Comments:  
OFTEN CLEAN RENTAL CARS IN BACK ROOM

### APPENDIX K - BUILDING SURVEY FORM

This form must be completed for each building involved in an indoor air investigation.

Preparer's name IAN HULL Date prepared 06/29/2010

Preparer's affiliation CONESTOGA - POWERS & ASSOC. FOR CHEVRON EMC

Telephone number 510 - 420 - 0700

#### 1. OCCUPANT

Name EMPTY

Address 2307 BLANDING AVE  
SUITE E

City ALAMEDA

Home telephone number N/A

Office telephone number N/A

#### 2. OWNER OR LANDLORD

Name JULIE BALL, PETER BECK, TOSY BECK  
(If different than occupant)

Address P.O. Box 278 #220  
MEADOW VALLEY, CA 95956

Telephone number -

#### A. Type of Building Construction

Type (circle appropriate responses): Single Family Multiple Dwelling Commercial

- |                     |                                      |
|---------------------|--------------------------------------|
| Ranch               | Two-family                           |
| Raised Ranch        | Duplex                               |
| Split Level         | Office                               |
| Colonial            | <u>Warehouse</u>                     |
| Mobile Home         | Strip Mall <u>RMS</u>                |
| Apartment Building: | Number of Units <u>3 w/ BATHROOM</u> |
| Other               |                                      |

Building Age \_\_\_\_\_ Number of stories ONE, VAULTED CEILING

Area of the Building (square feet) ~ 1,800

Is the building insulated? yes / no How sealed is the building? MODERATE

Number of elevators in the building 0



Condition of the elevator pits (sealed, open earth, etc.) N/A

General description of building construction materials STEEL OR IRON W/ ~~ED~~

SHEET ROCK AND FOAM UP DOORS

**B. Foundation Characteristics (circle all that apply)**

1. Full basement, crawlspace slab on grade other \_\_\_\_\_
2. Basement floor description: concrete, dirt, wood, other N/A
  - a. The basement is: wet, damp, dry \_\_\_\_\_
  - b. Sump present? yes / no \_\_\_\_\_ Water in sump? yes / no \_\_\_\_\_
  - c. The basement is: finished, unfinished \_\_\_\_\_
  - d. Is the basement sealed? Provide a description \_\_\_\_\_

3. Concrete floor description: unsealed, painted, covered, with CARPET

4. Foundation walls: poured concrete, block, stone, wood, other METAL

5. Identify all potential soil gas entry points and their size (e.g., cracks, voids, pipes, utility ports, sumps, drain holes, etc.). Include these points on the building diagram.

BATHROOM

**C. Heating, Ventilation, and Air Conditioning (circle all that apply)**

1. The type of heating system(s):

<u>Hot Air Circulation</u>	Heat Pump
Hot Water Radiation	Unvented Kerosene Heater
Steam Radiation	Wood Stove
Electric Baseboard	Other (specify) _____

2. The type of fuel used: Natural Gas, Fuel Oil, Electric, Wood, Coal, Solar  
Other (specify) \_\_\_\_\_

3. Location of heating system: ABOVE BATH ROOM

4. Is there air-conditioning? yes no Central Air or Window Units?

Specify the location ABOVE BATH ROOM

5. Are there air distribution ducts present?  yes / no
6. Describe the supply and cold air return duct work including whether there is a cold air return and comment on the tightness of duct joints.  
DUCTS APPEAR IN GOOD CONDITION, NO COLD AIR RETURN
7. Is there a whole house fan? yes / no NO  
What is the rated size of the fan? -
8. Temperature settings inside during sampling. Note day and night temperatures.
  - a. Daytime temperature(s) 70°F
  - b. Nighttime temperature(s) 70°F(Note times if system cycles during non-occupied hours during the day)
9. Estimate the average time doors and windows are open to allow fresh outside air into the building. Note rooms that frequently have open windows or doors.  
SHUT; BOTH ROOMS 98% OF TIME

**D. Potential Indoor Sources of Pollution**

1. Is the laundry room located inside the home? yes /  no
2. Has the house ever had a fire? yes /  no
2. Is there an attached garage? yes /  no
3. Is a vehicle normally parked in the garage? yes /  no
4. Is there a kerosene heater present? yes /  no
5. Is there a workshop, hobby or craft area in the residence? yes /  no
6. An inventory of all products used or stored in the home should be performed. Any products that contain volatile organic compounds or chemicals similar to the target compounds should be listed. The attached product inventory form should be used for this purpose.
7. Is there a kitchen exhaust fan? yes /  no      Where is it vented? -
8. Is the stove gas or electric? N/A      Is the oven gas or electric? -
9. Is there an automatic dishwasher? yes /  no
10. Is smoking allowed in the building? yes /  no
11. Has the house ever been fumigated or sprayed for pests? If yes, give date, type and location of treatment.

**E. Water and Sewage (Circle the appropriate response)**

**Source of Water**

Public Water Drilled Well Driven Well Dug Well Other (Specify) \_\_\_\_\_

**Water Well Specifications**

Well Diameter <u>N/A</u>	Grouted or Ungouted <u>NA</u>
Well Depth _____	Type of Storage Tank _____
Depth to Bedrock _____	Size of Storage Tank _____
Feet of Casing _____	Describe type(s) of Treatment _____

**Water Quality**

Taste and/or odor problems with water? yes / no If so, describe \_\_\_\_\_

Is the water chlorinated, brominated, or ozonated? yes / no \_\_\_\_\_

How long has the taste and/or odor problem been present? N/A

**Sewage Disposal:** Public Sewer Septic Tank Leach Field Other (Specify) \_\_\_\_\_

Distance from well to septic system — Type of septic tank additives —

**F. Plan View**

Sketch each floor and if applicable, indicate air sampling locations, possible indoor air pollution sources, preferential pathways and field instrument readings.

**G. Potential Outdoor Sources of Pollution**

Draw a diagram of the area surrounding the building being sampled. If applicable, provide information on the spill locations (if known), potential air contamination sources (industries, service stations, repair shops, retail shops, landfills, etc.), outdoor air sampling locations, and field instrument readings.

Also, on the diagram, indicate barometric pressure, weather conditions, ambient and indoor temperatures, compass direction, wind direction and speed during sampling, the locations of the water wells, septic systems, and utility corridors if applicable, and a statement to help locate the site on a topographical map.

**APPENDIX L – HOUSEHOLD PRODUCTS INVENTORY FORM**

Occupant of Building EMPTY

Address 2307 BLANDING AVE

City ALAMEDA

Field Investigator JAN HULL Date 06/29/2010

Product Description (commercial name, dispenser type, container size, manufacturer, etc.)	Volatile Ingredients in the Product	Field Instrument Reading
PAINT		
WOOD SEALANT		

Comments:  
PAINT POURED ONTO TARPS ON FLOOR IN PUDDLES TO  
DRY.

### APPENDIX K - BUILDING SURVEY FORM

This form must be completed for each building involved in an indoor air investigation.

Preparer's name Hansen Rigging David Grunat Date prepared 6/27/10

Preparer's affiliation CRA

Telephone number 510-420-3353

#### 1. OCCUPANT

Name Hansen Rigging

Address 2307 Blanding Ave  
Suite G

City Alameda, CA

Home telephone number -

Office telephone number 510-521-7027

#### 2. OWNER OR LANDLORD

Name JULIE BALL, PETER BECK, TATSY BECK  
(If different than occupant)

Address P.O. Box 278 #220  
MEADOW VALLEY, CA 95956

Telephone number N/A

#### A. Type of Building Construction

Type (circle appropriate responses):    Single Family    Multiple Dwelling    Commercial

- |                     |                           |
|---------------------|---------------------------|
| Ranch               | Two-family                |
| Raised Ranch        | Duplex                    |
| Split Level         | Office                    |
| Colonial            | <u>Warehouse</u>          |
| Mobile Home         | <del>Strip Mall</del> IMH |
| Apartment Building: | Number of Units _____     |
| Other _____         |                           |

Building Age \_\_\_\_\_ Number of stories 1

Area of the Building (square feet) 3,000

Is the building insulated yes/ no    How sealed is the building? MODERATELY

Number of elevators in the building 0

Condition of the elevator pits (sealed, open earth, etc.) NIA

General description of building construction materials METAL, WOOD, DRYWALL

**B. Foundation Characteristics (circle all that apply)**

1. Full basement, crawlspace, slab on grade, other \_\_\_\_\_
2. Basement floor description: concrete, dirt, wood, other NIA
  - a. The basement is: wet, damp, dry \_\_\_\_\_
  - b. Sump present? yes / no \_\_\_\_\_ Water in sump? yes / no \_\_\_\_\_
  - c. The basement is: finished, unfinished \_\_\_\_\_
  - d. Is the basement sealed? Provide a description \_\_\_\_\_
3. Concrete floor description: unsealed, painted, covered with Tile
4. Foundation walls: poured concrete, block, stone, wood, other, METAL
5. Identify all potential soil gas entry points and their size (e.g., cracks, voids, pipes, utility ports, sumps, drain holes, etc.). Include these points on the building diagram.

**C. Heating, Ventilation, and Air Conditioning (circle all that apply)**

1. The type of heating system(s):

<u>Hot Air Circulation</u>	Heat Pump
Hot Water Radiation	Unvented Kerosene Heater
Steam Radiation	Wood Stove
Electric Baseboard	Other (specify) _____
2. The type of fuel used: Natural Gas, Fuel Oil, Electric, Wood, Coal, Solar  
Other (specify) \_\_\_\_\_
3. Location of heating system: In Ceiling above Bathroom and in work zone
4. Is there air-conditioning? yes no Central Air or Window Units?

Specify the location Ceiling

5. Are there air distribution ducts present?  yes / no
6. Describe the supply and cold air return duct work including whether there is a cold air return and comment on the tightness of duct joints.

Unknown in ceiling

7. Is there a whole house fan? yes  no  
What is the rated size of the fan? -

8. Temperature settings inside during sampling. Note day and night temperatures.

- a. Daytime temperature(s) ~70  
b. Nighttime temperature(s) ~70

(Note times if system cycles during non-occupied hours during the day)

9. Estimate the average time doors and windows are open to allow fresh outside air into the building. Note rooms that frequently have open windows or doors.

~20% STORE FRONT AND REAR ROLL-UP DOORS ONLY  
OPENABLE SPACES TO OUTSIDE AIR.

**D. Potential Indoor Sources of Pollution**

1. Is the laundry room located inside the home? yes /  no
2. Has the house ever had a fire? yes /  no
2. Is there an attached garage?  yes / no
3. Is a vehicle normally parked in the garage?  yes / no
4. Is there a kerosene heater present? yes /  no
5. Is there a workshop, hobby or craft area in the residence?  yes / no
6. An inventory of all products used or stored in the home should be performed. Any products that contain volatile organic compounds or chemicals similar to the target compounds should be listed. The attached product inventory form should be used for this purpose.
7. Is there a kitchen exhaust fan? yes /  no Where is it vented? N/A
8. Is the stove gas or electric? N/A Is the oven gas or electric? N/A
9. Is there an automatic dishwasher? yes /  no
10. Is smoking allowed in the building? yes /  no
11. Has the house ever been fumigated or sprayed for pests? If yes, give date, type and location of treatment.

APoxy  
Acetone  
Alcohol  
Silcores

WD-40

**E. Water and Sewage (Circle the appropriate response)**

**Source of Water**

Public Water    Drilled Well    Driven Well    Dug Well    Other (Specify)   

**Water Well Specifications**

Well Diameter <u>  N/A  </u>	Grouted or Ungouted <u>  N/A  </u>
Well Depth <u>  </u>	Type of Storage Tank <u>  </u>
Depth to Bedrock <u>  </u>	Size of Storage Tank <u>  </u>
Feet of Casing <u>  </u>	Describe type(s) of Treatment <u>  </u>

**Water Quality**

Taste and/or odor problems with water? yes / no If so, describe   

Is the water chlorinated brominated, or ozonated? yes / no   

How long has the taste and/or odor problem been present?   N/A  

**Sewage Disposal:** Public Sewer Septic Tank Leach Field Other (Specify)   

Distance from well to septic system    Type of septic tank additives   

**F. Plan View**

Sketch each floor and if applicable, indicate air sampling locations, possible indoor air pollution sources, preferential pathways and field instrument readings.

**G. Potential Outdoor Sources of Pollution**

Draw a diagram of the area surrounding the building being sampled. If applicable, provide information on the spill locations (if known), potential air contamination sources (industries, service stations, repair shops, retail shops, landfills, etc.), outdoor air sampling locations, and field instrument readings.

Also, on the diagram, indicate barometric pressure, weather conditions, ambient and indoor temperatures, compass direction, wind direction and speed during sampling, the locations of the water wells, septic systems, and utility corridors if applicable, and a statement to help locate the site on a topographical map.



**APPENDIX L – HOUSEHOLD PRODUCTS INVENTORY FORM**

Occupant of Building HANSEN'S PIGGING (SUITE G)

Address 2307 BLANDING AVE, SUITE G

City ALAMEDA

Field Investigator DAVE GRUNAT Date 06/29/2010

Product Description (commercial name, dispenser type, container size, manufacturer, etc.)	Volatile Ingredients in the Product	Field Instrument Reading
EPOXY		
ACETONE		
ALCOHOL (ISOPROPYL)		
SILICONES		
WD-40		
WELDING EQUIP		

Comments:  
 \_\_\_\_\_  
 \_\_\_\_\_

APPENDIX D

LABORATORY ANALYTICAL REPORTS

7/20/2010

Mr. Ian Hull

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

Suite A

Emeryville CA 94608

Project Name: Chevron 20-6127

Project #: 631916

Workorder #: 1007054A

Dear Mr. Ian Hull

The following report includes the data for the above referenced project for sample(s) received on 7/2/2010 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori


Project Manager

**WORK ORDER #: 1007054A**

Work Order Summary

<b>CLIENT:</b>	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	<b>BILL TO:</b>	Accounts Payable Conestoga-Rovers Associates (CRA) 2055 Niagara Falls Blvd. Suite Three Niagara Falls, NY 14304
<b>PHONE:</b>	510-420-0700	<b>P.O. #</b>	40-4030926
<b>FAX:</b>	510-420-9170	<b>PROJECT #</b>	631916 Chevron 20-6127
<b>DATE RECEIVED:</b>	07/02/2010	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	07/20/2010		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	IA-1	Modified TO-15	3.5 "Hg	5 psi
01B	IA-1	Modified TO-15	3.5 "Hg	5 psi
02A	IA-2	Modified TO-15	4.0 "Hg	5 psi
02B	IA-2	Modified TO-15	4.0 "Hg	5 psi
03A	IA-4	Modified TO-15	3.5 "Hg	5 psi
03B	IA-4	Modified TO-15	3.5 "Hg	5 psi
04A	OA-1	Modified TO-15	3.5 "Hg	5 psi
04B	OA-1	Modified TO-15	3.5 "Hg	5 psi
05A	Lab Blank	Modified TO-15	NA	NA
05B	Lab Blank	Modified TO-15	NA	NA
05C	Lab Blank	Modified TO-15	NA	NA
06A	CCV	Modified TO-15	NA	NA
06B	CCV	Modified TO-15	NA	NA
06C	CCV	Modified TO-15	NA	NA
07A	LCS	Modified TO-15	NA	NA
07B	LCS	Modified TO-15	NA	NA
07C	LCS	Modified TO-15	NA	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 07/20/10

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763,  
 NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards  
 This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE  
Modified TO-15 Full Scan/SIM  
Conestoga-Rovers Associates (CRA)  
Workorder# 1007054A**

Four 6 Liter Summa Canister (SIM Certified) samples were received on July 02, 2010. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	For Full Scan: 30% RSD with 4 compounds allowed out to <math>< 40\%</math> RSD  For SIM: Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	For Full Scan: <math>\leq 30\%</math> Difference with four allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers  For SIM: Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

The reported CCV for each daily batch may be derived from more than one analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15

compound list as per contract or verbal agreement.

### **Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

**Client Sample ID: IA-1**

**Lab ID#: 1007054A-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
TPH ref. to Gasoline (MW=100)	38	72	160	290

**Client Sample ID: IA-1**

**Lab ID#: 1007054A-01B**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	0.076	0.16	0.24	0.52
Toluene	0.030	1.2	0.11	4.5
Ethyl Benzene	0.030	0.062	0.13	0.27
m,p-Xylene	0.061	0.22	0.26	0.97
o-Xylene	0.030	0.068	0.13	0.29

**Client Sample ID: IA-2**

**Lab ID#: 1007054A-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
TPH ref. to Gasoline (MW=100)	39	120	160	490

**Client Sample ID: IA-2**

**Lab ID#: 1007054A-02B**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	0.078	0.18	0.25	0.57
Toluene	0.031	1.4	0.12	5.2
Ethyl Benzene	0.031	0.54	0.13	2.3
m,p-Xylene	0.062	1.9	0.27	8.3
o-Xylene	0.031	0.54	0.13	2.4

**Client Sample ID: IA-4**

**Lab ID#: 1007054A-03A**



**Summary of Detected Compounds  
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

**Client Sample ID: IA-4**

**Lab ID#: 1007054A-03A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
TPH ref. to Gasoline (MW=100)	38	120	160	490

**Client Sample ID: IA-4**

**Lab ID#: 1007054A-03B**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	0.076	0.57	0.24	1.8
Toluene	0.030	4.3	0.11	16
Ethyl Benzene	0.030	0.48	0.13	2.1
m,p-Xylene	0.061	1.8	0.26	7.9
o-Xylene	0.030	0.54	0.13	2.4

**Client Sample ID: OA-1**

**Lab ID#: 1007054A-04A**

No Detections Were Found.

**Client Sample ID: OA-1**

**Lab ID#: 1007054A-04B**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	0.076	0.076	0.24	0.24
Toluene	0.030	0.21	0.11	0.78
Ethyl Benzene	0.030	0.035	0.13	0.15
m,p-Xylene	0.061	0.11	0.26	0.48
o-Xylene	0.030	0.041	0.13	0.18



Client Sample ID: IA-1

Lab ID#: 1007054A-01A

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

<b>File Name:</b>	<b>9070620</b>	<b>Date of Collection: 6/29/10 4:46:00 PM</b>
<b>Dil. Factor:</b>	<b>1.52</b>	<b>Date of Analysis: 7/6/10 09:41 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Naphthalene	0.76	Not Detected	4.0	Not Detected
TPH ref. to Gasoline (MW=100)	38	72	160	290

**Container Type: 6 Liter Summa Canister (SIM Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	106	70-130

Client Sample ID: IA-1

Lab ID#: 1007054A-01B

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	s070612sim	Date of Collection: 6/29/10 4:46:00 PM
Dil. Factor:	1.52	Date of Analysis: 7/6/10 03:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.076	0.16	0.24	0.52
Toluene	0.030	1.2	0.11	4.5
Ethyl Benzene	0.030	0.062	0.13	0.27
m,p-Xylene	0.061	0.22	0.26	0.97
o-Xylene	0.030	0.068	0.13	0.29

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: IA-2

Lab ID#: 1007054A-02A

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

<b>File Name:</b>	<b>9070621</b>	<b>Date of Collection: 6/29/10 4:45:00 PM</b>
<b>Dil. Factor:</b>	<b>1.55</b>	<b>Date of Analysis: 7/6/10 10:18 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Naphthalene	0.78	Not Detected	4.1	Not Detected
TPH ref. to Gasoline (MW=100)	39	120	160	490

**Container Type: 6 Liter Summa Canister (SIM Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: IA-2

Lab ID#: 1007054A-02B

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	s070613sim	Date of Collection: 6/29/10 4:45:00 PM
Dil. Factor:	1.55	Date of Analysis: 7/6/10 04:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.078	0.18	0.25	0.57
Toluene	0.031	1.4	0.12	5.2
Ethyl Benzene	0.031	0.54	0.13	2.3
m,p-Xylene	0.062	1.9	0.27	8.3
o-Xylene	0.031	0.54	0.13	2.4

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: IA-4

Lab ID#: 1007054A-03A

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	9070622	Date of Collection:	6/29/10 4:48:00 PM
Dil. Factor:	1.52	Date of Analysis:	7/6/10 10:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Naphthalene	0.76	Not Detected	4.0	Not Detected
TPH ref. to Gasoline (MW=100)	38	120	160	490

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	123	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: IA-4

Lab ID#: 1007054A-03B

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	s070615sim	Date of Collection: 6/29/10 4:48:00 PM
Dil. Factor:	1.52	Date of Analysis: 7/6/10 05:52 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.076	0.57	0.24	1.8
Toluene	0.030	4.3	0.11	16
Ethyl Benzene	0.030	0.48	0.13	2.1
m,p-Xylene	0.061	1.8	0.26	7.9
o-Xylene	0.030	0.54	0.13	2.4

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	112	70-130

Client Sample ID: OA-1

Lab ID#: 1007054A-04A

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	9071216	Date of Collection:	6/29/10 4:51:00 PM
Dil. Factor:	1.52	Date of Analysis:	7/12/10 09:18 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Naphthalene	0.76	Not Detected	4.0	Not Detected
TPH ref. to Gasoline (MW=100)	38	Not Detected	160	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: OA-1

Lab ID#: 1007054A-04B

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	s070616sim	Date of Collection: 6/29/10 4:51:00 PM
Dil. Factor:	1.52	Date of Analysis: 7/6/10 06:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.076	0.076	0.24	0.24
Toluene	0.030	0.21	0.11	0.78
Ethyl Benzene	0.030	0.035	0.13	0.15
m,p-Xylene	0.061	0.11	0.26	0.48
o-Xylene	0.030	0.041	0.13	0.18

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	104	70-130



Client Sample ID: Lab Blank

Lab ID#: 1007054A-05A

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

<b>File Name:</b>	<b>9070607</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 7/6/10 11:56 AM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Naphthalene	0.50	Not Detected	2.6	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: Lab Blank

Lab ID#: 1007054A-05B

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

<b>File Name:</b>	<b>s070604sim</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 7/6/10 09:49 AM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	0.050	Not Detected	0.16	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: Lab Blank

Lab ID#: 1007054A-05C

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

<b>File Name:</b>	<b>9071215</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 7/12/10 08:30 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Naphthalene	0.50	Not Detected	2.6	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	107	70-130

Client Sample ID: CCV

Lab ID#: 1007054A-06A

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	9070602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/6/10 08:39 AM

Compound	%Recovery
Naphthalene	94
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: CCV

Lab ID#: 1007054A-06B

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	s070602sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/6/10 08:22 AM

Compound	%Recovery
Benzene	95
Toluene	95
Ethyl Benzene	106
m,p-Xylene	106
o-Xylene	106

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: CCV

Lab ID#: 1007054A-06C

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	9071202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/12/10 09:05 AM

Compound	%Recovery
Naphthalene	92
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	108	70-130

Client Sample ID: LCS

Lab ID#: 1007054A-07A

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	9070603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/6/10 09:25 AM

Compound	%Recovery
Naphthalene	109
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: LCS

Lab ID#: 1007054A-07B

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	s070603sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/6/10 09:05 AM

Compound	%Recovery
Benzene	97
Toluene	94
Ethyl Benzene	111
m,p-Xylene	111
o-Xylene	110

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	106	70-130



**Client Sample ID: LCS**

**Lab ID#: 1007054A-07C**

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

<b>File Name:</b>	<b>9071203</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 7/12/10 09:43 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Naphthalene	98
TPH ref. to Gasoline (MW=100)	Not Spiked

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	107	70-130

7/20/2010

Mr. Ian Hull

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

Suite A

Emeryville CA 94608

Project Name: Chevron 20-6127

Project #: 631916

Workorder #: 1007054B

Dear Mr. Ian Hull

The following report includes the data for the above referenced project for sample(s) received on 7/2/2010 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori

Project Manager

**WORK ORDER #: 1007054B**

Work Order Summary

<b>CLIENT:</b>	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	<b>BILL TO:</b>	Accounts Payable Conestoga-Rovers Associates (CRA) 2055 Niagara Falls Blvd. Suite Three Niagara Falls, NY 14304
<b>PHONE:</b>	510-420-0700	<b>P.O. #</b>	40-4030926
<b>FAX:</b>	510-420-9170	<b>PROJECT #</b>	631916 Chevron 20-6127
<b>DATE RECEIVED:</b>	07/02/2010	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	07/20/2010		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
05A	VP-2	Modified TO-15	7.6 "Hg	15 psi
06A	VP-2 DUP	Modified TO-15	7.4 "Hg	15 psi
07A	VP-7	Modified TO-15	3.6 "Hg	15 psi
08A	VP-8	Modified TO-15	4.2 "Hg	15 psi
08AA	VP-8 Lab Duplicate	Modified TO-15	4.2 "Hg	15 psi
09A	VP-9	Modified TO-15	3.4 "Hg	15 psi
10A	VP-10	Modified TO-15	4.8 "Hg	15 psi
11A	VP-11	Modified TO-15	4.4 "Hg	15 psi
12A	VP-12	Modified TO-15	2.4 "Hg	15 psi
13A	VP-13	Modified TO-15	4.2 "Hg	15 psi
14A	Trip Blank	Modified TO-15	27.0 "Hg	15 psi
15A	Lab Blank	Modified TO-15	NA	NA
15B	Lab Blank	Modified TO-15	NA	NA
16A	CCV	Modified TO-15	NA	NA
17A	LCS	Modified TO-15	NA	NA

CERTIFIED BY: 

DATE: 07/20/10

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763,  
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE  
Modified TO-15  
Conestoga-Rovers Associates (CRA)  
Workorder# 1007054B**

Ten 1 Liter Summa Canister (100% Certified) samples were received on July 02, 2010. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Daily CCV	<math>\leq 30\%</math> Difference	<math>\leq 30\%</math> Difference; Compounds exceeding this criterion and associated data are flagged and narrated.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

The reported CCV for each daily batch may be derived from more than one analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
- J - Estimated value.
- E - Exceeds instrument calibration range.

- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: VP-2**

**Lab ID#: 1007054B-05A**

No Detections Were Found.

**Client Sample ID: VP-2 DUP**

**Lab ID#: 1007054B-06A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
TPH ref. to Gasoline (MW=100)	67	200	270	820

**Client Sample ID: VP-7**

**Lab ID#: 1007054B-07A**

No Detections Were Found.

**Client Sample ID: VP-8**

**Lab ID#: 1007054B-08A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	1.2	7.6	3.8	24
Ethyl Benzene	1.2	1.4	5.1	5.9
Toluene	1.2	19	4.4	71
m,p-Xylene	1.2	11	5.1	47
o-Xylene	1.2	2.8	5.1	12
TPH ref. to Gasoline (MW=100)	59	77	240	310

**Client Sample ID: VP-8 Lab Duplicate**

**Lab ID#: 1007054B-08AA**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	1.2	7.4	3.8	24
Ethyl Benzene	1.2	1.2	5.1	5.3
Toluene	1.2	19	4.4	70
m,p-Xylene	1.2	10	5.1	44
o-Xylene	1.2	2.7	5.1	12

**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: VP-8 Lab Duplicate**

**Lab ID#: 1007054B-08AA**

TPH ref. to Gasoline (MW=100)	59	82	240	340
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**Client Sample ID: VP-9**

**Lab ID#: 1007054B-09A**

No Detections Were Found.

**Client Sample ID: VP-10**

**Lab ID#: 1007054B-10A**

No Detections Were Found.

**Client Sample ID: VP-11**

**Lab ID#: 1007054B-11A**

No Detections Were Found.

**Client Sample ID: VP-12**

**Lab ID#: 1007054B-12A**

No Detections Were Found.

**Client Sample ID: VP-13**

**Lab ID#: 1007054B-13A**

No Detections Were Found.

**Client Sample ID: Trip Blank**

**Lab ID#: 1007054B-14A**

No Detections Were Found.

Client Sample ID: VP-2

Lab ID#: 1007054B-05A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>p071515</b>	<b>Date of Collection:</b> 6/29/10 1:54:00 PM
<b>Dil. Factor:</b>	<b>2.71</b>	<b>Date of Analysis:</b> 7/15/10 03:02 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	1.4	Not Detected	4.3	Not Detected
Ethyl Benzene	1.4	Not Detected	5.9	Not Detected
Toluene	1.4	Not Detected	5.1	Not Detected
m,p-Xylene	1.4	Not Detected	5.9	Not Detected
o-Xylene	1.4	Not Detected	5.9	Not Detected
Naphthalene	5.4	Not Detected	28	Not Detected
TPH ref. to Gasoline (MW=100)	68	Not Detected	280	Not Detected

**Container Type: 1 Liter Summa Canister (100% Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	102	70-130



Client Sample ID: VP-2 DUP

Lab ID#: 1007054B-06A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	p071516	Date of Collection: 6/29/10 1:54:00 PM
Dil. Factor:	2.68	Date of Analysis: 7/15/10 03:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.3	Not Detected	4.3	Not Detected
Ethyl Benzene	1.3	Not Detected	5.8	Not Detected
Toluene	1.3	Not Detected	5.0	Not Detected
m,p-Xylene	1.3	Not Detected	5.8	Not Detected
o-Xylene	1.3	Not Detected	5.8	Not Detected
Naphthalene	5.4	Not Detected	28	Not Detected
TPH ref. to Gasoline (MW=100)	67	200	270	820

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: VP-7

Lab ID#: 1007054B-07A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>p071517</b>	<b>Date of Collection:</b> 6/29/10 10:15:00 AM
<b>Dil. Factor:</b>	<b>2.30</b>	<b>Date of Analysis:</b> 7/15/10 04:03 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	1.2	Not Detected	3.7	Not Detected
Ethyl Benzene	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	Not Detected	4.3	Not Detected
m,p-Xylene	1.2	Not Detected	5.0	Not Detected
o-Xylene	1.2	Not Detected	5.0	Not Detected
Naphthalene	4.6	Not Detected	24	Not Detected
TPH ref. to Gasoline (MW=100)	58	Not Detected	240	Not Detected

**Container Type: 1 Liter Summa Canister (100% Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	96	70-130

Client Sample ID: VP-8

Lab ID#: 1007054B-08A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>p071519</b>	<b>Date of Collection:</b> 6/29/10 10:51:00 AM
<b>Dil. Factor:</b>	<b>2.35</b>	<b>Date of Analysis:</b> 7/15/10 05:16 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	1.2	7.6	3.8	24
Ethyl Benzene	1.2	1.4	5.1	5.9
Toluene	1.2	19	4.4	71
m,p-Xylene	1.2	11	5.1	47
o-Xylene	1.2	2.8	5.1	12
Naphthalene	4.7	Not Detected	25	Not Detected
TPH ref. to Gasoline (MW=100)	59	77	240	310

**Container Type: 1 Liter Summa Canister (100% Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: VP-8 Lab Duplicate

Lab ID#: 1007054B-08AA

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>p071528</b>	<b>Date of Collection:</b> 6/29/10 10:51:00 AM
<b>Dil. Factor:</b>	<b>2.35</b>	<b>Date of Analysis:</b> 7/15/10 09:54 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	1.2	7.4	3.8	24
Ethyl Benzene	1.2	1.2	5.1	5.3
Toluene	1.2	19	4.4	70
m,p-Xylene	1.2	10	5.1	44
o-Xylene	1.2	2.7	5.1	12
Naphthalene	4.7	Not Detected	25	Not Detected
TPH ref. to Gasoline (MW=100)	59	82	240	340

**Container Type: 1 Liter Summa Canister (100% Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: VP-9

Lab ID#: 1007054B-09A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>p071524</b>	<b>Date of Collection:</b> 6/29/10 9:15:00 AM
<b>Dil. Factor:</b>	<b>2.28</b>	<b>Date of Analysis:</b> 7/15/10 07:33 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	1.1	Not Detected	3.6	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
Toluene	1.1	Not Detected	4.3	Not Detected
m,p-Xylene	1.1	Not Detected	5.0	Not Detected
o-Xylene	1.1	Not Detected	5.0	Not Detected
Naphthalene	4.6	Not Detected	24	Not Detected
TPH ref. to Gasoline (MW=100)	57	Not Detected	230	Not Detected

**Container Type: 1 Liter Summa Canister (100% Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: VP-10

Lab ID#: 1007054B-10A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	p071525	Date of Collection: 6/29/10 1:31:00 PM
Dil. Factor:	2.41	Date of Analysis: 7/15/10 08:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.8	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
Toluene	1.2	Not Detected	4.5	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
Naphthalene	4.8	Not Detected	25	Not Detected
TPH ref. to Gasoline (MW=100)	60	Not Detected	250	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: VP-11

Lab ID#: 1007054B-11A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>p071526</b>	<b>Date of Collection:</b> 6/29/10 11:47:00 AM
<b>Dil. Factor:</b>	<b>2.37</b>	<b>Date of Analysis:</b> 7/15/10 09:09 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	1.2	Not Detected	3.8	Not Detected
Ethyl Benzene	1.2	Not Detected	5.1	Not Detected
Toluene	1.2	Not Detected	4.5	Not Detected
m,p-Xylene	1.2	Not Detected	5.1	Not Detected
o-Xylene	1.2	Not Detected	5.1	Not Detected
Naphthalene	4.7	Not Detected	25	Not Detected
TPH ref. to Gasoline (MW=100)	59	Not Detected	240	Not Detected

**Container Type: 1 Liter Summa Canister (100% Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: VP-12

Lab ID#: 1007054B-12A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	p071527	Date of Collection: 6/29/10 11:50:00 AM
Dil. Factor:	2.20	Date of Analysis: 7/15/10 09:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	Not Detected	3.5	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
Toluene	1.1	Not Detected	4.1	Not Detected
m,p-Xylene	1.1	Not Detected	4.8	Not Detected
o-Xylene	1.1	Not Detected	4.8	Not Detected
Naphthalene	4.4	Not Detected	23	Not Detected
TPH ref. to Gasoline (MW=100)	55	Not Detected	220	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130



Client Sample ID: VP-13

Lab ID#: 1007054B-13A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>p071529</b>	<b>Date of Collection:</b> 6/29/10 11:34:00 AM
<b>Dil. Factor:</b>	<b>2.35</b>	<b>Date of Analysis:</b> 7/15/10 10:13 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	1.2	Not Detected	3.8	Not Detected
Ethyl Benzene	1.2	Not Detected	5.1	Not Detected
Toluene	1.2	Not Detected	4.4	Not Detected
m,p-Xylene	1.2	Not Detected	5.1	Not Detected
o-Xylene	1.2	Not Detected	5.1	Not Detected
Naphthalene	4.7	Not Detected	25	Not Detected
TPH ref. to Gasoline (MW=100)	59	Not Detected	240	Not Detected

**Container Type: 1 Liter Summa Canister (100% Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: Trip Blank

Lab ID#: 1007054B-14A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	p071530	Date of Collection:	6/29/10
Dil. Factor:	1.00	Date of Analysis:	7/15/10 10:32 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Naphthalene	2.0	Not Detected	10	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: Lab Blank

Lab ID#: 1007054B-15A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>p071508</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 7/15/10 11:49 AM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Naphthalene	2.0	Not Detected	10	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

Client Sample ID: Lab Blank

Lab ID#: 1007054B-15B

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>p071523</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 7/15/10 06:56 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Naphthalene	2.0	Not Detected	10	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: CCV

Lab ID#: 1007054B-16A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	p071502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/15/10 09:10 AM

Compound	%Recovery
Benzene	107
Ethyl Benzene	111
Toluene	110
m,p-Xylene	113
o-Xylene	111
Naphthalene	102
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: LCS

Lab ID#: 1007054B-17A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>p071521</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 7/15/10 06:05 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Benzene	104
Ethyl Benzene	114
Toluene	103
m,p-Xylene	114
o-Xylene	112
Naphthalene	62
TPH ref. to Gasoline (MW=100)	Not Spiked

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	103	70-130

7/19/2010  
Mr. Ian Hull  
Conestoga-Rovers Associates (CRA)  
5900 Hollis Street  
Suite A  
Emeryville CA 94608

Project Name: Chevron 20-6127  
Project #: 631916  
Workorder #: 1007054C

Dear Mr. Ian Hull

The following report includes the data for the above referenced project for sample(s) received on 7/2/2010 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori  
Project Manager

**WORK ORDER #: 1007054C**

Work Order Summary

<b>CLIENT:</b>	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	<b>BILL TO:</b>	Accounts Payable Conestoga-Rovers Associates (CRA) 2055 Niagara Falls Blvd. Suite Three Niagara Falls, NY 14304
<b>PHONE:</b>	510-420-0700	<b>P.O. #</b>	40-4030926
<b>FAX:</b>	510-420-9170	<b>PROJECT #</b>	631916 Chevron 20-6127
<b>DATE RECEIVED:</b>	07/02/2010	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	07/19/2010		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A(cancelled)	IA-1	Modified ASTM D-1946	3.5 "Hg	5 psi
02A(cancelled)	IA-2	Modified ASTM D-1946	4.0 "Hg	5 psi
03A(cancelled)	IA-4	Modified ASTM D-1946	3.5 "Hg	5 psi
04A(cancelled)	OA-1	Modified ASTM D-1946	3.5 "Hg	5 psi
05A	VP-2	Modified ASTM D-1946	7.6 "Hg	15 psi
05AA	VP-2 Lab Duplicate	Modified ASTM D-1946	7.6 "Hg	15 psi
06A	VP-2 DUP	Modified ASTM D-1946	7.4 "Hg	15 psi
07A	VP-7	Modified ASTM D-1946	3.6 "Hg	15 psi
08A	VP-8	Modified ASTM D-1946	4.2 "Hg	15 psi
09A	VP-9	Modified ASTM D-1946	3.4 "Hg	15 psi
10A	VP-10	Modified ASTM D-1946	4.8 "Hg	15 psi
11A	VP-11	Modified ASTM D-1946	4.4 "Hg	15 psi
12A	VP-12	Modified ASTM D-1946	2.4 "Hg	15 psi
13A	VP-13	Modified ASTM D-1946	4.2 "Hg	15 psi
14A	Trip Blank	Modified ASTM D-1946	27.0 "Hg	15 psi
15A	Lab Blank	Modified ASTM D-1946	NA	NA
15B	Lab Blank	Modified ASTM D-1946	NA	NA

Continued on next page




**WORK ORDER #: 1007054C**

Work Order Summary

<b>CLIENT:</b>	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	<b>BILL TO:</b>	Accounts Payable Conestoga-Rovers Associates (CRA) 2055 Niagara Falls Blvd. Suite Three Niagara Falls, NY 14304
<b>PHONE:</b>	510-420-0700	<b>P.O. #</b>	40-4030926
<b>FAX:</b>	510-420-9170	<b>PROJECT #</b>	631916 Chevron 20-6127
<b>DATE RECEIVED:</b>	07/02/2010	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	07/19/2010		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
16A	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY:   
Laboratory Director

DATE: 07/19/10

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763,  
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719  
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10  
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards  
This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**Modified ASTM D-1946**  
**Conestoga-Rovers Associates (CRA)**  
**Workorder# 1007054C**

Four 6 Liter Summa Canister (SIM Certified) and ten 1 Liter Summa Canister (100% Certified) samples were received on July 02, 2010. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Samples IA-1, IA-2, IA-4, OA-1 were disposed of prior to final analysis. No analysis was possible.

Sample Trip Blank has a reportable level of Oxygen present. Reanalysis confirmed the initial result.

**Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds**  
**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: VP-2**

**Lab ID#: 1007054C-05A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.27	16
Nitrogen	0.27	79
Carbon Dioxide	0.027	5.1
Methane	0.00027	0.00050

**Client Sample ID: VP-2 Lab Duplicate**

**Lab ID#: 1007054C-05AA**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.27	16
Nitrogen	0.27	79
Carbon Dioxide	0.027	5.1
Methane	0.00027	0.00050

**Client Sample ID: VP-2 DUP**

**Lab ID#: 1007054C-06A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.27	16
Nitrogen	0.27	79
Carbon Dioxide	0.027	5.1

**Client Sample ID: VP-7**

**Lab ID#: 1007054C-07A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.23	21
Nitrogen	0.23	78
Carbon Dioxide	0.023	0.30
Helium	0.12	0.21

**Summary of Detected Compounds**  
**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: VP-8**

**Lab ID#: 1007054C-08A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.24	20
Nitrogen	0.24	79
Carbon Dioxide	0.024	0.61
Helium	0.12	0.57

**Client Sample ID: VP-9**

**Lab ID#: 1007054C-09A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.23	19
Nitrogen	0.23	80
Carbon Dioxide	0.023	1.1

**Client Sample ID: VP-10**

**Lab ID#: 1007054C-10A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.24	19
Nitrogen	0.24	73
Carbon Dioxide	0.024	0.43
Helium	0.12	7.3

**Client Sample ID: VP-11**

**Lab ID#: 1007054C-11A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.24	18
Nitrogen	0.24	80
Carbon Dioxide	0.024	1.9

**Summary of Detected Compounds**  
**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: VP-12**

**Lab ID#: 1007054C-12A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.22	20
Nitrogen	0.22	80
Carbon Dioxide	0.022	0.45

**Client Sample ID: VP-13**

**Lab ID#: 1007054C-13A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.24	16
Nitrogen	0.24	82
Carbon Dioxide	0.024	2.0

**Client Sample ID: Trip Blank**

**Lab ID#: 1007054C-14A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.10	0.18
Nitrogen	0.10	100



Client Sample ID: VP-2

Lab ID#: 1007054C-05A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9071713	Date of Collection:	6/29/10 1:54:00 PM
Dil. Factor:	2.71	Date of Analysis:	7/17/10 09:15 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.27	16
Nitrogen	0.27	79
Carbon Dioxide	0.027	5.1
Methane	0.00027	0.00050
Helium	0.14	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Client Sample ID: VP-2 Lab Duplicate

Lab ID#: 1007054C-05AA

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9071714	Date of Collection:	6/29/10 1:54:00 PM
Dil. Factor:	2.71	Date of Analysis:	7/17/10 09:37 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.27	16
Nitrogen	0.27	79
Carbon Dioxide	0.027	5.1
Methane	0.00027	0.00050
Helium	0.14	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)





Client Sample ID: VP-2 DUP

Lab ID#: 1007054C-06A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9071715	Date of Collection:	6/29/10 1:54:00 PM
Dil. Factor:	2.68	Date of Analysis:	7/17/10 09:59 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.27	16
Nitrogen	0.27	79
Carbon Dioxide	0.027	5.1
Methane	0.00027	Not Detected
Helium	0.13	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Client Sample ID: VP-7

Lab ID#: 1007054C-07A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9071716	Date of Collection:	6/29/10 10:15:00 AM
Dil. Factor:	2.30	Date of Analysis:	7/17/10 10:21 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	21
Nitrogen	0.23	78
Carbon Dioxide	0.023	0.30
Methane	0.00023	Not Detected
Helium	0.12	0.21

Container Type: 1 Liter Summa Canister (100% Certified)



Client Sample ID: VP-8

Lab ID#: 1007054C-08A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9071717	Date of Collection:	6/29/10 10:51:00 AM
Dil. Factor:	2.35	Date of Analysis:	7/17/10 11:00 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	20
Nitrogen	0.24	79
Carbon Dioxide	0.024	0.61
Methane	0.00024	Not Detected
Helium	0.12	0.57

Container Type: 1 Liter Summa Canister (100% Certified)



Client Sample ID: VP-9

Lab ID#: 1007054C-09A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9071718	Date of Collection:	6/29/10 9:15:00 AM
Dil. Factor:	2.28	Date of Analysis:	7/18/10 08:03 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	19
Nitrogen	0.23	80
Carbon Dioxide	0.023	1.1
Methane	0.00023	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Client Sample ID: VP-10

Lab ID#: 1007054C-10A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9071719	Date of Collection:	6/29/10 1:31:00 PM
Dil. Factor:	2.41	Date of Analysis:	7/18/10 08:34 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	19
Nitrogen	0.24	73
Carbon Dioxide	0.024	0.43
Methane	0.00024	Not Detected
Helium	0.12	7.3

Container Type: 1 Liter Summa Canister (100% Certified)



Client Sample ID: VP-11

Lab ID#: 1007054C-11A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9071720	Date of Collection:	6/29/10 11:47:00 AM
Dil. Factor:	2.37	Date of Analysis:	7/18/10 09:05 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	18
Nitrogen	0.24	80
Carbon Dioxide	0.024	1.9
Methane	0.00024	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Client Sample ID: VP-12

Lab ID#: 1007054C-12A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9071721	Date of Collection:	6/29/10 11:50:00 AM
Dil. Factor:	2.20	Date of Analysis:	7/18/10 09:30 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	20
Nitrogen	0.22	80
Carbon Dioxide	0.022	0.45
Methane	0.00022	Not Detected
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Client Sample ID: VP-13

Lab ID#: 1007054C-13A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9071722	Date of Collection:	6/29/10 11:34:00 AM
Dil. Factor:	2.35	Date of Analysis:	7/18/10 09:53 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	16
Nitrogen	0.24	82
Carbon Dioxide	0.024	2.0
Methane	0.00024	Not Detected
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)





Client Sample ID: Trip Blank

Lab ID#: 1007054C-14A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9071723	Date of Collection:	6/29/10
Dil. Factor:	1.00	Date of Analysis:	7/18/10 10:15 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.18
Nitrogen	0.10	100
Carbon Dioxide	0.010	Not Detected
Methane	0.00010	Not Detected
Helium	0.050	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Client Sample ID: Lab Blank

Lab ID#: 1007054C-15A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9071704	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/17/10 05:08 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Nitrogen	0.10	Not Detected
Carbon Dioxide	0.010	Not Detected
Methane	0.00010	Not Detected

Container Type: NA - Not Applicable



Client Sample ID: Lab Blank

Lab ID#: 1007054C-15B

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9071703b	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/17/10 04:34 PM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.050	Not Detected

Container Type: NA - Not Applicable

**Client Sample ID: LCS**

**Lab ID#: 1007054C-16A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9071725</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 7/18/10 11:09 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Oxygen	97
Nitrogen	100
Carbon Dioxide	100
Methane	101
Helium	97

**Container Type: NA - Not Applicable**



**CHAIN-OF-CUSTODY RECORD**

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180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager BRIAN SILVA  
 Collected by: (Print and Sign) IAN HULL  
 Company CRA Email bsilva@craworld.com  
 Address 1069 TRADE CENTER DR City RANCHO COCA State CA Zip 95076  
 Phone 916-889-8908 Fax 916-889-8999

**Project Info:**  
 P.O. # \_\_\_\_\_  
 Project # 631916  
 Project Name CHEVRON 20-G127

**Turn Around Time:**  
 Normal  
 Rush  
specify  
 Pressurized by \_\_\_\_\_  
 Date \_\_\_\_\_  
 Pressurization Gas \_\_\_\_\_  
 N<sub>2</sub> He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
	IA-1	94600	06/20/2016	1646	10-15 SIM: TPH <sub>3</sub> , BTEX, NAPHTHALENE	<-30	-5		
	IA-2	34257		1645		<-30	-5		
	IA-4	02948		1648	ASTM D-1946: O <sub>2</sub> , N <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> , HELIUM	-29	-5.5		
	OA-1	33735		1651		<-30	-5		
USA	VP-2	34600		1354		<-30	-8		
USA	VP-2 DUP	12371		1354	FOR THESE: • 10-15 TPH <sub>3</sub> , BTEX, NAPHTHALENE	<-30	-8		
USA	VP-7	32640		1015		<-30	-4.5		
USA	VP-8	36468		1051	• ASTM D-1946: O <sub>2</sub> , N <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> , HELIUM	<-30	-5		
USA	VP-9	31761		0915		<-30	-3.5		
USA	VP-10	36471		1331		<-30	-6		

Relinquished by: (signature) <u>Ian Hull</u> Date/Time <u>06/30/2016 1100</u>	Received by: (signature) <u>FEDEX</u> Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

**Notes:**  
 PLEASE REPORT IN ppby and pg in 3

Lab Use Only	Shopper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?			Work Order #
					Yes	No	None	<u>1007854</u>

revised coc received 7/2/10



**CHAIN-OF-CUSTODY RECORD**

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180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
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Project Manager BRIAN SILVA  
 Collected by: (Print and Sign) JAN HULL  
 Company CRA Email bsilva@cranord.com  
 Address 1066A TRADE CENTER DR City RANCHO CORD State CA Zip 95670  
 Phone 916-889-8908 Fax 916-889-8999

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>Specify</small>	Pressurized by: Date: Pressurization Gas: N He
P.O. #		
Project # <u>621916</u>		
Project Name <u>CHEVRON 20-6127</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (loss)
<u>11A</u>	<u>VP-11</u>	<u>21019</u>	<u>06/29/10</u>	<u>1147</u>	<u>FOR ALL 10-15 FOR</u>	<u>&lt;30</u>	<u>-7</u>		
<u>12A</u>	<u>VP-12</u>	<u>36443</u>		<u>1150</u>	<u>THG, BTEX, NAPHTHALENE AND</u>	<u>&lt;30</u>	<u>-3.5</u>		
<u>13A</u>	<u>VP-13</u>	<u>9393</u>	<u>↓</u>	<u>1124</u>	<u>ASTM D-1946 FOR</u>	<u>&lt;30</u>	<u>-6.5</u>		
<u>14A</u>	<u>TRIP BLANK</u>	<u>37370</u>	<u>06/29/10</u>	<u>1600</u>	<u>O<sub>2</sub>, N<sub>2</sub>, CO<sub>2</sub>, CH<sub>4</sub>, Helium</u>	<u>&lt;30</u>	<u>-</u>		
<u>15A</u>									
<u>16A</u>									
<u>17A</u>									
<u>18A</u>									
<u>19A</u>									
<u>20A</u>									

Relinquished by: (signature) <u>Jan Hull</u> Date/Time <u>06/30/2010 1100</u>	Received by: (signature) <u>FEDEX</u> Date/Time	Notes: <u>PLEASE REPORT IN ppbv and ug/m<sup>3</sup></u>
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time	
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
					Yes No None	<u>1007054</u>



**CHAIN-OF-CUSTODY RECORD**

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Page 1 of 2

Project Manager BRIAN SILVA  
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 Address DRAG TRADE CENTER SR SUITE 107 City RANCHO CERRA State CA Zip 95670  
 Phone 916-889-8908 Fax 916-889-8999

<b>Project Info:</b>	<b>Turn Around Time:</b>	<b>Lab Use Only</b>
P.O. # _____	<input checked="" type="checkbox"/> Normal	Pressurized by: <u>VGR</u>
Project # <u>631916</u>	<input type="checkbox"/> Rush	Date: <u>7/2/10</u>
Project Name <u>CHEVRON 20-6127</u>	specify _____	Pressurization Gas: <u>(N<sub>2</sub>) He</u>

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
	IA-1	94600	06/29/2010	1646	TO-15 SIM: TPH <sub>3</sub> , BTEX,	<-30	-5		
	IA-2	34257		1645	NA.PHTHALENE	<-30	-5		
	IA-4	03948		<del>1648</del>	ASTM D-1946: O <sub>2</sub> , N <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> , HELIUM	-29	-5.5		
	CA-1	33925		1651		<-30	-5		
05A	VP-2	34600		1354		<-30	-8		7.6 uHg 15psi
06A	VP-2 DUP	12371		1354	FOR THESE...	<-30	-8		7.4 uHg
07A	VP-7	33640		1015	TO-15: TPH <sub>3</sub> , BTEX, NA.PHTHALENE	<-30	-4.5		3.6 uHg
08A	VP-8	36468		1051	ASTM D-1946: O <sub>2</sub> , N <sub>2</sub>	<-30	-5		4.2 uHg
09A	VP-9	31761		0915	CO <sub>2</sub> , CH <sub>4</sub> , Helium	<-30	-3.5		3.4 uHg
10A	VP-10	26471		1231		<-30	-6		4.8 uHg

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>06/30/2010 1100</u>	Received by: (signature) <u>FFDFX</u> Date/Time _____	<b>Notes:</b> PLEASE REPORT IN ppbv and µg/m <sup>3</sup>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) <u>Monica Green AT</u> Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time <u>7/2/10 1145</u>	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>Fed Ex G</u>		<u>NA</u>	<u>Good</u>	Yes No <u>None</u>	<u>1007054</u>



**CHAIN-OF-CUSTODY RECORD**

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<b>Project Info:</b> P.O. # _____ Project # <u>631916</u> Project Name <u>CHEVRON 20-6127</u>	<b>Turn Around Time:</b> <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	<small>Lab Use Only</small> Pressurized by: <u>VFR</u> Date: <u>7/2/10</u> Pressurization Gas: <input checked="" type="checkbox"/> N <sub>2</sub> He
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Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
11A	VP-11	21019	06/29/10	1147	FOR ALL: TO-15 FOR	-30	-7	4.4 Hg	15psi
12A	VP-12	36443	↓	1150	TPH, BTEX, NAPH- THALENE AND	-30	-3.5	2.4 Hg	↓
13A	VP-13	9393	↓	1134	ASTM D-1946 FOR O <sub>2</sub> , N <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> , Helium	-30	-6.5	4.2 Hg	↓

Relinquished by: (signature) <u>Jan Hull</u> Date/Time <u>06/30/2010 1100</u>	Received by: (signature) <u>FEDEX</u> Date/Time _____	<b>Notes:</b> PLEASE REPORT IN ppbv and Ng/m <sup>3</sup>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) <u>Manuela Grogan</u> Date/Time <u>ATL 7/2/10</u>	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time <u>1145</u>	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>Fed Ex</u>		<u>NA</u>	<u>Good</u>	Yes No <u>None</u>	<u>1007054</u>



7/28/2010

Mr. Ian Hull

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

Suite A

Emeryville CA 94608

Project Name: Chevron 20-6127

Project #: 631916

Workorder #: 1007256A

Dear Mr. Ian Hull

The following report includes the data for the above referenced project for sample(s) received on 7/13/2010 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori

Project Manager

**WORK ORDER #: 1007256A**

Work Order Summary

<b>CLIENT:</b>	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	<b>BILL TO:</b>	Accounts Payable Conestoga-Rovers Associates (CRA) 2055 Niagara Falls Blvd. Suite Three Niagara Falls, NY 14304
<b>PHONE:</b>	510-420-0700	<b>P.O. #</b>	631916
<b>FAX:</b>	510-420-9170	<b>PROJECT #</b>	631916 Chevron 20-6127
<b>DATE RECEIVED:</b>	07/13/2010	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	07/28/2010		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	IA-3	Modified TO-15	5.5 "Hg	5 psi
01AA	IA-3 Lab Duplicate	Modified TO-15	5.5 "Hg	5 psi
01B	IA-3	Modified TO-15	5.5 "Hg	5 psi
01BB	IA-3 Lab Duplicate	Modified TO-15	5.5 "Hg	5 psi
02A	Lab Blank	Modified TO-15	NA	NA
02B	Lab Blank	Modified TO-15	NA	NA
03A	CCV	Modified TO-15	NA	NA
03B	CCV	Modified TO-15	NA	NA
04A	LCS	Modified TO-15	NA	NA
04B	LCS	Modified TO-15	NA	NA

CERTIFIED BY: 

DATE: 07/28/10

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763,  
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE  
Modified TO-15 Full Scan/SIM  
Conestoga-Rovers Associates (CRA)  
Workorder# 1007256A**

One 6 Liter Summa Canister (SIM Certified) sample was received on July 13, 2010. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	For Full Scan: 30% RSD with 4 compounds allowed out to <math>< 40\%</math> RSD  For SIM: Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	For Full Scan: <math>\leq 30\%</math> Difference with four allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers  For SIM: Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

The reported CCV for each daily batch may be derived from more than one analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15

compound list as per contract or verbal agreement.

The results for each sample in this report were acquired from two separate data files originating from the same analytical run. The two data files have the same base file name and are differentiated with a "sim" extension on the SIM data file.

### **Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds  
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

**Client Sample ID: IA-3**

**Lab ID#: 1007256A-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
TPH ref. to Gasoline (MW=100)	16	27	67	110

**Client Sample ID: IA-3 Lab Duplicate**

**Lab ID#: 1007256A-01AA**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
TPH ref. to Gasoline (MW=100)	16	25	67	100

**Client Sample ID: IA-3**

**Lab ID#: 1007256A-01B**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	0.082	0.12	0.26	0.39
Toluene	0.033	0.49	0.12	1.8
Ethyl Benzene	0.033	0.062	0.14	0.27
m,p-Xylene	0.066	0.21	0.28	0.92
o-Xylene	0.033	0.073	0.14	0.32

**Client Sample ID: IA-3 Lab Duplicate**

**Lab ID#: 1007256A-01BB**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	0.082	0.13	0.26	0.41
Toluene	0.033	0.52	0.12	2.0
Ethyl Benzene	0.033	0.060	0.14	0.26
m,p-Xylene	0.066	0.21	0.28	0.91
o-Xylene	0.033	0.074	0.14	0.32

Client Sample ID: IA-3

Lab ID#: 1007256A-01A

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	s071507	Date of Collection:	7/9/10 5:10:00 PM
Dil. Factor:	1.64	Date of Analysis:	7/15/10 01:12 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Naphthalene	0.82	Not Detected	4.3	Not Detected
TPH ref. to Gasoline (MW=100)	16	27	67	110

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: IA-3 Lab Duplicate

Lab ID#: 1007256A-01AA

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

<b>File Name:</b>	<b>s071508</b>	<b>Date of Collection:</b> 7/9/10 5:10:00 PM
<b>Dil. Factor:</b>	<b>1.64</b>	<b>Date of Analysis:</b> 7/15/10 02:09 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Naphthalene	0.82	Not Detected	4.3	Not Detected
TPH ref. to Gasoline (MW=100)	16	25	67	100

**Container Type: 6 Liter Summa Canister (SIM Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	91	70-130

Client Sample ID: IA-3

Lab ID#: 1007256A-01B

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	s071507sim	Date of Collection: 7/9/10 5:10:00 PM
Dil. Factor:	1.64	Date of Analysis: 7/15/10 01:12 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.082	0.12	0.26	0.39
Toluene	0.033	0.49	0.12	1.8
Ethyl Benzene	0.033	0.062	0.14	0.27
m,p-Xylene	0.066	0.21	0.28	0.92
o-Xylene	0.033	0.073	0.14	0.32

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	94	70-130



Client Sample ID: IA-3 Lab Duplicate

Lab ID#: 1007256A-01BB

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

<b>File Name:</b>	<b>s071508sim</b>	<b>Date of Collection:</b> 7/9/10 5:10:00 PM
<b>Dil. Factor:</b>	<b>1.64</b>	<b>Date of Analysis:</b> 7/15/10 02:09 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	0.082	0.13	0.26	0.41
Toluene	0.033	0.52	0.12	2.0
Ethyl Benzene	0.033	0.060	0.14	0.26
m,p-Xylene	0.066	0.21	0.28	0.91
o-Xylene	0.033	0.074	0.14	0.32

**Container Type: 6 Liter Summa Canister (SIM Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: Lab Blank

Lab ID#: 1007256A-02A

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

<b>File Name:</b>	<b>s071506</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 7/15/10 11:48 AM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Naphthalene	0.50	Not Detected	2.6	Not Detected
TPH ref. to Gasoline (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: Lab Blank

Lab ID#: 1007256A-02B

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

<b>File Name:</b>	<b>s071506sim</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 7/15/10 11:48 AM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Benzene	0.050	Not Detected	0.16	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	95	70-130

Client Sample ID: CCV

Lab ID#: 1007256A-03A

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	s071503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/15/10 10:10 AM

Compound	%Recovery
Naphthalene	100
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: CCV

Lab ID#: 1007256A-03B

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

<b>File Name:</b>	<b>s071503sim</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 7/15/10 10:10 AM

<b>Compound</b>	<b>%Recovery</b>
Benzene	96
Toluene	85
Ethyl Benzene	101
m,p-Xylene	102
o-Xylene	100

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	103	70-130

**Client Sample ID: LCS**

**Lab ID#: 1007256A-04A**

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

<b>File Name:</b>	<b>s071504</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 7/15/10 10:42 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Naphthalene	115
TPH ref. to Gasoline (MW=100)	Not Spiked

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: LCS

Lab ID#: 1007256A-04B

**MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN**

File Name:	s071504sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/15/10 10:42 AM

Compound	%Recovery
Benzene	98
Toluene	91
Ethyl Benzene	103
m,p-Xylene	105
o-Xylene	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	106	70-130



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager DEIAN SILVA

Collected by: (Print and Sign) JAN HULL

Company CRA Email \_\_\_\_\_

Address 1099 TRADE CENTER City RANCHO CORDOVA State CA Zip 95670

Phone 916-889-8908 Fax 916-889-8999

<b>Project Info:</b> P.O. # <u>631916</u> Project # <u>631916</u> Project Name <u>CHEVRON 20-6127</u>	<b>Turn Around Time:</b> <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	<small>Lab Use Only</small> Pressurized by: Date: Pressurization Gas: N <sub>2</sub> He
	<small>specify</small>	

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<u>01AB</u>	<u>IA-3</u>	<u>30852</u>	<u>07/09/2010</u>	<u>1710</u>	<u>TO-15 SIM: TPH<sub>6</sub>, BTEX, NAPHTHALENE, ASTM D-1946: O<sub>2</sub>, N<sub>2</sub>, CO<sub>2</sub>, CH<sub>4</sub>, He</u>	<u>-29</u>	<u>-5</u>		

Relinquished by: (signature) <u></u> Date/Time <u>07/09/10 1715</u>	Received by: (signature) <u>FFDEX</u> Date/Time _____	<b>Notes:</b> PLEASE REPORT IN ppbw and pg/m <sup>3</sup>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) <u>Monica Greenberg</u> Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time <u>7/13/10 840</u>	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>Ted Ex</u>		<u>NA</u>	<u>Good</u>	Yes No <u>None</u>	<u>1007256</u>



7/27/2010

Mr. Ian Hull

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

Suite A

Emeryville CA 94608

Project Name: Chevron 20-6127

Project #: 631916

Workorder #: 1007256B

Dear Mr. Ian Hull

The following report includes the data for the above referenced project for sample(s) received on 7/13/2010 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori

Project Manager

**WORK ORDER #: 1007256B**

Work Order Summary

<b>CLIENT:</b>	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	<b>BILL TO:</b>	Accounts Payable Conestoga-Rovers Associates (CRA) 2055 Niagara Falls Blvd. Suite Three Niagara Falls, NY 14304
<b>PHONE:</b>	510-420-0700	<b>P.O. #</b>	631916
<b>FAX:</b>	510-420-9170	<b>PROJECT #</b>	631916 Chevron 20-6127
<b>DATE RECEIVED:</b>	07/13/2010	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	07/27/2010		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	IA-3	Modified ASTM D-1946	5.5 "Hg	5 psi
02A	Lab Blank	Modified ASTM D-1946	NA	NA
02B	Lab Blank	Modified ASTM D-1946	NA	NA
03A	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY: 

DATE: 07/27/10

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763,  
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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**LABORATORY NARRATIVE  
Modified ASTM D-1946  
Conestoga-Rovers Associates (CRA)  
Workorder# 1007256B**

One 6 Liter Summa Canister (SIM Certified) sample was received on July 13, 2010. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections $> 5 X$ 's the RL.

### **Receiving Notes**

There were no receiving discrepancies.

### **Analytical Notes**

There were no analytical discrepancies.

### **Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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**Summary of Detected Compounds**  
**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: IA-3**

**Lab ID#: 1007256B-01A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.16	22
Nitrogen	0.16	78
Carbon Dioxide	0.016	0.040
Methane	0.00016	0.00019



Client Sample ID: IA-3

Lab ID#: 1007256B-01A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9072307	Date of Collection:	7/9/10 5:10:00 PM
Dil. Factor:	1.64	Date of Analysis:	7/23/10 07:45 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	22
Nitrogen	0.16	78
Carbon Dioxide	0.016	0.040
Methane	0.00016	0.00019
Helium	0.082	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)



Client Sample ID: Lab Blank

Lab ID#: 1007256B-02A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9072306	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/23/10 07:24 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Nitrogen	0.10	Not Detected
Carbon Dioxide	0.010	Not Detected
Methane	0.00010	Not Detected

Container Type: NA - Not Applicable



Client Sample ID: Lab Blank

Lab ID#: 1007256B-02B

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9072303b	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	7/23/10 06:06 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.050	Not Detected

Container Type: NA - Not Applicable



**Client Sample ID: LCS**

**Lab ID#: 1007256B-03A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9072332</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 7/23/10 05:42 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Oxygen	102
Nitrogen	100
Carbon Dioxide	100
Methane	100
Helium	104

**Container Type: NA - Not Applicable**

# @Air TOXICS LTD.

## CHAIN-OF-CUSTODY RECORD

### Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager BRIAN SILVA  
 Collected by: (Print and Sign) JAN HULL  
 Company CRA Email \_\_\_\_\_  
 Address 1096A TRADE CENTER City PANAMA CITY State CA Zip 95670  
 Phone 916-889-8908 Fax 916-889-8999

<b>Project Info:</b> P.O. # <u>631916</u> Project # <u>631916</u> Project Name <u>CHEVRON 20-6127</u>	<b>Turn Around Time:</b> <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	<small>Lab Use Only</small> Pressurized by: Date: Pressurization Gas: N <sub>2</sub> He
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Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<u>OIA</u>	<u>IA-3</u>	<u>30852</u>	<u>07/01/2010</u>	<u>1710</u>	<u>TO-15 SIM: TPH<sub>3</sub>, BTEX, NAPHTHALENE, ASTM D-1946: O<sub>2</sub>, N<sub>2</sub>, CO<sub>2</sub>, CH<sub>4</sub>, He</u>	<u>-29</u>	<u>-5</u>		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>07/01/10 1715</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>7/13/10 840</u>	<b>Notes:</b> PLEASE REPORT IN ppbv and µg/m <sup>3</sup>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) <u>[Signature]</u> Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>Ted Ex</u>		<u>NA</u>	<u>Good</u>	Yes No <u>None</u>	<u>1007256</u>