CONESTOGA-ROVERS & ASSOCIATES

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www.CRAworld.com

TRANSMITTAL

DATE: 3-30-11

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

RECEIVED
12:06 pm, Apr 04, 2011
Alameda County
Environmental Health

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

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

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: 

Mike Bauer
Project Manager
Marketing Business Unit

Chevron Environmental Management Company
145 S. State College Blvd
Brea, CA 92821
Tel (714) 671-3200
Fax (714) 671-3440
mbauer@chevron.com

March 30, 2011

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 *Second 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,

Mike Bauer
Project Manager

SECOND 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
AGENCY CASE RO# 0002466

Prepared For:

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

Prepared by:
Conestoga-Rovers & Associates

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MARCH 30, 2011
REF. NO. 631916 (18)
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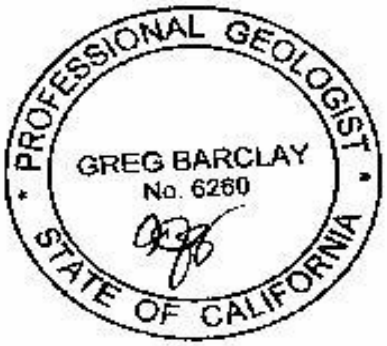
SECOND SOIL VAPOR, SUB-SLAB, AND INDOOR AIR SAMPLING REPORT

FORMER SIGNAL OIL MARINE STORAGE AND DISTRIBUTION FACILITY
CHEVRON FACILITY 20-6127
2301-2311 BLANDING AVENUE
ALAMEDA, CALIFORNIA
AGENCY CASE RO# 0002466

Brian Silva

Greg Barclay, PG 6260



Prepared by:
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MARCH 30, 2011
REF. NO. 631916 (18)

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1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) is submitting this *Second 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. This is the second soil vapor and indoor/outdoor sampling event performed to confirm results from CRA's September 17, 2010 *Soil Vapor, Sub Slab, and Indoor-Air Sampling Report.* 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 compare subsurface conditions with indoor and ambient air conditions. 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 most recent 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 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. Recently installed wells MW-1RA, MW-1RB (which were installed to replace well MW-1), and MW-6 have been 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 points as well as indoor and outdoor air samples. Samples were collected to confirm results from the June 29, 2010 event, 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 November 16, 2010, CRA collected vapor samples from vapor wells VP-2 through VP-5 and sub-slab vapor probes 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 probes and the soil vapor wells (approximately 30 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 between 5 inches to 8 inches of mercury was observed on the vacuum gauge. Field duplicate samples were collected simultaneously from VP-5 and VP-11. In accordance with the Department of Toxic Substances Control's (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-6 due to excess moisture in the vapor well tubing. This is likely due to the wet weather that was experienced this fall through the month of October and the first part of November.

3.2 INDOOR AND OUTDOOR AIR SAMPLING

On November 16, 2010, CRA collected eight-hour (approximate) indoor air samples from sampling points IA-1 through 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 11.5 mL/min.

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 DTSC'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, paint thinners, and gasoline cans 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 (IA-1) was open all day, as is typical during business hours. The back door at the Mark's Paints suite (IA-2) was left open during sampling, and is typically open 90 percent of the time during business hours. Exterior doors were closed in the empty suite (Suite E, IA-3). All doors were open in the Hansen Rigging suite (IA-4) for approximately 20 percent of the sampling duration as is typical during business hours.

Outside ambient air conditions were warm at 65 degrees Fahrenheit with intermittent breezes 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 Modified EPA Method TO-15.
- 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.

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 San Francisco Region's Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) for indoor air and shallow soil vapor 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 vapor 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. Due to a laboratory error, TPHg analysis for the sub-slab vapor probes was not initially conducted despite being noted on the chain-of-custody. As noted on the laboratory report, CRA requested that the report be re-issued with the TPHg results included. Because the TPHg single point calibration was not analyzed at the time of the initial analysis (it was conducted four days after), TPHg results for the sub-slab probes (VP-7 through VP-13) are considered

approximate. A memo from the laboratory documenting this oversight is included with the laboratory report. Cumulative soil vapor analytical data compared to ESLs are summarized in Table 1 and cumulative 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

- TPHg was only detected in two of the seven sub-slab probes at concentrations of 260 micrograms per cubic meter ($\mu g/m^3$) and 450 $\mu g/m^3$ in VP-10 and VP-13, respectively. Both are below commercial indoor air ESL of 1,400 $\mu g/m^3$.
- TPHg was detected in vapor wells analyzed ranging from 340,000 $\mu g/m^3$ in VP-3 through 130,000,000 $\mu g/m^3$ in VP-4.
- The TPHg results from vapor wells VP-3, VP-4, and VP-5 exceed the shallow soil vapor ESL of 29,000 $\mu g/m^3$.
- TPHg was also detected in all indoor air samples and the outdoor air sample collected at concentrations ranging from 110 $\mu g/m^3$ in OA-3 to 530 $\mu g/m^3$ in IA-3.
- The TPHg results for the indoor air sampling are above the indoor air ESL for commercial and industrial sites of 14 $\mu g/m^3$.

Benzene

- No benzene was detected in the vapor samples from vapor wells VP-2 and VP-3, or the sub-slab vapor probes.
- Benzene was detected in vapor wells VP-4 and VP-5 at concentrations of 830,000 $\mu g/m^3$ and 12,000 $\mu g/m^3$, respectively, both of which exceed the shallow soil vapor ESL of 280 $\mu g/m^3$.
- Benzene was also detected in all indoor and outdoor air samples collected at concentrations ranging from 0.61 $\mu g/m^3$ in OA-1 to 4.2 $\mu g/m^3$ in IA-3.
- The benzene results for the indoor air sampling are above the indoor air ESL for commercial and industrial sites of 0.14 $\mu g/m^3$.

Helium

- No helium was detected in the vapor samples from vapor wells VP-2, VP-3, and VP-5, sub-slab vapor probes VP-9, VP-11, and VP-12, and indoor and outdoor air samples IA-1 through IA-4, and OA-1.
- Helium was detected in vapor samples from vapor well VP-4, sub-slab vapor probes VP-7, VP-8, VP-10, and VP-13 at 0.28 percent, 0.54 percent, 1.10 percent, 10 percent, and 4.70 percent, respectively (indicating that there was a leak of ambient

air into the sampling apparatus). However, given the low percentage of helium reported and low concentrations of hydrocarbon vapor detected (well below any commercial/industrial ESLs for shallow soil vapor), the minor detection of helium does not nullify results of the vapor well and sub-slab sampling.

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 with the exception of ethylbenzene detected at 470,000 $\mu g/m^3$ in vapor well VP-4.

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 SFRWQCB ESLs for shallow soil vapor under a commercial/industrial land use reported in Table E of SFRWQCB (2008), are typically applied as screening values. Comments received from the ACEH dated February 5, 2010, regarding the Soil Vapor Sampling Report (CRA, 2009) indicate that comparing the sub-slab soil vapor analytical results directly to the ESLs for shallow soil vapor 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 by the SFRWQCB (2008), both sub-slab and shallow soil gas data (i.e. < 1.5 m bgs) should be compared to the shallow soil vapor screening levels presented in Table E. For conservatism, the sub-slab soil vapor and shallow soil vapor analytical results are compared to both Table E standards for shallow soil vapor, 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 to result in the corresponding sub-slab soil vapor ESLs).

The applied soil vapor 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. As indicated in Table 1, the

concentration of TPHg measured in shallow soil vapor sample VP-3 exceeded the shallow soil vapor ESL and sub-slab ESL based on indoor air (multiplied by an attenuation factor of 100 to account for attenuation between sub-slab and indoor air). The concentration of TPHg, benzene, and ethylbenzene measured in shallow soil vapor sample VP-4 exceeded the shallow soil vapor ESLs and sub-slab ESLs based on indoor air (multiplied by an attenuation factor of 100 to account for attenuation between sub-slab and indoor air), as well, VP-4 concentrations for toluene and m,p-xylene were above the sub-slab ESLs based on indoor air (multiplied by an attenuation factor of 100 to account for attenuation between sub-slab and indoor air) but was less than the ESL for shallow soil vapor. The concentration of TPHg and benzene measured in shallow soil vapor sample VP-5 exceeded the shallow soil vapor ESL and sub-slab ESL based on indoor air (multiplied by an attenuation factor of 100 to account for attenuation between sub-slab and indoor air). As a result, TPHg, benzene, and ethylbenzene have been identified as COCs in soil vapor at the site during the most recent sampling event. Toluene and m,p-xylene were not identified as COCs since they were below ESL for soil vapor.

An evaluation of site-specific data suggests 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 all soil vapor probes, the analytes were not detected in sub-slab soil vapor at detection limits.

5.2 CONTAMINANTS OF CONCERN IN AIR

To assess the results of the laboratory analysis of the indoor and ambient air samples, the SFRWQCB ESLs for indoor air in a commercial/industrial land use reported in Table E of SFRWQCB (2008) 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 1, this included TPHg, benzene, and ethylbenzene which are consistent with the June/July 2010 sampling event.

As shown in Table 2, the indoor air and outdoor ambient air concentrations are fairly consistent and of the same order of magnitude. Note that except for the empty suite, 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 1, TPHg, benzene, and ethylbenzene were identified as COCs in indoor air at the site. The only COCs identified in ambient air at the site were TPHg and 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.

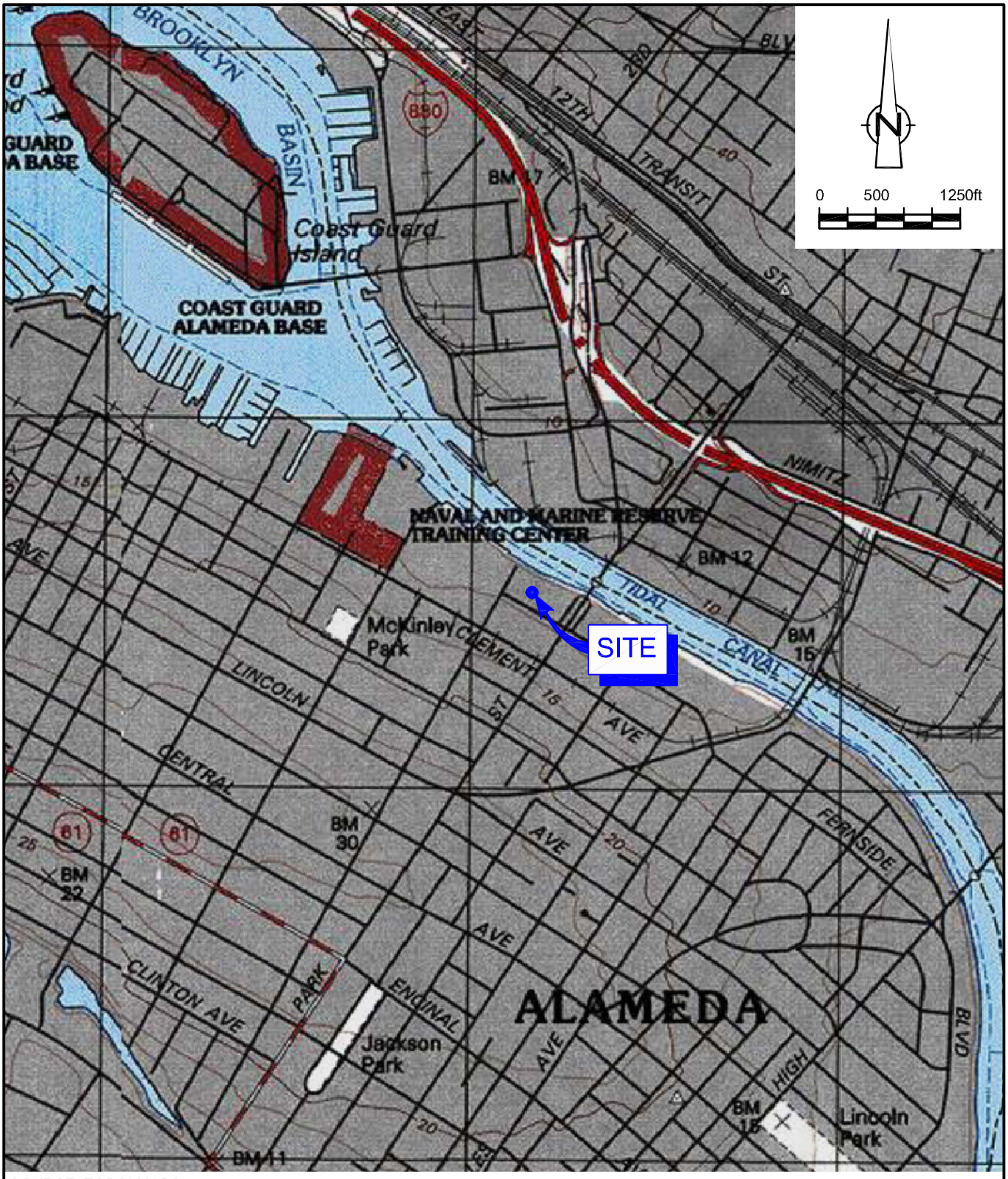
As indicated in Table 2, there were no COCs identified in sub-slab soil vapor or soil vapor at the site based on the ESLs for shallow soil vapor. The measured concentrations are therefore within the levels considered acceptable for human health based on the indoor air inhalation pathway. There were no exceedances of the indoor air ESL for the sub-slab vapor probes during this event.

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.

During the past two sub-slab sampling events that were conducted during the indoor air evaluation, none of the site COCs were detected above the indoor air ESLs in the sub-slab vapor probes. While COCs were detected in the indoor air samples, they were typically higher than those observed in the sub-slab vapor samples. Additionally, each of the suites where the indoor air samples were collected had numerous sources of VOCs present and the outdoor air sample also contained TPHg and benzene levels

above the indoor air ESLs. Based on this information, it does not appear that the elevated COC concentrations observed in vapor wells VP-1 through VP-6 present a vapor intrusion risk at the site. CRA recommends that further sub-slab vapor and indoor air sampling be discontinued and that the sub-slab probes be destroyed.

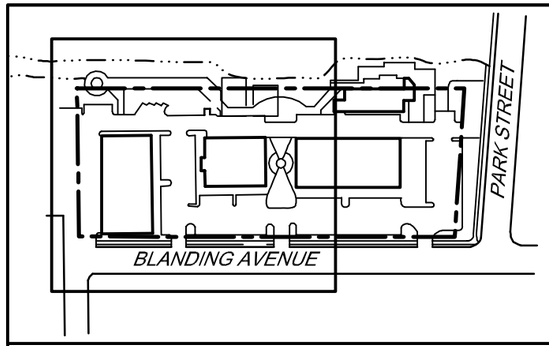
FIGURES



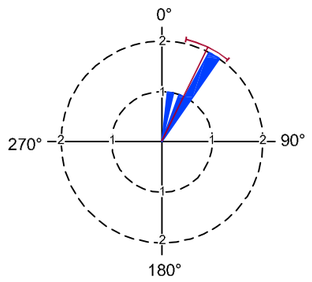
SOURCE: TOPO! MAPS.

figure 1

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



KEY PLAN
SCALE: 1"=250'



HISTORICAL GROUNDWATER FLOW DIRECTION
FROM 2Q 2009 TO 2Q 2010

LEGEND

- ▲ SUB-SLAB VAPOR POINT
- ● MONITORING WELL LOCATION
- △ VAPOR WELL
- ■ SOIL BORING (CRA, AUGUST, 2008)
- ◴ SOIL BORING (GEOMATRIX, FEBRUARY 1995)
- ⊕ SOIL BORING (RRM, OCTOBER 1998)
- ◍ SHALLOW GROUNDWATER SAMPLE (GEOMATRIX, APRIL 1995)
- ⊠ CANAL GRAB SURFACE WATER SAMPLE (RRM, OCTOBER 1998)
- ⊡ GRAB SOIL SAMPLE (CAMBRIA, JANUARY 2004)
- SITE FEATURES NOTED ON SANBORN FIRE INSURANCE MAP, DATED 1932
- ⚠ INDOOR AND OUTDOOR AIR SAMPLING LOCATION

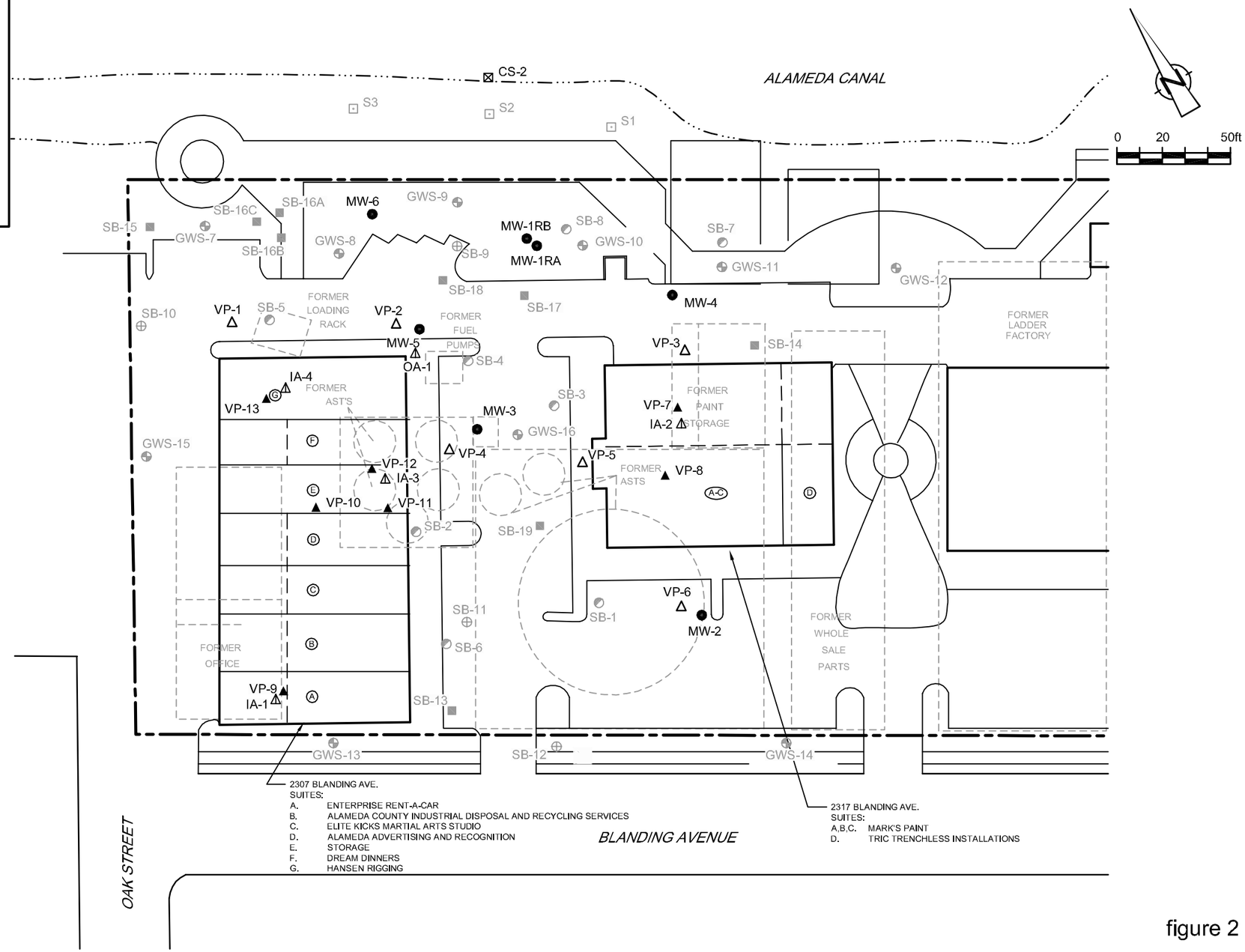


figure 2

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.

631916-2010(015)GN-WA002 SEP 15/2010

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 ($\mu g/m^3$)	TPHg ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	m,p-Xylene ($\mu g/m^3$)	Naphthalene ($\mu g/m^3$)	Chloromethane ($\mu g/m^3$)	Bromomethane ($\mu g/m^3$)	Hexane ($\mu g/m^3$)	Cyclohexane ($\mu g/m^3$)	Heptane ($\mu g/m^3$)	Cumene ($\mu g/m^3$)	Propyl-benzene ($\mu g/m^3$)	1,3,5-Trimethyl-benzene ($\mu g/m^3$)	4-Ethyl-toluene ($\mu g/m^3$)	O_2 (%)	N_2 (%)	CO_2 (%)	CH_4 (%)	He (%)
Soil Vapor Probes																						
VP-1	08/19/08	13,000	**1,300,000**	**300**	140	240	540	--	<160	<75	9,400	12,000	27,000	1,600	2,800	<95	660	17	--	4.00	--	<0.12
	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	--	5.70	--	<0.11
	06/29/10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/16/10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VP-2	08/19/08	24,000	**1,500,000**	140	<86	130	300	--	<190	<89	5,500	19,000	12,000	900	1,700	<110	370	8.9	--	11.00	--	<0.11
	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	--	8.00	--	<0.12
	06/29/10	--	<280	<4.3	<5	<5.9	<5.9	<28	--	--	--	--	--	--	--	--	--	16	79	5.10	0.0005	<0.14
	06/29/10[1]	--	820	<4.3	<5.0	<5.8	<5.8	<28	--	--	--	--	--	--	--	--	--	16	79	5.10	<0.00027	<0.13
	11/16/10[2]	--	<160	<3.8	<4.4	<5.1	<5.1	<25	--	--	--	--	--	--	--	--	--	18	79	3.10	<0.00024	<0.12
VP-3	08/19/08	**53,000E**	**4,100,000**	<700	<830	<960	1,200	--	<1,800	<850	38,000	47,000	77,000	4,000	5,700	1,200	<1100	1.7	--	11.00	--	<0.11
	10/22/09	--	**1,800,000**	<130	<150	<180	<180	--	<330	<160	6,200	6,200	1,800	<200	<200	<200	<200	1.4	--	8.10	--	<0.12
	06/29/10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/16/10	--	**340,000**	<38	<45	<52	<52	<250	--	--	--	--	--	--	--	--	--	4.1	87	8.10	0.66	<0.12
VP-4	08/19/08	**91,000S**	**220,000,000**	**1,100,000**	49,000	**570,000**	**70,000**	--	**3,900,000**	**70,000**	8,400,000	3,600,000	5,100,000	57,000	84,000	<19,000	37,000	0.55	--	16.00	--	<0.13
	10/22/09	--	**140,000,000**	**1,100,000**	<48,000	**650,000**	**71,000**	--	<100,000	<49,000	7,700,000	3,400,000	4,900,000	64,000	110,000	<62,000	<62,000	0.64	--	15.00	--	<0.13
	10/22/09[1]	--	**130,000,000**	**1,000,000**	<46,000	**540,000**	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	--	14.00	--	<0.12
	06/29/10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/16/10	--	**130,000,000**	**830,000**	30,000	**470,000**	44,000	<25,000	--	--	--	--	--	--	--	--	--	1.1	43	12.00	41	0.28
VP-5	08/19/08	**110,000S**	**29,000,000**	**28,000**	<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	--	15.00	--	<0.12
	10/22/09	--	**20,000,000**	**16,000**	<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	--	17.00	--	<0.13
	06/29/10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/16/10	--	**18,000,000**	**11,000**	1,600	<1600	1,600	<8000	--	--	--	--	--	--	--	--	--	1.5	82	16.00	0.030	<0.11
	11/16/10[1]	--	**18,000,000**	**12,000**	1,500	<1600	1,700	<8000	--	--	--	--	--	--	--	--	--	1.4	82	16.00	0.030	<0.11
VP-6	08/19/08	**96,000S**	**150,000,000**	**20,000**	<10,000	<12,000	<12,000	--	**1,200,000**	**25,000**	3,300,000	3,200,000	2,800,000	17,000	<14,000	<14,000	<14,000	3.9	--	9.80	--	<0.11
	08/19/08[1]	22,000	**840,000**	100	<86	130	290	--	<190	<89	4,400	9,800	12,000	890	1,700	<110	390	9.2	--	10.00	--	<0.11
	06/29/10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/16/10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

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 ($\mu g/m^3$)	TPHg ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	m,p-Xylene ($\mu g/m^3$)	Naphthalene ($\mu g/m^3$)	Chloromethane ($\mu g/m^3$)	Bromomethane ($\mu g/m^3$)	Hexane ($\mu g/m^3$)	Cyclohexane ($\mu g/m^3$)	Heptane ($\mu g/m^3$)	Cumene ($\mu g/m^3$)	Propyl-benzene ($\mu g/m^3$)	1,3,5-Trimethyl-benzene ($\mu g/m^3$)	4-Ethyl-toluene ($\mu g/m^3$)	O_2 (%)	N_2 (%)	CO_2 (%)	CH_4 (%)	He (%)
Soil Vapor Probes																						
Sub-Slab Soil Vapor Probes																						
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	--	0.60	--	<0.12
	06/29/10	--	<240	<3.7	<4.3	<5.0	<5.0	<24	--	--	--	--	--	--	--	--	--	21	78	0.30	<0.00023	0.21
	11/16/10	--	<260[3]	<4.1	<4.9	<5.6	<5.6	<27	--	--	--	--	--	--	--	--	--	20	79	0.50	<0.00026	0.54
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
	07/24/09[1]	--	8,200	7	48	24	100	--	<9.1	<4.3	<3.9	<3.8	<4.5	<5.4	14	33	79	21	--	0.56	--	<0.11
	06/29/10	--	310	24	71	5.9	47	<25	--	--	--	--	--	--	--	--	--	20	79	0.61	<0.00024	0.57
	06/29/10[1]	--	340	24	70	5.3	44	<25	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/16/10	--	<250[3]	<3.9	<4.6	<5.2	<5.2	<25	--	--	--	--	--	--	--	--	--	19	79	0.98	<0.00024	1.10
VP-9	07/24/09	--	8,800	<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	--	29.00
	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
	06/29/10	--	<230	<3.6	<4.3	<4.9	<5.0	<24	--	--	--	--	--	--	--	--	--	19	80	1.10	<0.00023	<0.11
	11/16/10	--	<250[3]	<3.9	<4.6	<5.3	<5.3	<26	--	--	--	--	--	--	--	--	--	19	80	1.20	<0.00024	<0.12
VP-10	07/24/09	--	2,500B	<3.7	7	52	130	--	<9.6	<4.5	<4.1	<4.0	12	<5.7	12	21	59	17	--	0.48	--	16.00
	10/22/09	--	2,100	16	6.1	12	<5.2	--	<10	<4.7	100	45	91	<5.9	<5.9	<5.9	<5.9	20	--	0.29	--	2.40
	06/29/10	--	<250	<3.8	<4.5	<5.2	<5.2	<25	--	--	--	--	--	--	--	--	--	19	73	0.43	<0.00024	7.30
	11/16/10	--	260[3]	<4.0	6.3	<5.4	<5.4	<26	--	--	--	--	--	--	--	--	--	18	72	0.42	<0.00025	10.00
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	--	22.00
	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	--	4.00	--	<0.12
	06/29/10	--	<240	<3.8	<4.5	<5.1	<5.1	<25	--	--	--	--	--	--	--	--	--	18	80	1.90	<0.00024	<0.12
	11/16/10	--	<260	<4.0	<4.7	<5.4	<5.4	<26	--	--	--	--	--	--	--	--	--	18	80	1.70	<0.00025	<0.12
	11/16/10[1]	--	<260[3]	<4.0	<4.7	<5.4	<5.4	<26	--	--	--	--	--	--	--	--	--	18	80	1.70	<0.00025	<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
	07/24/09[1]	--	1,600B	<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
	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	--	1.40	--	<0.12
	06/29/10	--	<220	<3.5	<4.1	<4.8	<4.8	<23	--	--	--	--	--	--	--	--	--	20	80	0.45	<0.00022	<0.11
	11/16/10	--	<240[3]	<3.8	<4.5	<5.2	<5.2	<25	--	--	--	--	--	--	--	--	--	20	80	0.50	<0.00024	<0.12
VP-13	07/24/09	--	8,600B	<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	--	26.00
	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	--	1.30	--	<0.12
	06/29/10	--	<240	<3.8	<4.4	<5.1	<5.1	<25	--	--	--	--	--	--	--	--	--	16	82	2.00	<0.00024	<0.12
	11/16/10	--	450[3]	<3.9	<4.6	<5.3	<5.3	<26	--	--	--	--	--	--	--	--	--	15	78	2.60	<0.00024	4.70
SFRWQCB ESLs [a]		***29,000***	***29,000***	***280***	***180,000***	***3,300***	***58000[4]***	***240***	***53,000***	***2,900***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***
SFRWQCB ESLs [b]		***1,400***	***1,400***	***14***	***8,800***	***160***	***2,900[4]***	***12***	***2,600***	***150***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***	***NE***

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 ($\mu g/m^3$)	TPHg ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	m,p-Xylene ($\mu g/m^3$)	Naphthalene ($\mu g/m^3$)	Chloromethane ($\mu g/m^3$)	Bromomethane ($\mu g/m^3$)	Hexane ($\mu g/m^3$)	Cyclohexane ($\mu g/m^3$)	Heptane ($\mu g/m^3$)	Cumene ($\mu g/m^3$)	Propyl-benzene ($\mu g/m^3$)	1,3,5-Trimethyl-benzene ($\mu g/m^3$)	4-Ethyl-toluene ($\mu g/m^3$)	O_2 (%)	N_2 (%)	CO_2 (%)	CH_4 (%)	He (%)

Soil Vapor Probes

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_2), nitrogen (N_2), carbon dioxide (CO_2), methane (CH_4) and helium (He) by ASTM Method D-1946
NE = Not established
NS = Not sampled due to the presence of water in vapor well
B = Compound present in laboratory blank greater than reporting limit, background subtraction not per
[a] = Environmental Screening Levels for shallow soil gas associated with potential vapor intrusion concerns at commercial/industrial sites (Table E, SFRWQCB, 2008).
[b] = 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).
[1] = Field duplicate sample
[2] = TPHg analysis by TO-15 APH
[3] = Estimated value due to laboratory error
[4] = ESL is for total xylenes
< = Not detected at or above stated laboratory reporting limit
-- = Not analyzed

TABLE 2

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

Vapor Well	*Sample Date*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*m,p-Xylene*	*Naphthalene*	*O_2*	*N_2*	*CO_2*	*CH_4*	*He*
		($\mu g/m^3$)										
IA-1	06/29/10	**290**	**0.52**	4.50	0.27	0.97	<4.0	--	--	--	--	--
	11/16/10[2]	**220**	**1.70**	7.70	0.61	2.20	<4.1	22	78	0.042	0.00021	<0.078
IA-2	06/29/10	**490**	**0.57**	5.20	**2.30**	8.3	<4.1	--	--	--	--	--
	11/16/10[2]	**390**	**0.97**	15.00	**1.80**	5.7	<4.4	22	78	0.048	0.00021	<0.084
IA-3	07/09/10	**110**	**0.39**	1.80	0.27	0.92	<4.3	22	78	0.040	0.00019	<0.082
	07/9/10[3]	**100**	**0.41**	2.00	0.26	0.91	<4.3	--	--	--	--	--
	11/16/10[2]	**530**	**4.20**	35.00	**6.00**	23.00	<4.2	22	78	0.046	0.00021	<0.081
IA-4	06/29/10	**490**	**1.80**	16.00	**2.10**	7.9	<4.0	--	--	--	--	--
	11/16/10[2]	**200**	**0.77**	4.40	0.74	2.5	<4.4	22	78	0.041	0.00020	<0.084
OA-1	06/29/10	<160	**0.24**	0.78	0.15	0.48	<4.0	--	--	--	--	--
	11/16/10[2]	**110**	**0.61**	2.10	0.38	1.20	<4.1	22	78	0.043	0.00021	<0.078
SFRWQCB ESLs		***14***	***0.14***	***88.00***	***1.60***	***29[1]***	***0.12***	***NE***	***NE***	***NE***	***NE***	***NE***

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_2), nitrogen (N_2), carbon dioxide (CO_2), methane (CH_4) 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).
[1] = ESL is for total xylenes.
[2] = Samples analyzed by Modified TO-15 APH
[3] = Field duplicate sample
NE = Not established.
< = Not detected at or above stated laboratory reporting limit.
-- = Not analyzed/not applicable.

TABLE 3

COMPARISON OF SOIL VAPOR AND AIR SAMPLING ANALYTICAL DATA
FORMER SIGNAL OIL BULK PLANT
(CHEVRON FACILITY 20-6127)
2301-2311 BLANDING AVENUE
ALAMEDA, CALIFORNIA

Enterprise Rent-A-Car Suite			Indoor Air		Sub-Slab Soil Gas: Predicted Based on Indoor Air [1]	Sub-Slab Soil Gas: Predicted Based on Indoor Air [2]	Sub-Slab Soil Gas: Actual	
	Units	Vapor Well Sample Date	IA-1 6/29/2010	IA-1 11/16/2010			VP-9 6/29/2010	VP-9 11/16/2010
TPHg	(µg/m^3)		290	220	29,000	22,000	<230	<250[3]
Benzene	(µg/m^3)		0.52	1.7	52	170	<3.6	<3.9
Toluene	(µg/m^3)		4.5	7.7	450	770	<4.3	<4.6
Ethylbenzene	(µg/m^3)		0.27	0.61	27	61	<4.9	<5.3
m,p-Xylene	(µg/m^3)		0.97	2.2	97	220	<5.0	<5.3
Naphthalene	(µg/m^3)		<4.0	<4.1	<400	<410	<24	<26

Mark's Paints Suite			Indoor Air		Sub-Slab Soil Gas: Predicted Based on Indoor Air [1]	Sub-Slab Soil Gas: Predicted Based on Indoor Air [2]	Sub-Slab Soil Gas: Actual			
	Units	Vapor Well Sample Date	IA-2 6/29/2010	IA-2 11/16/2010			VP-7 6/29/2010	VP-8 6/29/2010	VP-7 11/16/2010	VP-8 11/16/2010
TPHg	(µg/m^3)		490	390	49,000	39,000	<240	310/340	<260[3]	<250[3]
Benzene	(µg/m^3)		0.57	0.97	57	97	<3.7	24/24	<4.1	<3.9
Toluene	(µg/m^3)		5.2	15	520	1,500	<4.3	71/70	<4.9	<4.6
Ethylbenzene	(µg/m^3)		2.3	1.8	230	180	<5.0	5.9/5.3	<5.6	<5.2
m,p-Xylene	(µg/m^3)		8.3	5.7	830	570	<5.0	47/44	<5.6	<5.2
Naphthalene	(µg/m^3)		<4.1	<4.4	<410	<440	<24	<25/<25	<27	<25

Empty Suite			Indoor Air		Sub-Slab Soil Gas: Predicted Based on Indoor Air [1]	Sub-Slab Soil Gas: Predicted Based on Indoor Air [2]	Sub-Slab Soil Gas: Actual					
	Units	Vapor Well Sample Date	IA-3 7/9/2010	IA-3 11/16/2010			VP-10 6/29/2010	VP-11 6/29/2010	VP-12 6/29/2010	VP-10 11/16/2010	VP-11 11/16/2010	VP-12 11/16/2010
TPHg	(µg/m^3)		110/100	530	11,000/10,000	53,000	<250	<240	<220	260[3]	<260[3]	<240[3]
Benzene	(µg/m^3)		0.39/0.41	4.2	39/41	420	<3.8	<3.8	<3.5	<4.0	<4.0/<4.0	<3.8
Toluene	(µg/m^3)		1.8/2	35	180/200	3,500	<4.5	<4.5	<4.1	6.3	<4.7/<4.7	<4.5
Ethylbenzene	(µg/m^3)		0.27/0.26	6	27/26	600	<5.2	<5.1	<4.8	<5.4	<5.4/<5.4	<5.2
m,p-Xylene	(µg/m^3)		0.92/0.91	23	92/91	2,300	<5.2	<5.1	<4.8	<5.4	<5.4/<5.4	<5.2
Naphthalene	(µg/m^3)		<4.3/<4.3	<4.2	<430/<430	<420	<25	<25	<23	<26	<26/<26	<25

TABLE 3

COMPARISON OF SOIL VAPOR AND AIR SAMPLING ANALYTICAL DATA
FORMER SIGNAL OIL BULK PLANT
(CHEVRON FACILITY 20-6127)
2301-2311 BLANDING AVENUE
ALAMEDA, CALIFORNIA

Hansen Rigging Suite			*Indoor Air*		*Sub-Slab Soil Gas*			
					Predicted	*Predicted*	*Actual*	
		Vapor Well	*IA-4*	*IA-4*	*Based on Indoor*	*Based on Indoor*	*VP-13*	*VP-13*
	Units	*ample Date*	*6/29/2010*	*11/16/2010*	*Air* [1]	*Air* [2]	*6/29/2010*	*6/29/2010*
TPHg	(µg/m^3)		490	200	49,000	20,000	<240	450[3]
Benzene	(µg/m^3)		1.8	0.77	180	77	<3.8	<3.9
Toluene	(µg/m^3)		16	4.4	1,600	440	<4.4	<4.6
Ethylbenzene	(µg/m^3)		2.1	0.74	210	74	<5.1	<5.3
m,p-Xylene	(µg/m^3)		7.9	2.5	790	250	<5.1	<5.3
Naphthalene	(µg/m^3)		<4.0	<4.4	<400	<440	<25	<26

Notes:

TPHg = Total petroleum hydrocarbons as gasoline

µg/m^3 = Micrograms per cubic meter

< = Not detected at or above stated laboratory reporting limit.

[1] = Predicted sub-slab soil gas concentrations calculated by multiplying the measured June 2010 indoor air concentrations by an attenuation factor of 100, as indicated by Alameda County Health Care Services.

[2] = Predicted sub-slab soil gas concentrations calculated by multiplying the measured November 2010 indoor air concentrations by an attenuation factor of 100, as indicated by Alameda County Health Care Services.

APPENDIX A

REGULATORY CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

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April 19, 2010

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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

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

Sincerely,

Digitally signed by Jerry Wickham
DN: cn=Jerry Wickham, o, ou, email=jerry.wickham@acgov.org, c=US
Date: 2010.04.20 17:22:04 -07'00'

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@craworld.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*)
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.

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.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**ISSUE DATE:** July 5, 2005
	REVISION DATE: March 27, 2009
	PREVIOUS REVISIONS: December 16, 2005, October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** 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
         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 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 (µg/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 µg/L (GWS-9). Benzene was detected in the samples collected from borings GWS-8 through GWS-10 and GWS-16 at concentrations of 36 µg/L, 6,200 µg/L, and 880 µg/L, respectively. Toluene, ethylbenzene, and xylenes (up to 1,200 µg/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 (TTLC) 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^3). 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.

2010 Well Installation

In August 2010, CRA replaced well MW-1 with a more discretely screened well, MW-1RB, and installed wells MW-1RA and MW-6 to depths between 13 to 20 fbg to further evaluate shallow groundwater near Alameda Canal. Well MW-1RA and MW-1RB are located in the vicinity of former well MW-1 and MW-6 is located downgradient of well MW-5. Soil analytical data indicated that minor hydrocarbon impact to soil remains in the vicinity of MW-1 and generally decreases with depth. The highest TPHd and TPHg concentrations detected were from well boring MW-1RA at 10 fbg at a concentration of 260 mg/kg and at 13.5 fbg at 490 mg/kg, respectively. Only trace concentrations of hydrocarbons were detected in well boring MW-6. No grab-groundwater were collected from the well boring as the wells will be incorporated into the site's monitoring and sampling program. Additional details of this investigation are presented in CRA's *Well Installation Report*, dated September 29, 2010.

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 11/16/2010

Preparer's affiliation CRA FOR CHEVRON EMC

Telephone number 510-420-0700

1. **OCCUPANT**

Name MARK'S PAINTS

Address 2317 BLANDING AVE

SUITES A-C

City ALAMEDA

Home telephone number 510-522-0717

Office telephone number –

2. **OWNER OR LANDLORD**

Name JULIE BALL, PETER BECK, JOTSY 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	(Warehouse)
Mobile Home	Strip Mall
Apartment Building:	Number of ~~Units~~ RMS 8
Other	

Building Age _____ Number of stories ONE, VAULTED

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

Is the building insulated? (yes) / no How sealed is the building? MODERATE, BACK DOOR 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):

(Hot Air Circulation)	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 OFTEN USED
4. Is there air-conditioning? yes / (no) ~~Central Air or Window Units?~~

Specify the location N/A

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 BACK OFFICES
NO COLD AIR RETURN

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

8. Temperature settings inside during sampling. Note day and night temperatures.
   a. Daytime temperature(s) NONE
   b. Nighttime temperature(s) NONE
   (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 PAINT MIXING- ROOM OPEN 90% TO OUTDOOR AIR, NO OTHER OPEN DOORS/WINDOWS

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? —

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.
UNKNOWN

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 Ungrouted _____

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, CALIFORNIA

Field Investigator IAN HULL Date 11/16/2010

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 IAN HULL Date prepared 11/16/2010

Preparer's affiliation CRA FOR CHEVRON EMC

Telephone number 510-420-0700

1. **OCCUPANT**

Name ENTERPRISE CAR RENTAL

Address 2307 BLANDING AVE

SUITE A

City ALAMEDA, CA

Home telephone number —

Office telephone number (510) 523-7457

2. **OWNER OR LANDLORD**

Name JULIE BELL, PETER AND BTSY 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	Warehouse
Mobile Home	Strip Mall
Apartment Building:	Number of Units
Other	

Building Age UNKNOWN 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.) N/A

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

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, painted, (covered) with CONCRETE BACK ROOM / TILE / CARPET FRONT ROOMS
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):

(Hot Air Circulation)	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 BACK 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.
UNKNOWN, ALL DUCTS IN INACCESSIBLE LOCATIONS

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° F
   b. Nighttime temperature(s) ~65° 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.
FRONT ROOMS (10%), 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.
UNKNOWN

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 Ungrouted _____

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 CAR RENTAL

Address 2307 BLANDING AVE, SUITE A

City ALAMEDA, CA

Field Investigator IAN HULL Date 11/16/2010

Product Description (commercial name, dispenser type, container size, manufacturer, etc.)	Volatile Ingredients in the Product	Field Instrument Reading
GASOLINE CANS (PLASTIC, 2)	GAS	
ASSORTED CAR CLEANING PRODUCTS		
° GLADE		
° RED STAR DETERGENT	SODIUM HYDROXIDE	
° BUG AWAY		
° WASH + WAX		
° TERMINATOR		
° TUFF STUFF		
° GLASS CLEANER		

Comments:
CLEAN CARS IN BACK ROOM OFTEN

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 11/16/2010

Preparer's affiliation CRA FOR CHEVRON EMC

Telephone number 510 - 420 - 0700

1. **OCCUPANT**

Name EMPTY (SUITE E)

Address 2307 BLANDING AVE

SUITE E

City ALAMEDA, CA

Home telephone number —

Office telephone number —

2. **OWNER OR LANDLORD**

Name JULIE BALL, PETER AND TOTSY 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	(Warehouse)
Mobile Home	Strip Mall
Apartment Building:	Number of ~~Units~~ RMS 3 W/ BATHROOM
Other	

Building Age _____ Number of stories ONE VAULTED

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.) —

General description of building construction materials STEEL OR IRON W/ SHEETROCK

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.

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

1. The type of heating system(s):

(Hot Air Circulation)	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.
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) 65 °F
   b. Nighttime temperature(s) 65 °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 100% 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.
UNKNOWN

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 Ungrouted _____

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 (GLEN HANSEN TEMP BOAT, MOTORCYCLE STORAGE)

Address 2807 BLANDING AVE, SUITE E

City ALAMEDA, CA

Field Investigator IAN HULL Date 11/16/2010

Product Description (commercial name, dispenser type, container size, manufacturer, etc.)	Volatile Ingredients in the Product	Field Instrument Reading
○ GASOLINE (IN ENGINES, TANKS	GASOLINE	
OF MOTORCYCLES)		
○ OTHER ENGINE FLUIDS IN		
MOTORCYCLES		

Comments:
TWO MOTORCYCLES STORED, TRAILER W/ SAILING EQUIP.
TWO SAIL BOATS STORED IN BACK ROOM OF SUITE

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 11/16/2010

Preparer's affiliation CRA FOR CHEVRON EMC

Telephone number 510-420-0700

1. **OCCUPANT**

Name HANSEN RIGGING

Address 2307 BLANDING AVE

SUITE G

City ALAMEDA, CA

Home telephone number 510-521-7027

Office telephone number

2. **OWNER OR LANDLORD**

Name JULIE BALL, PETER AND TOTSY 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	(Warehouse)
Mobile Home	Strip Mall
Apartment Building:	Number of Units
Other	

Building Age UNKN 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.) 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):

(Hot Air Circulation)	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 AREA
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.
UNKNOW, 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) ~65°F
   b. Nighttime temperature(s) ~65°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.
~20%, IF OPENED, FRONT DOORS AND REAR ROLL-UP DOOR ARE ONLY OPENINGS 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.
UNKNOWN

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 N/A

Well Depth _____

Depth to Bedrock _____

Feet of Casing _____

Grouted or Ungrouted N/A

Type of Storage Tank _____

Size of Storage Tank _____

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 HANSEN RIGGING (SUITE G)

Address 2307 BLANDING AVE, SUITE G

City ALAMEDA

Field Investigator IAN HULL Date 11/16/2010

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

Comments:

APPENDIX D

LABORATORY ANALYTICAL REPORTS

Air Toxics LTD.
Laboratory Services Since 1989

12/7/2010
Mr. Ian Hull
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: Chevron 20-6127
Project #: 631916
Workorder #: 1011486A

Dear Mr. Ian Hull

The following report includes the data for the above referenced project for sample(s) received on 11/19/2010 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 #: 1011486A

Work Order Summary

CLIENT:	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Accounts Payable Conestoga-Rovers Associates (CRA) 2055 Niagara Falls Blvd. Suite Three Niagara Falls, NY 14304
PHONE:	510-420-0700	**P.O. #**	40-4031644
FAX:	510-420-9170	**PROJECT #**	631916 Chevron 20-6127
DATE RECEIVED:	11/19/2010	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	12/06/2010		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	IA-1	Modified TO-15	4.4 "Hg	5 psi
01B	IA-1	Modified TO-15	4.4 "Hg	5 psi
02A	IA-2	Modified TO-15	6.0 "Hg	5 psi
02B	IA-2	Modified TO-15	6.0 "Hg	5 psi
03A	IA-3	Modified TO-15	5.2 "Hg	5 psi
03B	IA-3	Modified TO-15	5.2 "Hg	5 psi
04A	IA-4	Modified TO-15	6.0 "Hg	5 psi
04B	IA-4	Modified TO-15	6.0 "Hg	5 psi
05A	OA-1	Modified TO-15	4.0 "Hg	5 psi
05B	OA-1	Modified TO-15	4.0 "Hg	5 psi
06A	Lab Blank	Modified TO-15	NA	NA
06B	Lab Blank	Modified TO-15	NA	NA
07A	CCV	Modified TO-15	NA	NA
07B	CCV	Modified TO-15	NA	NA
08A	LCS	Modified TO-15	NA	NA
08AA	LCSD	Modified TO-15	NA	NA
08B	LCS	Modified TO-15	NA	NA

Continued on next page

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 1011486A

Work Order Summary

CLIENT:	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Accounts Payable Conestoga-Rovers Associates (CRA) 2055 Niagara Falls Blvd. Suite Three Niagara Falls, NY 14304
PHONE:	510-420-0700	**P.O. #**	40-4031644
FAX:	510-420-9170	**PROJECT #**	631916 Chevron 20-6127
DATE RECEIVED:	11/19/2010	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	12/06/2010		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
08BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 12/06/10

Laboratory Director

Certfication 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: 06/30/11
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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# 1011486A

Five 6 Liter Summa Canister (SIM Certified) samples were received on November 19, 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.

Requirement	***TO-15***	***ATL Modifications***
ICAL %RSD acceptance criteria	</=30% RSD with 2 compounds allowed out to < 40% RSD	For Full Scan: 30% RSD with 4 compounds allowed out to < 40% RSD For SIM: Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	For Full Scan: </= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers For SIM: Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=40%.; 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 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.

A single point calibration for TPH referenced to Gasoline was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

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

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: IA-1

Lab ID#: 1011486A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	16	54	64	220

Client Sample ID: IA-1

Lab ID#: 1011486A-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.078	0.52	0.25	1.7
Toluene	0.031	2.0	0.12	7.7
Ethyl Benzene	0.031	0.14	0.14	0.61
m,p-Xylene	0.063	0.50	0.27	2.2
o-Xylene	0.031	0.17	0.14	0.74

Client Sample ID: IA-2

Lab ID#: 1011486A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	17	96	69	390

Client Sample ID: IA-2

Lab ID#: 1011486A-02B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.084	0.30	0.27	0.97
Toluene	0.034	3.9	0.13	15
Ethyl Benzene	0.034	0.42	0.14	1.8
m,p-Xylene	0.067	1.3	0.29	5.7
o-Xylene	0.034	0.45	0.14	2.0

Client Sample ID: IA-3

Lab ID#: 1011486A-03A

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: IA-3

Lab ID#: 1011486A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	16	130	66	530

Client Sample ID: IA-3

Lab ID#: 1011486A-03B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.081	1.3	0.26	4.2
Toluene	0.032	9.4	0.12	35
Ethyl Benzene	0.032	1.4	0.14	6.0
m,p-Xylene	0.065	5.2	0.28	23
o-Xylene	0.032	1.8	0.14	7.6

Client Sample ID: IA-4

Lab ID#: 1011486A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	17	48	69	200

Client Sample ID: IA-4

Lab ID#: 1011486A-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.084	0.24	0.27	0.77
Toluene	0.034	1.2	0.13	4.4
Ethyl Benzene	0.034	0.17	0.14	0.74
m,p-Xylene	0.067	0.57	0.29	2.5
o-Xylene	0.034	0.19	0.14	0.84

Client Sample ID: OA-1

Lab ID#: 1011486A-05A

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: OA-1

Lab ID#: 1011486A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	16	26	63	110

Client Sample ID: OA-1

Lab ID#: 1011486A-05B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.078	0.19	0.25	0.61
Toluene	0.031	0.55	0.12	2.1
Ethyl Benzene	0.031	0.088	0.13	0.38
m,p-Xylene	0.062	0.28	0.27	1.2
o-Xylene	0.031	0.11	0.13	0.49

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Client Sample ID: IA-1

Lab ID#: 1011486A-01A

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

File Name:	**a113012**	**Date of Collection: 11/16/10 5:52:00 PM**	
Dil. Factor:	**1.57**	**Date of Analysis: 11/30/10 05:10 PM**	

Compound	**Rpt. Limit (ppbv)**	**Amount (ppbv)**	**Rpt. Limit (ug/m3)**	**Amount (ug/m3)**
Naphthalene	0.78	Not Detected	4.1	Not Detected
TPH ref. to Gasoline (MW=100)	16	54	64	220

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	88	70-130

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Client Sample ID: IA-1

Lab ID#: 1011486A-01B

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

File Name:	**a113012sim**	**Date of Collection: 11/16/10 5:52:00 PM**	
Dil. Factor:	**1.57**	**Date of Analysis: 11/30/10 05:10 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.078	0.52	0.25	1.7
Toluene	0.031	2.0	0.12	7.7
Ethyl Benzene	0.031	0.14	0.14	0.61
m,p-Xylene	0.063	0.50	0.27	2.2
o-Xylene	0.031	0.17	0.14	0.74

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	89	70-130

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Client Sample ID: IA-2

Lab ID#: 1011486A-02A

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

File Name:	**a113013**	**Date of Collection: 11/16/10 4:55:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 11/30/10 06:05 PM**	

Compound	**Rpt. Limit (ppbv)**	**Amount (ppbv)**	**Rpt. Limit (ug/m3)**	**Amount (ug/m3)**
Naphthalene	0.84	Not Detected	4.4	Not Detected
TPH ref. to Gasoline (MW=100)	17	96	69	390

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	90	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA-2

Lab ID#: 1011486A-02B

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

File Name:	**a113013sim**	**Date of Collection: 11/16/10 4:55:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 11/30/10 06:05 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.084	0.30	0.27	0.97
Toluene	0.034	3.9	0.13	15
Ethyl Benzene	0.034	0.42	0.14	1.8
m,p-Xylene	0.067	1.3	0.29	5.7
o-Xylene	0.034	0.45	0.14	2.0

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	91	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA-3

Lab ID#: 1011486A-03A

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

File Name:	**a113014**	**Date of Collection: 11/16/10 5:18:00 PM**	
Dil. Factor:	**1.62**	**Date of Analysis: 11/30/10 06:56 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Naphthalene	0.81	Not Detected	4.2	Not Detected
TPH ref. to Gasoline (MW=100)	16	130	66	530

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	91	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA-3

Lab ID#: 1011486A-03B

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

File Name:	**a113014sim**	**Date of Collection: 11/16/10 5:18:00 PM**	
Dil. Factor:	**1.62**	**Date of Analysis: 11/30/10 06:56 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.081	1.3	0.26	4.2
Toluene	0.032	9.4	0.12	35
Ethyl Benzene	0.032	1.4	0.14	6.0
m,p-Xylene	0.065	5.2	0.28	23
o-Xylene	0.032	1.8	0.14	7.6

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	92	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA-4

Lab ID#: 1011486A-04A

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

File Name:	**a113015**	**Date of Collection: 11/16/10 5:18:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 11/30/10 07:36 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Naphthalene	0.84	Not Detected	4.4	Not Detected
TPH ref. to Gasoline (MW=100)	17	48	69	200

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	90	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA-4

Lab ID#: 1011486A-04B

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

File Name:	**a113015sim**	**Date of Collection: 11/16/10 5:18:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 11/30/10 07:36 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.084	0.24	0.27	0.77
Toluene	0.034	1.2	0.13	4.4
Ethyl Benzene	0.034	0.17	0.14	0.74
m,p-Xylene	0.067	0.57	0.29	2.5
o-Xylene	0.034	0.19	0.14	0.84

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	90	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: OA-1

Lab ID#: 1011486A-05A

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

File Name:	**a113016**	**Date of Collection: 11/16/10 6:12:00 PM**	
Dil. Factor:	**1.55**	**Date of Analysis: 11/30/10 08:26 PM**	

Compound	**Rpt. Limit (ppbv)**	**Amount (ppbv)**	**Rpt. Limit (ug/m3)**	**Amount (ug/m3)**
Naphthalene	0.78	Not Detected	4.1	Not Detected
TPH ref. to Gasoline (MW=100)	16	26	63	110

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	92	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: OA-1

Lab ID#: 1011486A-05B

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

File Name:	**a113016sim**	**Date of Collection: 11/16/10 6:12:00 PM**	
Dil. Factor:	**1.55**	**Date of Analysis: 11/30/10 08:26 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.078	0.19	0.25	0.61
Toluene	0.031	0.55	0.12	2.1
Ethyl Benzene	0.031	0.088	0.13	0.38
m,p-Xylene	0.062	0.28	0.27	1.2
o-Xylene	0.031	0.11	0.13	0.49

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	93	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 1011486A-06A

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

File Name:	**a113006**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/30/10 11:51 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	91	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 1011486A-06B

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

File Name:	**a113006sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/30/10 11:51 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	93	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 1011486A-07A

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

File Name:	**a113002**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/30/10 08:36 AM**	

Compound	**%Recovery**
Naphthalene	68
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	94	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 1011486A-07B

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

File Name:	**a113002sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/30/10 08:36 AM**	

Compound	%Recovery
Benzene	94
Toluene	95
Ethyl Benzene	97
m,p-Xylene	92
o-Xylene	96

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 1011486A-08A

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

File Name:	**a113003**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/30/10 09:31 AM**	

Compound	**%Recovery**
Naphthalene	74
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	97	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCSD

Lab ID#: 1011486A-08AA

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

File Name:	**a113004**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/30/10 10:10 AM**	

Compound	**%Recovery**
Naphthalene	81
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	97	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 1011486A-08B

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

File Name:	**a113003sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/30/10 09:31 AM**	

Compound	%Recovery
Benzene	96
Toluene	98
Ethyl Benzene	99
m,p-Xylene	94
o-Xylene	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	98	70-130

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Laboratory Services Since 1989

Client Sample ID: LCSD

Lab ID#: 1011486A-08BB

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

File Name:	**a113004sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/30/10 10:10 AM**	

Compound	%Recovery
Benzene	96
Toluene	98
Ethyl Benzene	100
m,p-Xylene	96
o-Xylene	101

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	98	70-130

@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

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Project Manager BRIAN SILVA

Collected by: (Print and Sign) IAN HULL

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Phone 916-889-8909 Fax 916-889-8999

Project Info:
P.O. # 40-403164H
Project # 631916
Project Name CHEVRON 20-6127

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 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)
01AB	IA-1	25254	11/16/2010	17:52	FOR ALL ON PAGE:	<-30	-6.5		
02AB	IA-2	33879		16:55	*TO-15 (SIM):	-29.5	-7.0		
03AB	IA-3	35259		17:18	TPH$_G$, BTEX, NAPH-	-30	-7.0		
04AB	IA-4	5745		17:18	THALENE	<-30	-8.0		
05AB	OA-1	34251		18:12	*ASTM D-1946:	<-30	-6.0		
					O_2, N_2, CO_2, CH_4,				
					HELIUM				

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
	11/17/2010 0800	FEDEX	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
		Ronan Whittaker ATC	11/19/10 915
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fedex		N/A	Good	Yes No (None)	1011486

Form 1293 rev.11

A

Air Toxics LTD.

MEMO

3/1/11

To: Brian Silva/Conestoga-Rovers & Assoc.

From: Kyle Vagadori/Project Manager/Air Toxics Ltd.
CC: Phua Penney/Laboratory Director

Dear Mr. Silva,

This letter is an addendum to data we are reissuing for the Chevron 20-6127 (# 631916) project. Air Toxics work order 1011486B is being reissued to include data for Total Petroleum Hydrocarbon referenced to gasoline (TPHg). TPHg data was requested per the chain of custody, however, the TPHg was not analyzed. We have started a lab corrective action investigation to address the system failure to prevent a reoccurrence.

We recognize that this error failed to meet our quality standards of excellence and in doing so impacted your ability to successfully evaluate your site. We want to take this opportunity to express how important it is for us to maintain our quality systems and therefore have initiated an internal investigation. The Quality Assurance Department will be instituting changes as a result of the investigation that will guard against future occurrences.

We appreciate the opportunity to continue supporting your media and analytical needs for this and future project. If you have any further questions or concerns please contact me directly at (916) 985-1000 x 1039.

Sincerely,

Kyle Vagadori
Project Manager
Air Toxics Ltd.

AIR TOXICS LTD.
SINCE 1989

Air Toxics LTD.
Laboratory Services Since 1989

3/1/2011
Mr. Ian Hull
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: Chevron 20-6127
Project #: 631916
Workorder #: 1011486BR1

Dear Mr. Ian Hull

The following report includes the data for the above referenced project for sample(s) received on 11/19/2010 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 APH 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 #: 1011486BR1

Work Order Summary

CLIENT: Mr. Ian Hull
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville, CA 94608

PHONE: 510-420-0700

FAX: 510-420-9170

DATE RECEIVED: 11/19/2010

DATE COMPLETED: 12/06/2010

DATE REISSUED: 02/28/2011

BILL TO: Accounts Payable
Conestoga-Rovers Associates (CRA)
2055 Niagara Falls Blvd.
Suite Three
Niagara Falls, NY 14304

P.O. # 40-4031644

PROJECT # 631916 Chevron 20-6127

CONTACT: Kyle Vagadori

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
06A	VP-2	Modified TO-15 APH	4.2 "Hg	15 psi
07A	VP-3	Modified TO-15 APH	4.6 "Hg	15 psi
08A	VP-4	Modified TO-15 APH	4.6 "Hg	15 psi
09A	VP-5	Modified TO-15 APH	3.4 "Hg	15 psi
10A	VP-5 DUP	Modified TO-15 APH	3.4 "Hg	15 psi
11A	VP-7	Modified TO-15 APH	6.6 "Hg	15 psi
12A	VP-8	Modified TO-15 APH	5.0 "Hg	15 psi
13A	VP-9	Modified TO-15 APH	5.2 "Hg	15 psi
14A	VP-10	Modified TO-15 APH	5.8 "Hg	15 psi
15A	VP-11	Modified TO-15 APH	5.8 "Hg	15 psi
16A	VP-11 DUP	Modified TO-15 APH	5.8 "Hg	15 psi
17A	VP-12	Modified TO-15 APH	4.6 "Hg	15 psi
18A	VP-13	Modified TO-15 APH	5.2 "Hg	15 psi
19A	TRIP BLANK	Modified TO-15 APH	27.8 "Hg	15 psi
20A	Lab Blank	Modified TO-15 APH	NA	NA
20B	Lab Blank	Modified TO-15 APH	NA	NA
21A	CCV	Modified TO-15 APH	NA	NA

Continued on next page

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WORK ORDER #: 1011486BR1

Work Order Summary

CLIENT:	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Accounts Payable Conestoga-Rovers Associates (CRA) 2055 Niagara Falls Blvd. Suite Three Niagara Falls, NY 14304
PHONE:	510-420-0700	**P.O. #**	40-4031644
FAX:	510-420-9170	**PROJECT #**	631916 Chevron 20-6127
DATE RECEIVED:	11/19/2010	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	12/06/2010		
DATE REISSUED:	02/28/2011		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
21B	CCV	Modified TO-15 APH	NA	NA
22A	LCS	Modified TO-15 APH	NA	NA
22AA	LCSD	Modified TO-15 APH	NA	NA
22B	LCS	Modified TO-15 APH	NA	NA
22BB	LCSD	Modified TO-15 APH	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 03/01/11

Laboratory Director

Certfication 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: 06/30/11
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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

LABORATORY NARRATIVE
Modified TO-15 Std & Soil Gas
Conestoga-Rovers Associates (CRA)
Workorder# 1011486BR1

Fourteen 1 Liter Summa Canister (100% Certified) samples were received on November 19, 2010. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan mode. The method involves concentrating up to 1.0 liter 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.

Requirement	***TO-15***	***ATL Modifications***
Daily CCV	+- 30% Difference	</= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers
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 recovery of surrogate 1,2-Dichloroethane-d4 in sample VP-4 was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

Dilution was performed on samples VP-4, VP-5 and VP-5 DUP due to the presence of high level non-target species.

A single point calibration for TPH referenced to Gasoline was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

PER THE CLIENT'S REQUEST, THE WORK ORDER WAS RE-ISSUED ON 03/01/2011 TO REPORT TPH-G BY TO-15. WHILE THE INITIAL REPORT MET THE LABORATORY DATA QUALITY REQUIREMENTS FOR THE ORIGINALLY REQUESTED COMPOUNDS, THE TPH-G SINGLE POINT CALIBRATION WAS NOT ANALYZED ON 11/29/2010, THE

ORIGINAL DATE OF ANALYSIS FOR THESE SAMPLES. THE CALIBRATION FACTOR USED IN QUANTITATING THE TPH-G RESULTS ARE FROM A CALIBRATION POINT ANALYZED 12/2/2010. TPH-G RESULTS ARE FLAGGED AS ESTIMATED.

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 and/or LCS.

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

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Laboratory Services Since 1989

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

Client Sample ID: VP-2

Lab ID#: 1011486BR1-06A

No Detections Were Found.

Client Sample ID: VP-3

Lab ID#: 1011486BR1-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	240	84000	980	340000

Client Sample ID: VP-4

Lab ID#: 1011486BR1-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1200	260000	3800	830000
Toluene	1200	7900	4500	30000
Ethyl Benzene	1200	110000	5200	470000
m,p-Xylene	1200	10000	5200	44000
o-Xylene	1200	1400	5200	6200
TPH ref. to Gasoline (MW=100)	24000	32000000	98000	130000000

Client Sample ID: VP-5

Lab ID#: 1011486BR1-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	380	3600	1200	11000
Toluene	380	430	1400	1600
m,p-Xylene	380	380	1600	1600
TPH ref. to Gasoline (MW=100)	7600	4300000	31000	18000000

Client Sample ID: VP-5 DUP

Lab ID#: 1011486BR1-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	380	3800	1200	12000

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

Client Sample ID: VP-5 DUP

Lab ID#: 1011486BR1-10A

Toluene	380	410	1400	1500
m,p-Xylene	380	390	1600	1700
TPH ref. to Gasoline (MW=100)	7600	4500000	31000	18000000

Client Sample ID: VP-7

Lab ID#: 1011486BR1-11A

No Detections Were Found.

Client Sample ID: VP-8

Lab ID#: 1011486BR1-12A

No Detections Were Found.

Client Sample ID: VP-9

Lab ID#: 1011486BR1-13A

No Detections Were Found.

Client Sample ID: VP-10

Lab ID#: 1011486BR1-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.2	1.7	4.7	6.3
TPH ref. to Gasoline (MW=100)	62	64 J	260	260 J

Client Sample ID: VP-11

Lab ID#: 1011486BR1-15A

No Detections Were Found.

Client Sample ID: VP-11 DUP

Lab ID#: 1011486BR1-16A

No Detections Were Found.

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

Client Sample ID: VP-12

Lab ID#: 1011486BR1-17A

No Detections Were Found.

Client Sample ID: VP-13

Lab ID#: 1011486BR1-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	61	110 J	250	450 J

Client Sample ID: TRIP BLANK

Lab ID#: 1011486BR1-19A

No Detections Were Found.

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Client Sample ID: VP-2

Lab ID#: 1011486BR1-06A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112909**	**Date of Collection: 11/16/10 3:33:00 PM**	
Dil. Factor:	**2.35**	**Date of Analysis: 11/29/10 01:31 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.8	Not Detected
Toluene	1.2	Not Detected	4.4	Not Detected
Ethyl Benzene	1.2	Not Detected	5.1	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

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	89	70-130
4-Bromofluorobenzene	89	70-130

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Client Sample ID: VP-3

Lab ID#: 1011486BR1-07A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**b120413**	**Date of Collection: 11/16/10 4:15:00 PM**	
Dil. Factor:	**2.39**	**Date of Analysis: 12/4/10 01:34 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	12	Not Detected	38	Not Detected
Toluene	12	Not Detected	45	Not Detected
Ethyl Benzene	12	Not Detected	52	Not Detected
m,p-Xylene	12	Not Detected	52	Not Detected
o-Xylene	12	Not Detected	52	Not Detected
Naphthalene	48	Not Detected	250	Not Detected
TPH ref. to Gasoline (MW=100)	240	84000	980	340000

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	126	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: VP-4

Lab ID#: 1011486BR1-08A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**b120414**	**Date of Collection: 11/16/10 2:58:00 PM**	
Dil. Factor:	**239**	**Date of Analysis: 12/4/10 01:57 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1200	260000	3800	830000
Toluene	1200	7900	4500	30000
Ethyl Benzene	1200	110000	5200	470000
m,p-Xylene	1200	10000	5200	44000
o-Xylene	1200	1400	5200	6200
Naphthalene	4800	Not Detected	25000	Not Detected
TPH ref. to Gasoline (MW=100)	24000	32000000	98000	130000000

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	167 Q	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: VP-5

Lab ID#: 1011486BR1-09A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**b120415**	**Date of Collection: 11/16/10 4:47:00 PM**	
Dil. Factor:	**76.0**	**Date of Analysis: 12/4/10 02:34 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	380	3600	1200	11000
Toluene	380	430	1400	1600
Ethyl Benzene	380	Not Detected	1600	Not Detected
m,p-Xylene	380	380	1600	1600
o-Xylene	380	Not Detected	1600	Not Detected
Naphthalene	1500	Not Detected	8000	Not Detected
TPH ref. to Gasoline (MW=100)	7600	4300000	31000	18000000

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	127	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: VP-5 DUP

Lab ID#: 1011486BR1-10A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**b120416**	**Date of Collection: 11/16/10 4:47:00 PM**	
Dil. Factor:	**76.0**	**Date of Analysis: 12/4/10 03:15 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	380	3800	1200	12000
Toluene	380	410	1400	1500
Ethyl Benzene	380	Not Detected	1600	Not Detected
m,p-Xylene	380	390	1600	1700
o-Xylene	380	Not Detected	1600	Not Detected
Naphthalene	1500	Not Detected	8000	Not Detected
TPH ref. to Gasoline (MW=100)	7600	4500000	31000	18000000

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	126	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: VP-7

Lab ID#: 1011486BR1-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112915r1**	**Date of Collection:**	**11/16/10 10:56:00 A**
Dil. Factor:	**2.59**	**Date of Analysis:**	**11/29/10 05:03 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.3	Not Detected	4.1	Not Detected
Ethyl Benzene	1.3	Not Detected	5.6	Not Detected
Toluene	1.3	Not Detected	4.9	Not Detected
m,p-Xylene	1.3	Not Detected	5.6	Not Detected
o-Xylene	1.3	Not Detected	5.6	Not Detected
Naphthalene	5.2	Not Detected	27	Not Detected
TPH ref. to Gasoline (MW=100)	65	Not Detected	260	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: VP-8

Lab ID#: 1011486BR1-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112916r1**	**Date of Collection: 11/16/10 11:16:00 A**	
Dil. Factor:	**2.42**	**Date of Analysis: 11/29/10 05:26 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
Toluene	1.2	Not Detected	4.6	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	96	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: VP-9

Lab ID#: 1011486BR1-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112917r1**	**Date of Collection:**	**11/16/10 11:52:00 A**
Dil. Factor:	**2.44**	**Date of Analysis:**	**11/29/10 05:45 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Ethyl Benzene	1.2	Not Detected	5.3	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
m,p-Xylene	1.2	Not Detected	5.3	Not Detected
o-Xylene	1.2	Not Detected	5.3	Not Detected
Naphthalene	4.9	Not Detected	26	Not Detected
TPH ref. to Gasoline (MW=100)	61	Not Detected	250	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: VP-10

Lab ID#: 1011486BR1-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112918r1**	**Date of Collection: 11/16/10 2:31:00 PM**	
Dil. Factor:	**2.50**	**Date of Analysis: 11/29/10 06:07 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	4.0	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
Toluene	1.2	1.7	4.7	6.3
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected
Naphthalene	5.0	Not Detected	26	Not Detected
TPH ref. to Gasoline (MW=100)	62	64 J	260	260 J

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	77	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: VP-11

Lab ID#: 1011486BR1-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112919r1**	**Date of Collection: 11/16/10 1:44:00 PM**	
Dil. Factor:	**2.50**	**Date of Analysis: 11/29/10 06:29 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	4.0	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
Toluene	1.2	Not Detected	4.7	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected
Naphthalene	5.0	Not Detected	26	Not Detected
TPH ref. to Gasoline (MW=100)	62	Not Detected	260	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	72	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: VP-11 DUP

Lab ID#: 1011486BR1-16A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112920r1**	**Date of Collection: 11/16/10 1:44:00 PM**	
Dil. Factor:	**2.50**	**Date of Analysis: 11/29/10 07:25 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	4.0	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
Toluene	1.2	Not Detected	4.7	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected
Naphthalene	5.0	Not Detected	26	Not Detected
TPH ref. to Gasoline (MW=100)	62	Not Detected	260	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	78	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: VP-12

Lab ID#: 1011486BR1-17A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112921r1**	**Date of Collection: 11/16/10 2:03:00 PM**	
Dil. Factor:	**2.39**	**Date of Analysis: 11/29/10 07:48 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	240	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	87	70-130
4-Bromofluorobenzene	100	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-13

Lab ID#: 1011486BR1-18A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112922r1**	**Date of Collection: 11/16/10 10:06:00 A**	
Dil. Factor:	**2.44**	**Date of Analysis: 11/29/10 08:09 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Ethyl Benzene	1.2	Not Detected	5.3	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
m,p-Xylene	1.2	Not Detected	5.3	Not Detected
o-Xylene	1.2	Not Detected	5.3	Not Detected
Naphthalene	4.9	Not Detected	26	Not Detected
TPH ref. to Gasoline (MW=100)	61	110 J	250	450 J

J = Estimated value.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	97	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: TRIP BLANK

Lab ID#: 1011486BR1-19A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112923r1**	**Date of Collection: 11/16/10 4:50:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 08:28 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	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.
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Client Sample ID: Lab Blank

Lab ID#: 1011486BR1-20A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112908**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 12:50 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	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

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	111	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 1011486BR1-20B

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**b120409**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/4/10 11:36 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	5.0	Not Detected	16	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Naphthalene	20	Not Detected	100	Not Detected
TPH ref. to Gasoline (MW=100)	100	Not Detected	410	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

Air Toxics LTD.
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Client Sample ID: CCV

Lab ID#: 1011486BR1-21A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112902**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 09:15 AM**	

Compound	%Recovery
Benzene	94
Toluene	96
Ethyl Benzene	103
m,p-Xylene	106
o-Xylene	107
Naphthalene	91

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: CCV

Lab ID#: 1011486BR1-21B

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**b120403**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/4/10 08:49 AM**	

Compound	**%Recovery**
Benzene	105
Toluene	105
Ethyl Benzene	104
m,p-Xylene	102
o-Xylene	101
Naphthalene	60
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	99	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 1011486BR1-22A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112903**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 09:53 AM**	

Compound	%Recovery
Benzene	98
Toluene	95
Ethyl Benzene	98
m,p-Xylene	104
o-Xylene	105
Naphthalene	77

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: LCSD

Lab ID#: 1011486BR1-22AA

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112904**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 10:26 AM**	

Compound	%Recovery
Benzene	94
Toluene	94
Ethyl Benzene	97
m,p-Xylene	97
o-Xylene	101
Naphthalene	87

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: LCS

Lab ID#: 1011486BR1-22B

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**b120404**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/4/10 09:11 AM**	

Compound	%Recovery
Benzene	107
Toluene	108
Ethyl Benzene	109
m,p-Xylene	105
o-Xylene	107
Naphthalene	94
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LCSD

Lab ID#: 1011486BR1-22BB

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**b120405**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 12/4/10 09:41 AM**	

Compound	%Recovery
Benzene	107
Toluene	108
Ethyl Benzene	107
m,p-Xylene	103
o-Xylene	105
Naphthalene	95
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	102	70-130

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

Project Manager BRIAN SILVA

Collected by: (Print and Sign) IAN HULL

Company CRA Email bsilva@cramail.com

Address 10969 TRADE CENTER DRIVE, SUITE 107 City RANCHO CORDOVA State CA Zip 95670

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

Project Info:
P.O. # 40-4031644
Project # 631916
Project Name CHEVRON 20-6127

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 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)
06A	VP-2	9450	11/16/2010	15:33	FOR VP-2 THRU VP-5 DUP: • TO-15 (W/ APH FRACTIONS): TPH$_s$, BTEX, NAPHTHALENE • ASTM D-1946: O_2, N_2, CO_2, CH_4, HELIUM	-30	-5.5		
07A	VP-3	97105		16:15		<-30	-6.5		
08A	VP-4	93109		14:58		-29.5	-6.0		
09A	VP-5	37347		16:47		<-30	-5.0		
10A	VP-5 DUP	33395		16:47		<-30	-5.5		
11A	VP-7	31756		10:56	FOR VP-7 THRU VP-10: • TO-15: TPH$_s$, BTEX, NAPHTHALENE • ASTM D-1946: O_2, N_2, CO_2, CH_4, HELIUM	-30	-8.0		
12A	VP-8	37415		11:16		-30	-6.0		
13A	VP-9	36471		11:52		<-30	-6.0		
14A	VP-10	35549		14:31		-30	-7.0		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
IAN HULL	11/17/2010 08:00	FEDEX	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
		Brian W Sattler ATC	11/19/10 0915
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fedex		N/A	Good	Yes No (None)	1011486

Form 1293 rev.11

B

@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

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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 10969 TRADE CENTER DR SUITE 107 City RANCHO CORDOVA State CA Zip 95670

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

Project Info:
P.O. # 40-40316444
Project # 631916
Project Name CHEVRON 20-6127

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 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)
15A	VP-11	37345	11/16/2010	13:44	FOR ALL ON PAGE:	-30	-7.0		
16A	VP-11 DUP	34086		13:44	*TO-15: TPH$_g$,	<-30	-7.0		
17A	VP-12	36491		14:03	BTEX, NAPHTHALENE	<-30	-5.0		
18A	VP-13	35629		10:06	°ASTM D-1946: O_2,	<-30	-6.0		
19A	TRIP BLANK	12279		16:50	N_2, CO_2, CH_4, Helium	-	-		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	11/17/2010 08:00	FEDEX	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
		Brian Whittaker ATL	11/19/10 915
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fedex		N/A	Good	Yes No (None)	1011486

Form 1293 rev.11

B

Air Toxics LTD.
Laboratory Services Since 1989

12/6/2010
Mr. Ian Hull
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: Chevron 20-6127
Project #: 631916
Workorder #: 1011486D

Dear Mr. Ian Hull

The following report includes the data for the above referenced project for sample(s) received on 11/19/2010 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 #: 1011486D

Work Order Summary

CLIENT:	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Accounts Payable Conestoga-Rovers Associates (CRA) 2055 Niagara Falls Blvd. Suite Three Niagara Falls, NY 14304
PHONE:	510-420-0700	**P.O. #**	40-4031644
FAX:	510-420-9170	**PROJECT #**	631916 Chevron 20-6127
DATE RECEIVED:	11/19/2010	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	12/04/2010		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	IA-1	Modified ASTM D-1946	4.4 "Hg	5 psi
02A	IA-2	Modified ASTM D-1946	6.0 "Hg	5 psi
03A	IA-3	Modified ASTM D-1946	5.2 "Hg	5 psi
04A	IA-4	Modified ASTM D-1946	6.0 "Hg	5 psi
05A	OA-1	Modified ASTM D-1946	4.0 "Hg	5 psi
06A	VP-2	Modified ASTM D-1946	4.2 "Hg	15 psi
07A	VP-3	Modified ASTM D-1946	4.6 "Hg	15 psi
08A	VP-4	Modified ASTM D-1946	4.6 "Hg	15 psi
09A	VP-5	Modified ASTM D-1946	3.4 "Hg	15 psi
10A	VP-5 DUP	Modified ASTM D-1946	3.4 "Hg	15 psi
11A	VP-7	Modified ASTM D-1946	6.6 "Hg	15 psi
12A	VP-8	Modified ASTM D-1946	5.0 "Hg	15 psi
13A	VP-9	Modified ASTM D-1946	5.2 "Hg	15 psi
14A	VP-10	Modified ASTM D-1946	5.8 "Hg	15 psi
15A	VP-11	Modified ASTM D-1946	5.8 "Hg	15 psi
16A	VP-11 DUP	Modified ASTM D-1946	5.8 "Hg	15 psi
17A	VP-12	Modified ASTM D-1946	4.6 "Hg	15 psi

Continued on next page

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 1011486D

Work Order Summary

CLIENT:	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Accounts Payable Conestoga-Rovers Associates (CRA) 2055 Niagara Falls Blvd. Suite Three Niagara Falls, NY 14304
PHONE:	510-420-0700	**P.O. #**	40-4031644
FAX:	510-420-9170	**PROJECT #**	631916 Chevron 20-6127
DATE RECEIVED:	11/19/2010	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	12/04/2010		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
18A	VP-13	Modified ASTM D-1946	5.2 "Hg	15 psi
19A	TRIP BLANK	Modified ASTM D-1946	27.8 "Hg	15 psi
20A	Lab Blank	Modified ASTM D-1946	NA	NA
20B	Lab Blank	Modified ASTM D-1946	NA	NA
21A	LCS	Modified ASTM D-1946	NA	NA
21AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 12/04/10

Laboratory Director

Certfication 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: 06/30/11
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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# 1011486D

Five 6 Liter Summa Canister (SIM Certified) and fourteen 1 Liter Summa Canister (100% Certified) samples were received on November 19, 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.

Requirement	***ASTM D-1946***	***ATL Modifications***
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 >/= 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

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: IA-1

Lab ID#: 1011486D-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	22
Nitrogen	0.16	78
Carbon Dioxide	0.016	0.042
Methane	0.00016	0.00021

Client Sample ID: IA-2

Lab ID#: 1011486D-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	22
Nitrogen	0.17	78
Carbon Dioxide	0.017	0.048
Methane	0.00017	0.00021

Client Sample ID: IA-3

Lab ID#: 1011486D-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	22
Nitrogen	0.16	78
Carbon Dioxide	0.016	0.046
Methane	0.00016	0.00021

Client Sample ID: IA-4

Lab ID#: 1011486D-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	22
Nitrogen	0.17	78
Carbon Dioxide	0.017	0.041
Methane	0.00017	0.00020

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: OA-1

Lab ID#: 1011486D-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	22
Nitrogen	0.16	78
Carbon Dioxide	0.016	0.043
Methane	0.00016	0.00021

Client Sample ID: VP-2

Lab ID#: 1011486D-06A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	18
Nitrogen	0.24	79
Carbon Dioxide	0.024	3.1

Client Sample ID: VP-3

Lab ID#: 1011486D-07A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	4.1
Nitrogen	0.24	87
Carbon Dioxide	0.024	8.1
Methane	0.00024	0.66

Client Sample ID: VP-4

Lab ID#: 1011486D-08A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	1.1
Nitrogen	0.24	43
Carbon Dioxide	0.024	12
Methane	0.00024	41
Helium	0.12	0.28

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: VP-5

Lab ID#: 1011486D-09A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.5
Nitrogen	0.23	82
Carbon Dioxide	0.023	16
Methane	0.00023	0.030

Client Sample ID: VP-5 DUP

Lab ID#: 1011486D-10A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.4
Nitrogen	0.23	82
Carbon Dioxide	0.023	16
Methane	0.00023	0.030

Client Sample ID: VP-7

Lab ID#: 1011486D-11A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	20
Nitrogen	0.26	79
Carbon Dioxide	0.026	0.50
Helium	0.13	0.54

Client Sample ID: VP-8

Lab ID#: 1011486D-12A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	19
Nitrogen	0.24	79
Carbon Dioxide	0.024	0.98
Helium	0.12	1.1

Air Toxics LTD.
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Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: VP-9

Lab ID#: 1011486D-13A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	19
Nitrogen	0.24	80
Carbon Dioxide	0.024	1.2

Client Sample ID: VP-10

Lab ID#: 1011486D-14A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	18
Nitrogen	0.25	72
Carbon Dioxide	0.025	0.42
Helium	0.12	10

Client Sample ID: VP-11

Lab ID#: 1011486D-15A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	18
Nitrogen	0.25	80
Carbon Dioxide	0.025	1.7

Client Sample ID: VP-11 DUP

Lab ID#: 1011486D-16A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	18
Nitrogen	0.25	80
Carbon Dioxide	0.025	1.7

Client Sample ID: VP-12

Lab ID#: 1011486D-17A

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: VP-12

Lab ID#: 1011486D-17A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	20
Nitrogen	0.24	80
Carbon Dioxide	0.024	0.50

Client Sample ID: VP-13

Lab ID#: 1011486D-18A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	15
Nitrogen	0.24	78
Carbon Dioxide	0.024	2.6
Helium	0.12	4.7

Client Sample ID: TRIP BLANK

Lab ID#: 1011486D-19A

Compound	Rpt. Limit (%)	Amount (%)
Nitrogen	0.10	100

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA-1

Lab ID#: 1011486D-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112905**	**Date of Collection: 11/16/10 5:52:00 PM**	
Dil. Factor:	**1.57**	**Date of Analysis: 11/29/10 08:51 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	22
Nitrogen	0.16	78
Carbon Dioxide	0.016	0.042
Methane	0.00016	0.00021
Helium	0.078	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA-2

Lab ID#: 1011486D-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112906**	**Date of Collection: 11/16/10 4:55:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 11/29/10 09:16 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	22
Nitrogen	0.17	78
Carbon Dioxide	0.017	0.048
Methane	0.00017	0.00021
Helium	0.084	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA-3

Lab ID#: 1011486D-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112907**	**Date of Collection: 11/16/10 5:18:00 PM**	
Dil. Factor:	**1.62**	**Date of Analysis: 11/29/10 09:40 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	22
Nitrogen	0.16	78
Carbon Dioxide	0.016	0.046
Methane	0.00016	0.00021
Helium	0.081	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: IA-4

Lab ID#: 1011486D-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112908**	**Date of Collection: 11/16/10 5:18:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 11/29/10 10:04 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	22
Nitrogen	0.17	78
Carbon Dioxide	0.017	0.041
Methane	0.00017	0.00020
Helium	0.084	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: OA-1

Lab ID#: 1011486D-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112909**	**Date of Collection: 11/16/10 6:12:00 PM**	
Dil. Factor:	**1.55**	**Date of Analysis: 11/29/10 10:38 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	22
Nitrogen	0.16	78
Carbon Dioxide	0.016	0.043
Methane	0.00016	0.00021
Helium	0.078	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-2

Lab ID#: 1011486D-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112910**	**Date of Collection: 11/16/10 3:33:00 PM**	
Dil. Factor:	**2.35**	**Date of Analysis: 11/29/10 11:01 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	18
Nitrogen	0.24	79
Carbon Dioxide	0.024	3.1
Methane	0.00024	Not Detected
Helium	0.12	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-3

Lab ID#: 1011486D-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112911**	**Date of Collection: 11/16/10 4:15:00 PM**	
Dil. Factor:	**2.39**	**Date of Analysis: 11/29/10 11:25 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	4.1
Nitrogen	0.24	87
Carbon Dioxide	0.024	8.1
Methane	0.00024	0.66
Helium	0.12	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-4

Lab ID#: 1011486D-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112912**	**Date of Collection: 11/16/10 2:58:00 PM**	
Dil. Factor:	**2.39**	**Date of Analysis: 11/29/10 11:52 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	1.1
Nitrogen	0.24	43
Carbon Dioxide	0.024	12
Methane	0.00024	41
Helium	0.12	0.28

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-5

Lab ID#: 1011486D-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112915**	**Date of Collection: 11/16/10 4:47:00 PM**	
Dil. Factor:	**2.28**	**Date of Analysis: 11/29/10 01:05 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.5
Nitrogen	0.23	82
Carbon Dioxide	0.023	16
Methane	0.00023	0.030
Helium	0.11	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-5 DUP

Lab ID#: 1011486D-10A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112916**	**Date of Collection: 11/16/10 4:47:00 PM**	
Dil. Factor:	**2.28**	**Date of Analysis: 11/29/10 01:46 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.4
Nitrogen	0.23	82
Carbon Dioxide	0.023	16
Methane	0.00023	0.030
Helium	0.11	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-7

Lab ID#: 1011486D-11A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112918**	**Date of Collection:**	**11/16/10 10:56:00 A**
Dil. Factor:	**2.59**	**Date of Analysis:**	**11/29/10 02:40 PM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	20
Nitrogen	0.26	79
Carbon Dioxide	0.026	0.50
Methane	0.00026	Not Detected
Helium	0.13	0.54

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-8

Lab ID#: 1011486D-12A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112919**	**Date of Collection:**	**11/16/10 11:16:00 A**
Dil. Factor:	**2.42**	**Date of Analysis:**	**11/29/10 03:26 PM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	19
Nitrogen	0.24	79
Carbon Dioxide	0.024	0.98
Methane	0.00024	Not Detected
Helium	0.12	1.1

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-9

Lab ID#: 1011486D-13A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112920**	**Date of Collection:**	**11/16/10 11:52:00 A**
Dil. Factor:	**2.44**	**Date of Analysis:**	**11/29/10 03:51 PM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	19
Nitrogen	0.24	80
Carbon Dioxide	0.024	1.2
Methane	0.00024	Not Detected
Helium	0.12	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-10

Lab ID#: 1011486D-14A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112921**	**Date of Collection: 11/16/10 2:31:00 PM**	
Dil. Factor:	**2.50**	**Date of Analysis: 11/29/10 04:15 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	18
Nitrogen	0.25	72
Carbon Dioxide	0.025	0.42
Methane	0.00025	Not Detected
Helium	0.12	10

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-11

Lab ID#: 1011486D-15A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112922**	**Date of Collection: 11/16/10 1:44:00 PM**	
Dil. Factor:	**2.50**	**Date of Analysis: 11/29/10 04:40 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	18
Nitrogen	0.25	80
Carbon Dioxide	0.025	1.7
Methane	0.00025	Not Detected
Helium	0.12	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-11 DUP

Lab ID#: 1011486D-16A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112923**	**Date of Collection: 11/16/10 1:44:00 PM**	
Dil. Factor:	**2.50**	**Date of Analysis: 11/29/10 05:03 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	18
Nitrogen	0.25	80
Carbon Dioxide	0.025	1.7
Methane	0.00025	Not Detected
Helium	0.12	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-12

Lab ID#: 1011486D-17A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112924**	**Date of Collection: 11/16/10 2:03:00 PM**	
Dil. Factor:	**2.39**	**Date of Analysis: 11/29/10 05:35 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	20
Nitrogen	0.24	80
Carbon Dioxide	0.024	0.50
Methane	0.00024	Not Detected
Helium	0.12	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-13

Lab ID#: 1011486D-18A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112925**	**Date of Collection:**	**11/16/10 10:06:00 A**
Dil. Factor:	**2.44**	**Date of Analysis:**	**11/29/10 06:00 PM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	15
Nitrogen	0.24	78
Carbon Dioxide	0.024	2.6
Methane	0.00024	Not Detected
Helium	0.12	4.7

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: TRIP BLANK

Lab ID#: 1011486D-19A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112926**	**Date of Collection: 11/16/10 4:50:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 06:28 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
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)

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 1011486D-20A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112904**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 07:55 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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 1011486D-20B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112903b**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 07:31 AM**	

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

Container Type: NA - Not Applicable

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 1011486D-21A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112902**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 06:45 AM**	

Compound	%Recovery
Oxygen	99
Nitrogen	100
Carbon Dioxide	99
Methane	99
Helium	95

Container Type: NA - Not Applicable

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCSD

Lab ID#: 1011486D-21AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9112927**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 06:50 PM**	

Compound	%Recovery
Oxygen	99
Nitrogen	101
Carbon Dioxide	99
Methane	95
Helium	100

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

Project Manager BRIAN SILVA

Collected by: (Print and Sign) IAN HULL

Company CPA Email bsilva@cramer-ld.com

Address 10969 TRADE CENTER DR. SUITE 107 City RANCHO CORDOVA State CA Zip 95670

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

Project Info:
P.O. # 40-403160444
Project # 631916
Project Name CHEVRON 20-6127

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 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)
01A	IA-1	2525	11/16/2010	17:52	FOR ALL ON PAGE:	-30	-6.5		
02A	IA-2	33879		16:55	TO-15 (SIM):	-29.5	-7.0		
03A	IA-3	35259		17:18	TPHg, BTEX, MTBE	-30	-7.0		
04A	IA-4	5745		17:18	THALENE	-30	-8.0		
05A	OA-1	34251		18:12	ASTM D-1946:	-30	-6.0		
					O_2, N_2, CO, CH_4,				
					HELIUM				

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
	11/17/2010 0800	FEDEX	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
		Ryan Whitehead MTC	11/19/10 915
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx		N/A	Good	Yes No None	1011486

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@Air Toxics LTD.

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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 10969 TRADE CENTER DRIVE, SUITE 107 City RANCHO CORDOVA State CA Zip 95670

Phone 916-889-8108 Fax 916-889-8999

Project Info:
P.O. # 40-4031644
Project # 631916
Project Name CHEVRON 20-6127

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 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)
06A	VP-2	9450	11/16/2010	15:33	FOR VP-2 THRU VP-5 DUP: • TO-15 (WI APH FRACTIONS): TPH$_s$, BTEX, NAPHTHALENE • ASTM D-1946: O_2, N_2, CO_2, CH_4, HELIUM	-30	-5.5		
07A	VP-3	97105		16:15		<-30	-6.5		
08A	VP-4	93109		14:58		-29.5	-6.0		
09A	VP-5	37347		16:47		<-30	-5.0		
10A	VP-5 DUP	33395		16:47		<-30	-5.5		
11A	VP-7	31756		10:56	FOR VP-7 THRU VP-10: • TO-15: TPH$_s$, BTEX, NAPHTHALENE • ASTM D-1946: O_2, N_2, CO_2, CH_4, HELIUM	-30	-8.0		
12A	VP-8	37415		11:16		-30	-6.0		
13A	VP-9	36471		11:52		<-30	-6.0		
14A	VP-10	35549		14:31		-30	-7.0		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Ian Hull	11/17/2010 08:00	FEDEX	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
		Brian W Whittaker ATC	11/19/10 0915
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fedex		N/A	Good	Yes No (None)	1011486

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Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
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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 10969 TRADE CENTER DR. City RANCHO CORDOVA State CA Zip 95670
SUITE 107

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

Project Info:
P.O. # 40-4031644
Project # 631916
Project Name CHEVRON 20-6127

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 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)
15A	VP-11	37245	11/16/2010	13:44	FOR ALL ON PAGE:	-30	-7.0		
16A	VP-11 DUP	24086		13:44	* TO-15: TPHg,	<-30	-7.0		
17A	VP-12	36491		14:03	BTEX, NAPHTHALENE	<-30	-5.0		
18A	VP-13	35629		10:06	* ASTM D-1946: O_2,	<-30	-6.0		
19A	TRIP BLANK	12279		16:50	N_2, CO_2, CH_4, Helium	-	-		

Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
11/17/2010 08:00	FEDEX
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
	Brian Shattuck ATL 11/19/10 915
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fedex		n/a	Good	Yes No (None)	1011486

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D

Air Toxics LTD.
Laboratory Services Since 1989

12/7/2010
Mr. Ian Hull
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: Chevron 20-6127
Project #: 631916
Workorder #: 1011486C

Dear Mr. Ian Hull

The following report includes the data for the above referenced project for sample(s) received on 11/19/2010 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 APH 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

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 1011486C

Work Order Summary

CLIENT:	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Accounts Payable Conestoga-Rovers Associates (CRA) 2055 Niagara Falls Blvd. Suite Three Niagara Falls, NY 14304
PHONE:	510-420-0700	**P.O. #**	40-4031644
FAX:	510-420-9170	**PROJECT #**	631916 Chevron 20-6127
DATE RECEIVED:	11/19/2010	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	12/06/2010		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
06A	VP-2	Modified TO-15 APH	4.2 "Hg	15 psi
06B	VP-2	Modified TO-15 APH	4.2 "Hg	15 psi
07A(cancelled)	VP-3	Modified TO-15 APH	4.6 "Hg	15 psi
07B(cancelled)	VP-3	Modified TO-15 APH	4.6 "Hg	15 psi
08A(cancelled)	VP-4	Modified TO-15 APH	4.6 "Hg	15 psi
08B(cancelled)	VP-4	Modified TO-15 APH	4.6 "Hg	15 psi
09A(cancelled)	VP-5	Modified TO-15 APH	3.4 "Hg	15 psi
09B(cancelled)	VP-5	Modified TO-15 APH	3.4 "Hg	15 psi
10A(cancelled)	VP-5 DUP	Modified TO-15 APH	3.4 "Hg	15 psi
10B(cancelled)	VP-5 DUP	Modified TO-15 APH	3.4 "Hg	15 psi
11A	Lab Blank	Modified TO-15 APH	NA	NA
11B	Lab Blank	Modified TO-15 APH	NA	NA
12A	CCV	Modified TO-15 APH	NA	NA
12B	CCV	Modified TO-15 APH	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 12/07/10

Laboratory Director

Certfication 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: 06/30/11
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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

LABORATORY NARRATIVE
Modified TO-15 & VPH Fractions
Conestoga-Rovers Associates (CRA)
Workorder# 1011486C

Five 1 Liter Summa Canister (100% Certified) samples were received on November 19, 2010. The laboratory performed analysis via EPA Method TO-15 and Air Toxics VPH (Volatile Petroleum Hydrocarbon) methods for the Determination of VPH Fractions using GC/MS in the full scan mode. The method involves concentrating up to 0.5 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 method is designed to measure gaseous phase aliphatic and aromatic compounds in ambient air and soil gas collected in stainless steel Summa canisters. Air Toxics VPH method is a hybrid of EPA TO-15, MADEP APH and WSDE VPH methods. Chromatographic peaks were identified via mass spectrum as either aliphatic or aromatic petroleum hydrocarbons and included in the appropriate range as defined by the method. The volatile Aliphatic hydrocarbons are collectively quantified within the C5 to C6 range, C6 to C8 range, C8 to C10 range and the C10 to C12 range. Additionally, the volatile Aromatic hydrocarbons are collectively quantified within the C8 to C10 range and the C10 to C12 range. The Aromatic ranges refer to the equivalent carbon (EC) ranges.

Aliphatic data is calculated from the Total Ion chromatogram which has been reprocessed in a duplicate file differentiated from the original by the addition of an alphanumeric extension. The Aromatic calculation also uses the information contained in the associated Extracted Ion file.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

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

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: VP-2

Lab ID#: 1011486C-06A

No Detections Were Found.

Client Sample ID: VP-2

Lab ID#: 1011486C-06B

No Detections Were Found.

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Client Sample ID: VP-2

Lab ID#: 1011486C-06A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112909a**	**Date of Collection: 11/16/10 3:33:00 PM**	
Dil. Factor:	**2.35**	**Date of Analysis: 11/29/10 01:31 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	24	Not Detected	76	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	24	Not Detected	96	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	24	Not Detected	140	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	24	Not Detected	160	Not Detected

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

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Client Sample ID: VP-2

Lab ID#: 1011486C-06B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112909c**	**Date of Collection: 11/16/10 3:33:00 PM**	
Dil. Factor:	**2.35**	**Date of Analysis: 11/29/10 01:31 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons (ref. to 1,2,3-TMB)	24	Not Detected	120	Not Detected
>C10-C12 Aromatic Hydrocarbons (ref. to 1,2,4,5-TMB)	24	Not Detected	130	Not Detected

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

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Client Sample ID: Lab Blank

Lab ID#: 1011486C-11A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112908a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 12:50 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	10	Not Detected	32	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	10	Not Detected	41	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	10	Not Detected	58	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	10	Not Detected	70	Not Detected

Container Type: NA - Not Applicable

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Client Sample ID: Lab Blank

Lab ID#: 1011486C-11B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112908c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 12:50 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons (ref. to 1,2,3-TMB)	10	Not Detected	49	Not Detected
>C10-C12 Aromatic Hydrocarbons (ref. to 1,2,4,5-TMB)	10	Not Detected	55	Not Detected

Container Type: NA - Not Applicable

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Client Sample ID: CCV

Lab ID#: 1011486C-12A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112905a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 11:00 AM**	

Compound	%Recovery
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	87
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	103
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	91
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	83

Container Type: NA - Not Applicable

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Client Sample ID: CCV

Lab ID#: 1011486C-12B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	**6112905c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 11/29/10 11:00 AM**	

Compound	%Recovery
>C8-C10 Aromatic Hydrocarbons (ref. to 1,2,3-TMB)	81
>C10-C12 Aromatic Hydrocarbons (ref. to 1,2,4,5-TMB)	84

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

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Project Manager BRIAN SILVA

Collected by: (Print and Sign) JAN HULL

Company CRA Email bsilva@craworld.com

Address 10060 TOWNE CENTER DRIVE, SUITE 107 City RANCHO CORDOVA State CA Zip 95670

Phone 916-888-8908 Fax 916-889-8999

Project Info:
P.O. # 40-402164
Project # 631916
Project Name CHEVRON 20-6127

Turn Around Time:
☑ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 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)
01A B	VP-2	9450	11/16/2010	15:33	FOR VP-2 THRU VP-5 DUP	-30	-5.5		
02A B	VP-3	97105		16:15	• TO-15 (W/ APH FRACTIONS): TPH$_g$, BTEX, NAPHTHALENE • ASTM D-1946: O$_2$, N$_2$, CO$_2$, CH$_4$, HELIUM	<-30	-6.5		
03A B	VP-4	97109		14:58		-29.5	-6.0		
04A B	VP-5	37347		16:47		<-30	-5.0		
10A B	VP-5 DUP	35295		16:47		<-30	-5.5		
11A	VP-7	31756		10:56	FOR VP-7 THRU VP-10: • TO-15: TPH$_g$, BTEX, NAPHTHALENE • ASTM D-1946: O$_2$, N$_2$, CO$_2$, CH$_4$, HELIUM	-30	-8.0		
08A	VP-8	37415		11:16		-30	-6.0		
13A	VP-9	36471		11:52		<-30	-6.0		
14A	VP-10	35549		14:31		-30	-7.0		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
	11/17/2010 09:00	FEDEX	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
		Brian Silva	11/19/10
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fedex		N/A	Good	Yes No (None)	1011486

Form 1293 rev.11

C