Ian Robb
Project Manager
Marketing Business Unit

Chevron Environmental Management Company
6101 Bollinger Canyon Road
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Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Former Signal Oil Station No. 20-6145
800 Center Street
Oakland, CA
ACEH RO0454

I have reviewed the attached Vapor Well Sampling Results dated April 2, 2012.

I agree with the conclusions and recommendations presented in the referenced report. This information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Conestoga Rovers Associates, upon who assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

Ian Robb
Project Manager

Attachment: Vapor Well Sampling Results

CONESTOGA-ROVERS
& ASSOCIATES

5900 Hollis Street, Suite A
Emeryville, California 94608
Telephone: (510) 420-0700 Fax: (510) 420-9170
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April 2, 2012 Reference No. 312002

Mr. Mark Detterman
Alameda County Environmental Health (ACEH)
1131 Harbor Bay Parkway
Alameda, California 94502

Re: Vapor Well Sampling Results
Former Signal Oil Service Station 20-6145
800 Center Street
Oakland, California
ACEH Case RO0000454

Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA) is submitting this *First Quarter 2012 Soil Vapor Sampling Report* on behalf of Chevron Environmental Management Company for the site referenced above (Figure 1). On February 21, 2012, CRA collected soil vapor samples from all soil vapor wells. The site background and soil vapor sampling details and results are discussed below.

SITE BACKGROUND

The site is a former Signal Oil gasoline service station located on the northeastern corner of the intersection of 8th Street and Center Street in a mixed commercial and residential area of Oakland, California (Figure 1). The site was first developed as a service station in 1932. Four 1,000-gallon fuel underground storage tanks (USTs) and one used-oil UST were installed when the site was developed. These USTs were removed in 1973 when the station was closed. The site is currently undeveloped.

Environmental investigation has been ongoing since 1989. To date, 17 monitoring wells, 8 air sparge wells, 61 soil borings, and 11 soil vapor probes have been drilled (Figure 2). A remedial excavation was completed in 2002, removing approximately 1,584 tons of hydrocarbon source mass soil. An air sparge pilot test operated January through April 2011 using wells AS-1 through AS-8. Groundwater is currently monitored by 17 onsite and offsite monitoring wells. A summary of previous environmental assessments and remediation is included as Attachment A.

VAPOR WELL SAMPLING EVENT

On February 21, 2012, CRA collected soil vapor samples from probes VP-1 through VP-6. All soil vapor wells are installed to a depth of 5.5 fbg.

Vapor Sampling
Soil vapor samples were collected from the vapor points using flow meters set at approximately 167 milliliters/minute and one-liter Summa™ canisters connected directly to the tubing at each vapor probe. A closed circuit sampling train was created by attaching the sample Summa™ canister in series with the purge Summa™ canister via a steam-cleaned stainless-steal manifold.

A "shut-in" test was performed prior to connecting the sampling equipment to the vapor probe tubing. This test was performed by sealing all openings to ambient air, opening the purge Summa™ canister to establish a vacuum inside the sampling train and waiting to ensure the vacuum remained stable over time. The shut-in test reduces the potential for ambient air to bias the soil vapor samples.

After the sampling train passed the "shut in" test, it was connected to the probe tubing and approximately 0.01 liters of existing vapor in the tubing was purged so the sample was representative of actual soil gas concentrations. After purging, the sample Summa™ canister valve was opened. The vacuum of the Summa™ canister was used to draw soil vapor through the flow controller and into the sample canister until a vacuum of approximately 5 inches of mercury was observed on the vacuum gauge. A field duplicate was collected concurrently with the VP-2 sample. After sampling, the Summa™ canisters were packaged and sent to Air Toxics of Folsom, California under chain-of-custody for analysis.

Using the Department of Toxic Substance Control (DTSC) March 2010 *Advisory-Active Soil Gas Investigations* guidance document, laboratory grade helium was used for leak detection to determine if ambient air was entering the Summa™ canisters during sampling. A shroud surrounded the vapor sampling equipment and the connection between the sampling equipment and the vapor probe tubing. A helium detector was placed inside the shroud to quantify helium concentrations. An atmosphere of at least 20 percent helium was created and maintained for the duration of vapor sampling. Helium in the atmosphere was monitored by a helium detector. No helium was detected by the laboratory in any samples and all samples are considered valid.

Laboratory Analysis
Vapor samples were stored at ambient air temperature and transported under chain of custody to Eurofins Air Toxics of Folsom, California where they were analyzed for the following constituents:

- Total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE) using EPA Method TO-15.
- Oxygen ($O_{2)}$), carbon dioxide (CO_2), methane (CH_4), nitrogen (N_2), and helium using ASTM D-1946 (GC/TCD).

Air Toxics analytical results reports dated March 8, 2012 and March 9, 2012 are included as Attachment B.

HYDROCARBONS IN SOIL VAPOR

Ultra-high pure grade helium was used as the tracer gas. Ultra-high pure grade helium is preferred since it is not found at impacted fuel sites and should not contain organic impurities. No helium was detected in any of the vapor samples collected during this sampling event indicating the sampling equipment was properly connected and no samples were contaminated by ambient air. The maximum soil vapor concentrations detected on February 21, 2012 were:

- 22 micrograms per cubic meter ($\mu g/m^3$) toluene in VP-4
- 17 $\mu g/m^3$ xylenes in VP-4
- No TPHg, benzene, ethylbenzene, MTBE, or naphthalene were detected

The toluene and xylenes concentrations detected were at least three orders of magnitude less than the residential Environmental Screening Levels (ESLs)[1] for shallow soil gas.

Current and historical soil vapor data is presented in Table 1.

[1] Shallow gas screening levels for evaluation of potential vapor intrusion concerns (Table E-2) from *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* prepared by the California Regional Water Quality Control Board San Francisco Bay Region, Interim Final - November 2007, Revised May 2008.

CONCLUSIONS AND RECOMMENDATIONS

This site is currently undeveloped and surrounded by residential buildings. Based on the soil vapor data, there is no significant risk from soil vapor in the vadose zone to the surrounding residences or any future site occupants under equilibrium conditions (i.e. without air sparging).

CRA recommends one additional soil vapor sampling event during the second quarter 2012 to complete 1 year of quarterly vapor sampling following the low flow air sparge pilot test that concluded in April 2011.

CONESTOGA-ROVERS & ASSOCIATES

April 2, 2012 Reference No. 312002

Please contact Kiersten Hoey (510) 420-3347 if you have any questions or require additional information.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

PROFESSIONAL GEOLOGIST
N. SCOTT MacLEOD
No. 5747
Exp 11/30/12
STATE OF CALIFORNIA

Kiersten Hoey N. Scott MacLeod, PG 5747

APM/mws/22
Encl.

Figure 1	Vicinity Map
Figure 2	Site Map
Table 1	Current Vapor Sampling Results
Attachment A	Summary of Previous Environmental Investigations and Remediation
Attachment B	Laboratory Analytical Reports

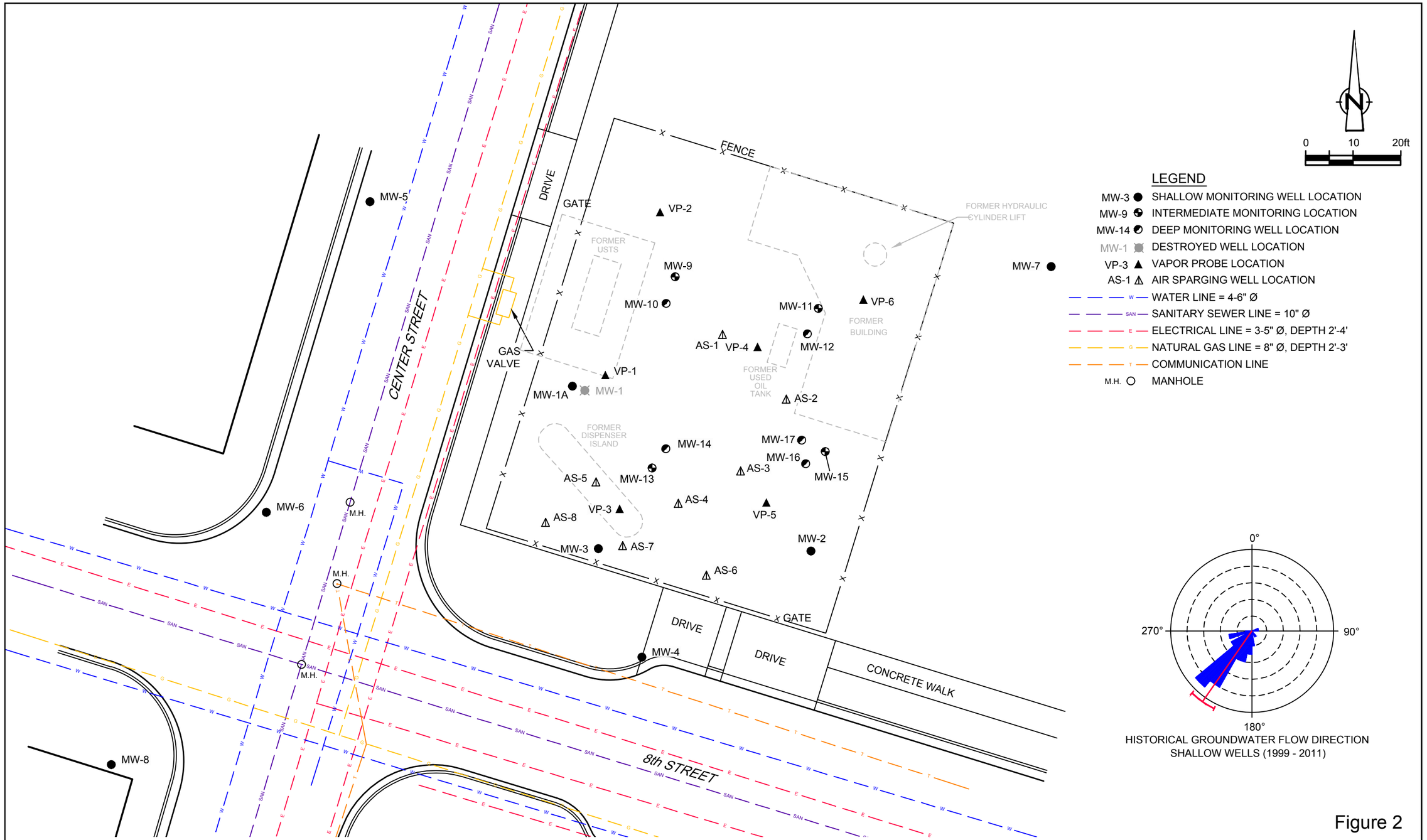
cc: Mr. Ian Robb, Chevron EMC (*electronic copy*)
Mr. Rene Boisvert, 800 Center LLC

FIGURES

SOURCE: USGS QUADRANGLE MAP: OAKLAND WEST, CA.

Figure 1

VICINITY MAP
FORMER SIGNAL OIL SERVICE STATION 20-6145
800 CENTER STREET
Oakland, California



HISTORICAL GROUNDWATER FLOW DIRECTION
SHALLOW WELLS (1999 - 2011)

Figure 2

SITE PLAN
FORMER SIGNAL OIL SERVICE STATION 20-6145
800 CENTER STREET
Oakland, California

312002-2012(022)GN-WA002 MAR 12/2012

TABLE

TABLE 1

CUMULATIVE VAPOR ANALYTICAL DATA
FORMER SIGNAL OIL SERVICE STATION
(CHEVRON STATION #206145)
800 CENTER STREET
OAKLAND, CALIFORNIA

Sample ID	Sample Date	Probe Depth Interval fbg	TPHg (by TO-3)	TPHg (by TO-15)	Benzene	Toluene	Ethylbenzene	Xylenes [1]	MTBE	Naphthalene	Iso-butane [2] ppbv	Oxygen	Nitrogen	Carbon Dioxide	Methane	Helium
			Concentrations reported in micrograms per cubic meter ($\mu g/m^3$)									% Volume				
ESL Table E-2	*Shallow Soil Gas (Residential)*		*10,000*	*10,000*	*84*	*63,000*	*980*	*21,000*	*9,400*	*72*	--	--	--	--	--	--
VP-1	11/6/2007	5.0-5.5	1,400	--	<3.8	16	<5.2	<5.2	<17	<25	6.6	10	--	<0.024	<0.00024	--
VP-1	LAB DUPLICATE		--	--	<3.8	14	<5.2	<5.2	<17	<25	6.5	--	--	--	--	--
VP-1	10/3/2008	5.0-5.5	--	<97	<3.8	<4.5	<5.2	<5.2	<4.3	<25	--	14	--	0.027	0.00027	<0.12
VP-1	5/10/2011	5.0-5.5	--	57,000,000	9,200	<3,200	<3,700	<3,700	<3,100	<18,000	--	8.7	88	1.6	0.0059	<0.12
VP-1	8/23/2011	5.0-5.5	--	2,500,000	<400	<470	<550	<550	<450	<2,600	--	9.4	89	1.5	0.0024	<0.13
VP-1	11/2/2011	5.0-5.5	--	5,700	2.9	<3.0	<3.5	<3.5	<2.9	<17	--	8.6	91	0.52	0.00054	--
VP-1	**2/21/2012**	**5.0-5.5**	**--**	**<200**	**<3.1**	**<3.6**	**<4.2**	**<4.2**	**<3.5**	**<20**	**--**	11	88	0.55	<0.00019	<0.097
VP-2	11/6/2007	5.0-5.5	<250	--	<3.9	<4.6	<5.2	<5.2	<17	<25	ND	10	--	0.88	<0.00024	--
VP-2	LAB DUPLICATE		<250	--	--	--	--	--	--	--	--	10	--	0.88	<0.00024	--
VP-2	10/3/2008 [3]	5.0-5.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VP-2	5/10/2011	5.0-5.5	--	6,500	<4.1	5.1	<5.6	<5.6	<4.7	<27	--	15	84	1.4	0.00039	<0.13
VP-2 DUP	5/10/2011	5.0-5.5	--	13,000	<4.1	7.5	<5.6	<5.6	<4.7	<27	--	15	84	1.4	0.00037	<0.13
VP-2	8/23/2011	5.0-5.5	--	<260	<4.0	<4.7	<5.5	<5.5	<4.5	<26	--	14	84	2.1	<0.00025	<0.13
VP-2	11/2/2011	5.0-5.5	--	<160	<2.6	<3.0	<3.5	<3.5	<2.9	<17	--	12	86	1.9	--	--
VP-2	**2/21/2012**	**5.0-5.5**	**--**	**<170**	**<2.7**	**<3.2**	**<3.6**	**<3.6**	**<3.0**	**<18**	**--**	14	85	1.3	<0.00017	<0.084
VP-2-DUP	**2/21/2012**	**5.0-5.5**	**--**	**<170**	**<2.7**	**<3.2**	**<3.6**	**<3.6**	**<3.0**	**<18**	**--**	15	84	1.4	<0.00017	<0.084
VP-3	11/6/2007	5.0-5.5	<240	--	<3.7	<4.4	<5.0	<5.0	<17	<24	ND	16	--	2.0	<0.00023	--
VP-3	10/3/2008	5.0-5.5	--	<92	<3.6	<4.2	<4.9	<4.9	<4.0	<23	--	16	--	2.4	<0.00022	<0.11
VP-3	LAB DUPLICATE		--	--	--	--	--	--	--	--	--	16	--	2.4	<0.00022	<0.11
VP-3	5/10/2011	5.0-5.5	--	22,000,000	10,000	21,000	4,200	60,000	<1600	<9000	--	14	82	3.8	0.0054	<0.13
VP-3	8/23/2011	5.0-5.5	--	300	<3.9	4.8	<5.2	15	<4.4	<25	--	16	80	3.6	<0.00024	<0.12
VP-3 DUP	8/23/2011	5.0-5.5	--	<250	<3.9	<4.6	<5.2	15	<4.4	<25	--	16	80	3.5	<0.00024	<0.12
VP-3	11/2/2011	5.0-5.5	--	860	<2.6	4.8	<3.5	30	<2.9	<17	--	17	79	3.6	--	--
VP-3	**2/21/2012**	**5.0-5.5**	**--**	**<160**	**<2.6**	**3.6**	**<3.5**	**9.1**	**<2.9**	**<17**	**--**	17	80	3.2	<0.00016	<0.080

TABLE 1

CUMULATIVE VAPOR ANALYTICAL DATA
FORMER SIGNAL OIL SERVICE STATION
(CHEVRON STATION #206145)
800 CENTER STREET
OAKLAND, CALIFORNIA

Sample ID	*Sample Date*	*Probe Depth Interval* *fbg*	*TPHg (by TO-3)*	*TPHg (by TO-15)*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes* [1]	*MTBE*	*Naphthalene*	*Iso-butane* [2] *ppbv*	*Oxygen*	*Nitrogen*	*Carbon Dioxide*	*Methane*	*Helium*
			Concentrations reported in micrograms per cubic meter (µg/m [3] *)*									% Volume				
ESL Table E-2	*Shallow Soil Gas (Residential)*		*10,000*	*10,000*	*84*	*63,000*	*980*	*21,000*	*9,400*	*72*	--	--	--	--	--	--
VP-4	11/6/2007	5.0-5.5	280	--	<3.9	<4.6	<5.2	<5.2	<17	<25	ND	9.7	--	4.0	<0.00024	--
VP-4	10/3/2008	5.0-5.5	--	390	<4.1	<4.9	<5.6	<5.6	<4.6	<27	--	11	--	4.8	0.00028	<0.13
VP-4 DUPLICATE	10/3/2008	5.0-5.5	--	240	<4.2	<5.0	<5.7	<5.7	<4.8	<28	--	11	--	5.0	0.00028	<0.13
VP-4	5/10/2011	5.0-5.5	--	12,000,000	2,600	3,400	160	13,000	<36	<210	--	6.5	86	6.8	0.0034	<0.12
VP-4	8/23/2011	5.0-5.5	--	3,300	14	160	<5.2	89	<4.4	<25	--	14	81	5.2	0.00031	<0.12
VP-4	11/2/2011	5.0-5.5	--	650	<2.5	23	<3.4	16	<2.8	<16	--	13	82	4.4	0.0002	0.09
VP-4 DUP	11/2/2011	5.0-5.5	--	780	2.7	27	<3.4	20	<2.8	<16	--	13	82	4.5	0.0002	--
VP-4	**2/21/2012**	**5.0-5.5**	--	**<160**	**<2.5**	**22**	**<3.4**	**17**	**<2.8**	**<16**	--	17	80	2.7	<0.00016	<0.078
VP-5	11/6/2007	5.0-5.5	120,000 *	2,100,000	<760	<900	<1,000	<1,000	<3,400	<5,000	13,000	16	--	4.4	<0.00024	--
VP-5	10/3/2008	5.0-5.5	--	57,000	<86	<100	<120	<120	<97	<560	--	17	--	4.1	<0.00024	<0.12
VP-5	LAB DUPLICATE		--	65,000	<15	<18	<21	<21	<17	<100	--	--	--	--	--	--
VP-5	5/10/2011 [3]	5.0-5.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VP-5	8/23/2011	5.0-5.5	--	150,000	110	870	9.1	86	4.4	<25	--	19	78	2.5	<0.00024	<0.12
VP-5	11/2/2011	5.0-5.5	--	1,500	<2.6	23	<3.6	8.9	<3.0	<17	--	19	78	2.6	--	--
VP-5	**2/21/2012**	**5.0-5.5**	--	**<170**	**<2.6**	**12**	**<3.6**	**4.8**	**<3.0**	**<17**	--	19	78	2.6	<0.00016	<0.082
VP-6	11/6/2007	5.0-5.5	<260	--	<4.0	<4.8	<5.5	<5.5	<18	<26	ND	20	--	1.0	<0.00025	--
VP-6 DUPLICATE	11/6/2007	5.0-5.5	<250	--	<3.9	<4.6	<5.4	<5.4	<18	<26	ND	20	--	1.0	<0.00025	--
VP-6	10/3/2008	5.0-5.5	--	<97	<3.8	<4.5	<5.2	<5.2	<4.3	<25	--	20	--	0.98	<0.00024	<0.12
VP-6	5/10/2011	5.0-5.5	--	2,200,000	<190	<230	<260	380	<220	<1,200	--	19	79	1.8	<0.00024	<0.12
VP-6	8/23/2011	5.0-5.5	--	980	<4.0	<4.7	<5.5	<5.5	<4.5	<26	--	19	79	2.2	<0.00025	<0.13
VP-6	11/2/2011	5.0-5.5	--	450	<2.6	<3.1	<3.6	<3.6	<3.0	<17	--	20	78	1.9	--	--
VP-6	**2/21/2012**	**5.0-5.5**	**--**	**<160**	**<2.5**	**<3.0**	**<3.4**	**<3.4**	**<2.8**	**<16**	--	21	78	1.0	<0.00016	<0.079

TABLE 1

CUMULATIVE VAPOR ANALYTICAL DATA
FORMER SIGNAL OIL SERVICE STATION
(CHEVRON STATION #206145)
800 CENTER STREET
OAKLAND, CALIFORNIA

Sample ID	Sample Date	Probe Depth Interval (fbg)	TPHg (by TO-3)	TPHg (by TO-15)	Benzene	Toluene	Ethylbenzene	Xylenes [1]	MTBE	Naphthalene	Iso-butane [2]	Oxygen	Nitrogen	Carbon Dioxide	Methane	Helium
			Concentrations reported in micrograms per cubic meter (µg/m ^{3})								ppbv	% Volume				
ESL Table E-2	Shallow Soil Gas (Residential)		10,000	10,000	84	63,000	980	21,000	9,400	72	--	--	--	--	--	--

Notes/Abbreviations:

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method TO-3 for samples collected 11/06/07

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method TO-15 for samples collected 10/03/08

Benzene, toluene, ethylbenzene, xylenes (BTEX), methyl-tertiary butyl ether (MTBE), napthalene by EPA method TO-15

Oxygen, nitrogen, carbon dioxide, methane and helium by ASTM D-1946

fbg = feet below grade

ppbv = parts per billion volume

<x.xxx = Below laboratory method detection limits

ND = Not detected above laboratory method detection limits, detection limit not reported by laboratory

-- = Not analyzed

ESL - Environmental Screening Levela from Table E-2 of *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final* November 2007 (Updated May 2008) prepared by the San Francisco Regional Water Quality Control Board.

1 = Values for highest value of xylenes detected

2 = Constituent used as leak detector for samples collected 11/06/07determined as a Tentatively Identified Compound (TICs) by Modified EPA Method TO-15. Match quality was below 50%.

3 = Water in probe tubing: sample couldn't be collected

* = TPHg samples collected on 10/03/08 from VP-5 were analyzed by EPA Method TO-15 and EPA Method TO-3 for comparison purposes. Results were within laboratory limits.

ATTACHMENT A

SUMMARY OF PREVIOUS ENVIRONMENTAL INVESTIGATIONS AND REMEDIATION

SUMMARY OF PREVIOUS ENVIRONMENTAL INVESTIGATION AND REMEDIATON

FORMER SIGNAL OIL SERVICE STATION (CHEVRON SITE NO. 206145)
800 CENTER STREET, OAKLAND, CALIFORNIA

August 1989 Subsurface Investigation

Subsurface Consultants Inc. (Subsurface) advanced soil borings B1 through B5 to depths ranging from 4.5 to 26 feet below grade (fbg) in the vicinity of the former underground storage tanks (USTs), dispenser island, and sumps along the eastern property boundary. Temporary wells were installed in borings B1 and B3. The highest hydrocarbon concentrations detected in soil included 14,000 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as diesel (TPHd), 31,000 mg/kg total petroleum hydrocarbons as gasoline (TPHg), and 500 mg/kg benzene. A soil sample collected from 3.5 fbg in boring B-5, near the former hydraulic hoist, contained 16,000 mg/kg oil and grease. No TPHd was detected in grab groundwater samples collected from borings B1 and B3. The groundwater sample from boring B3 contained 340 micrograms per liter (µg/L) benzene. Subsurface noted in their report that the former USTs had been removed in 1973 when the station closed based on a permit search at city of Oakland. Additional information is available in Subsurface's October 13, 1989 *Preliminary Hydrocarbon Contamination Assessment*.

October 1995 Subsurface Investigation

Groundwater Technology Inc. (GTI) advanced borings SB-1 through SB-3 and installed groundwater monitoring wells MW-1 through MW-4. The highest hydrocarbon concentrations detected in soil included 14,000 mg/kg TPHg and 120 mg/kg benzene. Additional information is available in GTI's November 14, 1995 *Additional Site Assessment Report*.

March 1996 Subsurface Investigation

Pacific Environmental Group (PEG) advanced soil borings P-1 through P-9. The highest hydrocarbon concentrations detected in soil included 5,400 mg/kg TPHg and 41 mg/kg benzene in boring P-3. The highest hydrocarbon concentrations detected in grab-groundwater samples included 800,000 µg/L TPHg and 13,000 µg/L benzene in boring P-2, located in Center Street. Additional information is available in PEG's April 18, 1996 *Soil and Groundwater Investigation*.

December 1996 Well Installation

PEG installed offsite wells MW-5 through MW-7 and drilled a boring for MW-8. Well MW-8 was not installed because no evidence of petroleum hydrocarbons was observed. No TPHg or benzene were detected in soil. Additional information is available in PEG's January 24, 1997 *Soil and Groundwater Investigation*.

1997 Soil Vapor Sampling

PEG advanced soil vapor points SV-1 through SV-5 to depths up to 12 fbg. The highest hydrocarbon concentrations detected in soil included 8,000 mg/kg TPHg and 52 mg/kg benzene. The highest hydrocarbon concentrations detected in soil vapor included 50,000 µg/L TPH and 65 µg/L benzene. Hydrocarbon concentrations in soil vapor were highest between 6 and 10 fbg. Additional information is available in PEG's July 28, 1997 *Results of the Soil Vapor Investigation*.

1999/2001 Site Demolition

Gettler-Ryan, Inc. (G-R) removed the dispenser island, sumps, the hydraulic hoist, building foundations, garbage enclosure, yard lights and asphalt. An orphaned 1,000-gallon UST, an orphaned 550-gallon used-oil UST, and a buried 55-gallon drum (apparently a makeshift used oil UST) were encountered and removed. This work was initiated in September 1999 and postponed until April 2001, while Chevron and the property owner determined UST ownership. The highest hydrocarbon concentrations detected in soil included 630 mg/kg TPHg and 10 mg/kg benzene in the former gasoline UST cavity. Additional information is available in Delta Environmental Consultants, Inc. (Delta) May 21, 2001 *Compliance Soil Sampling During Removal of Underground Storage Tanks*.

2002 Monitoring Well Installation

G-R installed groundwater monitoring well MW-8 offsite. No TPHd, TPHg, benzene, or methyl tertiary butyl ether (MTBE) were detected in soil. Additional information is available in Delta's April 11, 2002 *Monitoring Well Installation Report*.

2002 Subsurface Investigation

G-R advanced soil borings GP-1 through GP-23 to approximately 12 fbg. Soil samples were collected at 5 and 10 fbg in each boring to profile soil for disposal for a planned source mass remedial excavation. The highest hydrocarbon concentrations detected in soil included 19,000 mg/kg TPHg and 83 mg/kg benzene in boring GP-9 at 10 fbg. The highest MTBE concentration detected in soil was 170 mg/kg in boring GP-14 at 10 fbg. Additional information is available in G-R's July 31, 2002 *Soil Borings*.

November 2002 Remedial Excavation

G-R excavated hydrocarbon-bearing soil in the areas of the former USTs, dispenser island, hydraulic lift, and sumps to a total depth of approximately 12 fbg, with a maximum depth of 14 fbg in one location. Approximately 1,584 tons of hydrocarbon-bearing soil were removed and transported to Allied Waste Landfill in Manteca, California. Thirty-four confirmation soil samples were collected. Well MW-1 was destroyed by excavation during this event. Prior to backfilling, approximately 900 pounds of oxygen releasing compound was placed in the

excavation bottoms, and Class II aggregate base was used for backfill. Additional information is available in Delta's January 23, 2003 *Well Destruction, Over-Excavation and Soil Sampling Report*.

2003 Soil Borings and Well installation

Delta advanced soil borings GP-24 through GP-30 to approximately 16 fbg. Monitoring well MW-1A was installed near former monitoring well MW-1. The highest hydrocarbon concentrations detected in soil included 1,600 mg/kg TPHd, 16,000 mg/kg TPHg, 92 mg/kg benzene, and 150 mg/kg MTBE in boring GP-30 at 10 fbg. A sample from 15 fbg in GP-27 also contained 1,600 mg/kg TPHd. Additional information is available in Delta's May 15, 2003 *Soil Boring and Well Installation Report*.

October and November 2004 Geoprobe and CPT Investigation

Cambria Environmental Technology advanced cone penetration test (CPT) borings CPT-1 through CPT-5 and direct push borings C-1 through C-9 to further define the lateral and vertical extents of hydrocarbons in soil. All borings were advanced onsite except CPT-5, which was located offsite in Center Street. Vertical delineation of hydrocarbons in soil was achieved between 15 and 20 fbg, except for concentrations just above TPHg detection limits between 25 and 50 fbg. Anomalous hydrocarbon grab-groundwater analytical results were detected in deeper groundwater samples. It was surmised that these detections may result from cross contamination during drilling. Additional information is in Cambria's January 14, 2005 *Subsurface Investigation Report*.

2007 Well Installation and Subsequent Sampling

Conestoga-Rovers & Associates, Inc. (CRA) installed clustered monitoring wells MW-9 through MW-17 to further define the vertical extent of hydrocarbons in groundwater. Wells MW-9 through MW-16 were screened from 35 to 40 fbg or from 55 to 60 fbg to collect depth-discrete groundwater samples. Well MW-17 was screened from 70 to 75 fbg to vertically delineate dissolved-phase hydrocarbons. Dissolved-phase hydrocarbons were detected in all wells and were highest in well MW-14 screened from 55-60 fbg. Subsequent groundwater monitoring and sampling events indicated that hydrocarbon concentrations were decreasing in these wells. Additional information is available in CRA's May 14, 2007 *Well Installation Report* and October 1, 2007 *Third Multi-Level Groundwater Monitoring Report*.

October 2007 Soil Vapor Probe Installation

CRA installed soil vapor probes VP-1 through VP-6 and on November 6, 2007 collected soil vapor samples to evaluate the potential for vapor intrusion to proposed residential housing units. TPHg was detected in vapor probes VP-1, VP-4 and VP-5 at up to 2,100,000 micrograms per cubic meter ($\mu g/m^3$) in VP-5. No benzene was detected in soil vapor. Additional information is available in CRA's January 23, 2008 *Feasibility Study/Corrective Action Plan Addendum*.

October 2008 Soil Vapor Investigation

CRA re-sampled vapor probes VP-1 and VP-3 through VP-6 to confirm initial results. VP-2 could not be sampled due to water in the tubing. TPHg was detected in vapor probes VP-4 and VP-5 and was highest in VP-5 at 120,000 µg/m^3. No benzene was detected. Additional information is available in CRA's November 18, 2008 *Soil Vapor Investigation Results*.

January 2010 Surficial Sampling

CRA collected soil samples at the surface and at depths of 0.5 and 2.5 fbg from 12 locations, the majority of which are designated as future landscaping areas where potential direct human contact may occur. The locations were designated SS-1 through SS-12. The scope of work was based on California's Department of Toxic Substances Control (DTSC) 2006 *Interim Guidance Evaluation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers*. The highest lead concentrations of up to 5760 mg/kg were detected at SS-1, SS-2, SS-3, and SS-6, located in the northern portion of the site. In December 2009, CRA conducted a Department of Water Resources (DWR) file review and identified one irrigation well within 1/2-mile radius of the site, located approximately 2,100 feet upgradient of the site. The well was installed in 1915 and has a total depth of 55 fbg. Additional details are available in CRA's February 15, 2010 *Surficial Soil Lead Results.*

2011 Air Sparge Pilot Test

A low flow air sparge (LFAS) pilot test began on January 5, 2011 and operated continuously until it was shutdown on April 8, 2011. Air was injected sequentially into new sparge wells AS-1 through AS-8 for approximately 60 minutes per sparge cycle. The following conclusions were made based on the results of the LFAS pilot test: (1) Dissolved petroleum hydrocarbon concentrations generally declined from before the pilot test to after the test; (2) Hydrocarbon concentrations in soil vapor samples collected after the test increased by several orders of magnitude from concentrations detected prior to testing; (3) Vapor samples were collected from the monitoring well casings during the pilot test to confirm air sparging was performed at a sufficiently low flow rate to prevent stripping of hydrocarbons from the saturated zone into the vadose zone. Details of the pilot test are available in CRA's July 6, 2011 *Low Flow Air Sparge Pilot Test* report.

ATTACHMENT B

LABORATORY ANALYTICAL REPORTS

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3/8/2012

Ms. Kiersten Hoey
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: CHEVRON 20-6145
Project #: 312002
Workorder #: 1202539A

Dear Ms. Kiersten Hoey

The following report includes the data for the above referenced project for sample(s) received on 2/24/2012 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

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WORK ORDER #: 1202539A

Work Order Summary

CLIENT:	Ms. Kiersten Hoey Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-0700	**P.O. #**	312002
FAX:	510-420-9170	**PROJECT #**	312002 CHEVRON 20-6145
DATE RECEIVED:	02/24/2012	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	03/08/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	VP-1	Modified TO-15	3.0 "Hg	5 psi
02A	VP-2	Modified TO-15	6.0 "Hg	5 psi
03A	VP-2-DUP	Modified TO-15	6.0 "Hg	5 psi
04A	VP-3	Modified TO-15	5.0 "Hg	5 psi
05A	VP-4	Modified TO-15	4.0 "Hg	5 psi
06A	VP-5	Modified TO-15	5.5 "Hg	5 psi
07A	VP-6	Modified TO-15	4.5 "Hg	5 psi
08A	TRIP BLANK	Modified TO-15	29.0 "Hg	5 psi
09A	Lab Blank	Modified TO-15	NA	NA
09B	Lab Blank	Modified TO-15	NA	NA
10A	CCV	Modified TO-15	NA	NA
10B	CCV	Modified TO-15	NA	NA
11A	LCS	Modified TO-15	NA	NA
11AA	LCSD	Modified TO-15	NA	NA
11B	LCS	Modified TO-15	NA	NA
11BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 03/08/12

Laboratory Director

Certfication numbers: AZ Licensure AZ0719, CA NELAP - 02110CA, LA NELAP - 02089,
NY NELAP - 11291, TX NELAP - T104704434-11-3, UT NELAP -CA009332011-1, WA NELAP - C935
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/11 , Expiration date: 06/30/12.
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
EPA Method TO-15
Conestoga-Rovers Associates (CRA)
Workorder# 1202539A

Eight 1 Liter Summa Canister (100% Certified) samples were received on February 24, 2012. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

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

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

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

Client Sample ID: VP-1

Lab ID#: 1202539A-01A

No Detections Were Found.

Client Sample ID: VP-2

Lab ID#: 1202539A-02A

No Detections Were Found.

Client Sample ID: VP-2-DUP

Lab ID#: 1202539A-03A

No Detections Were Found.

Client Sample ID: VP-3

Lab ID#: 1202539A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	0.80	0.96	3.0	3.6
m,p-Xylene	0.80	2.1	3.5	9.1
o-Xylene	0.80	0.84	3.5	3.6

Client Sample ID: VP-4

Lab ID#: 1202539A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	0.78	5.9	2.9	22
m,p-Xylene	0.78	4.0	3.4	17
o-Xylene	0.78	0.84	3.4	3.6

Client Sample ID: VP-5

Lab ID#: 1202539A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	0.82	3.2	3.1	12
m,p-Xylene	0.82	1.1	3.6	4.8
o-Xylene	0.82	0.91	3.6	3.9

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

Client Sample ID: VP-6

Lab ID#: 1202539A-07A

No Detections Were Found.

Client Sample ID: TRIP BLANK

Lab ID#: 1202539A-08A

No Detections Were Found.

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Client Sample ID: VP-1

Lab ID#: 1202539A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022921**	**Date of Collection: 2/21/12 1:55:00 PM**	
Dil. Factor:	**1.94**	**Date of Analysis: 2/29/12 06:52 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.97	Not Detected	3.1	Not Detected
Ethyl Benzene	0.97	Not Detected	4.2	Not Detected
Toluene	0.97	Not Detected	3.6	Not Detected
m,p-Xylene	0.97	Not Detected	4.2	Not Detected
o-Xylene	0.97	Not Detected	4.2	Not Detected
Methyl tert-butyl ether	0.97	Not Detected	3.5	Not Detected
Naphthalene	3.9	Not Detected	20	Not Detected
TPH ref. to Gasoline (MW=100)	48	Not Detected	200	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: VP-2

Lab ID#: 1202539A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022922**	**Date of Collection: 2/21/12 11:39:00 AM**	
Dil. Factor:	**1.68**	**Date of Analysis: 2/29/12 07:28 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.84	Not Detected	2.7	Not Detected
Ethyl Benzene	0.84	Not Detected	3.6	Not Detected
Toluene	0.84	Not Detected	3.2	Not Detected
m,p-Xylene	0.84	Not Detected	3.6	Not Detected
o-Xylene	0.84	Not Detected	3.6	Not Detected
Methyl tert-butyl ether	0.84	Not Detected	3.0	Not Detected
Naphthalene	3.4	Not Detected	18	Not Detected
TPH ref. to Gasoline (MW=100)	42	Not Detected	170	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: VP-2-DUP

Lab ID#: 1202539A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022923**	**Date of Collection:**	**2/21/12 11:39:00 AM**
Dil. Factor:	**1.68**	**Date of Analysis:**	**2/29/12 07:53 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.84	Not Detected	2.7	Not Detected
Ethyl Benzene	0.84	Not Detected	3.6	Not Detected
Toluene	0.84	Not Detected	3.2	Not Detected
m,p-Xylene	0.84	Not Detected	3.6	Not Detected
o-Xylene	0.84	Not Detected	3.6	Not Detected
Methyl tert-butyl ether	0.84	Not Detected	3.0	Not Detected
Naphthalene	3.4	Not Detected	18	Not Detected
TPH ref. to Gasoline (MW=100)	42	Not Detected	170	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: VP-3

Lab ID#: 1202539A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022924**	**Date of Collection: 2/21/12 1:35:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 2/29/12 08:25 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.80	Not Detected	2.6	Not Detected
Ethyl Benzene	0.80	Not Detected	3.5	Not Detected
Toluene	0.80	0.96	3.0	3.6
m,p-Xylene	0.80	2.1	3.5	9.1
o-Xylene	0.80	0.84	3.5	3.6
Methyl tert-butyl ether	0.80	Not Detected	2.9	Not Detected
Naphthalene	3.2	Not Detected	17	Not Detected
TPH ref. to Gasoline (MW=100)	40	Not Detected	160	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: VP-4

Lab ID#: 1202539A-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p030107**	**Date of Collection:**	**2/21/12 12:08:00 PM**
Dil. Factor:	**1.55**	**Date of Analysis:**	**3/1/12 11:09 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.78	Not Detected	2.5	Not Detected
Ethyl Benzene	0.78	Not Detected	3.4	Not Detected
Toluene	0.78	5.9	2.9	22
m,p-Xylene	0.78	4.0	3.4	17
o-Xylene	0.78	0.84	3.4	3.6
Methyl tert-butyl ether	0.78	Not Detected	2.8	Not Detected
Naphthalene	3.1	Not Detected	16	Not Detected
TPH ref. to Gasoline (MW=100)	39	Not Detected	160	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: VP-5

Lab ID#: 1202539A-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p030108**	**Date of Collection:**	**2/21/12 1:02:00 PM**
Dil. Factor:	**1.64**	**Date of Analysis:**	**3/1/12 11:31 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.82	Not Detected	2.6	Not Detected
Ethyl Benzene	0.82	Not Detected	3.6	Not Detected
Toluene	0.82	3.2	3.1	12
m,p-Xylene	0.82	1.1	3.6	4.8
o-Xylene	0.82	0.91	3.6	3.9
Methyl tert-butyl ether	0.82	Not Detected	3.0	Not Detected
Naphthalene	3.3	Not Detected	17	Not Detected
TPH ref. to Gasoline (MW=100)	41	Not Detected	170	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	102	70-130

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Client Sample ID: VP-6

Lab ID#: 1202539A-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p030109**	**Date of Collection:**	**2/21/12 12:43:00 PM**
Dil. Factor:	**1.58**	**Date of Analysis:**	**3/1/12 11:53 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.79	Not Detected	2.5	Not Detected
Ethyl Benzene	0.79	Not Detected	3.4	Not Detected
Toluene	0.79	Not Detected	3.0	Not Detected
m,p-Xylene	0.79	Not Detected	3.4	Not Detected
o-Xylene	0.79	Not Detected	3.4	Not Detected
Methyl tert-butyl ether	0.79	Not Detected	2.8	Not Detected
Naphthalene	3.2	Not Detected	16	Not Detected
TPH ref. to Gasoline (MW=100)	40	Not Detected	160	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: TRIP BLANK

Lab ID#: 1202539A-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p030110**	**Date of Collection: 2/21/12**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/1/12 12:13 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
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Naphthalene	2.0	Not Detected	10	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1202539A-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022910**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/29/12 01:05 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
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Naphthalene	2.0	Not Detected	10	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1202539A-09B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p030106**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/1/12 10:33 AM**	

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
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Naphthalene	2.0	Not Detected	10	Not Detected
TPH ref. to Gasoline (MW=100)	25	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: CCV

Lab ID#: 1202539A-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022903**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/29/12 09:40 AM**	

Compound	%Recovery
Benzene	94
Ethyl Benzene	98
Toluene	92
m,p-Xylene	101
o-Xylene	103
Methyl tert-butyl ether	108
Naphthalene	104
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	96	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: CCV

Lab ID#: 1202539A-10B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p030102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/1/12 08:50 AM**	

Compound	%Recovery
Benzene	96
Ethyl Benzene	97
Toluene	95
m,p-Xylene	100
o-Xylene	101
Methyl tert-butyl ether	105
Naphthalene	86
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCS

Lab ID#: 1202539A-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022905**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/29/12 10:31 AM**	

Compound	**%Recovery**
Benzene	104
Ethyl Benzene	106
Toluene	99
m,p-Xylene	110
o-Xylene	111
Methyl tert-butyl ether	119
Naphthalene	83
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	98	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: LCSD

Lab ID#: 1202539A-11AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022908**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/29/12 11:51 AM**	

Compound	**%Recovery**
Benzene	106
Ethyl Benzene	103
Toluene	100
m,p-Xylene	107
o-Xylene	110
Methyl tert-butyl ether	115
Naphthalene	67
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: LCS

Lab ID#: 1202539A-11B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p030103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/1/12 09:20 AM**	

Compound	**%Recovery**
Benzene	102
Ethyl Benzene	103
Toluene	96
m,p-Xylene	107
o-Xylene	108
Methyl tert-butyl ether	114
Naphthalene	84
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: LCSD

Lab ID#: 1202539A-11BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p030104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/1/12 09:37 AM**	

Compound	**%Recovery**
Benzene	102
Ethyl Benzene	101
Toluene	99
m,p-Xylene	104
o-Xylene	107
Methyl tert-butyl ether	115
Naphthalene	85
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

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

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3/9/2012

Ms. Kiersten Hoey
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: CHEVRON 20-6145
Project #: 312002
Workorder #: 1202539B

Dear Ms. Kiersten Hoey

The following report includes the data for the above referenced project for sample(s) received on 2/24/2012 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

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WORK ORDER #: 1202539B

Work Order Summary

CLIENT:	Ms. Kiersten Hoey Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Mr. Ian Hull Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-0700	**P.O. #**	312002
FAX:	510-420-9170	**PROJECT #**	312002 CHEVRON 20-6145
DATE RECEIVED:	02/24/2012	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	03/09/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	VP-1	Modified ASTM D-1946	3.0 "Hg	5 psi
02A	VP-2	Modified ASTM D-1946	6.0 "Hg	5 psi
03A	VP-2-DUP	Modified ASTM D-1946	6.0 "Hg	5 psi
04A	VP-3	Modified ASTM D-1946	5.0 "Hg	5 psi
05A	VP-4	Modified ASTM D-1946	4.0 "Hg	5 psi
06A	VP-5	Modified ASTM D-1946	5.5 "Hg	5 psi
07A	VP-6	Modified ASTM D-1946	4.5 "Hg	5 psi
08A	TRIP BLANK	Modified ASTM D-1946	29.0 "Hg	5 psi
09A	Lab Blank	Modified ASTM D-1946	NA	NA
09B	Lab Blank	Modified ASTM D-1946	NA	NA
10A	LCS	Modified ASTM D-1946	NA	NA
10AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 03/09/12

Laboratory Director

Certfication numbers: AZ Licensure AZ0719, CA NELAP - 02110CA, LA NELAP - 02089,
NY NELAP - 11291, TX NELAP - T104704434-11-3, UT NELAP -CA009332011-1, WA NELAP - C935
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/11 , Expiration date: 06/30/12.
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# 1202539B

Eight 1 Liter Summa Canister (100% Certified) samples were received on February 24, 2012. 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

The trip blank sample TRIP BLANK has reportable levels of Oxygen present.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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

Client Sample ID: VP-1

Lab ID#: 1202539B-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.19	11
Nitrogen	0.19	88
Carbon Dioxide	0.019	0.55

Client Sample ID: VP-2

Lab ID#: 1202539B-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	14
Nitrogen	0.17	85
Carbon Dioxide	0.017	1.3

Client Sample ID: VP-2-DUP

Lab ID#: 1202539B-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	15
Nitrogen	0.17	84
Carbon Dioxide	0.017	1.4

Client Sample ID: VP-3

Lab ID#: 1202539B-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	17
Nitrogen	0.16	80
Carbon Dioxide	0.016	3.2

Client Sample ID: VP-4

Lab ID#: 1202539B-05A

Compound	Rpt. Limit (%)	Amount (%)

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

Client Sample ID: VP-4

Lab ID#: 1202539B-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	17
Nitrogen	0.16	80
Carbon Dioxide	0.016	2.7

Client Sample ID: VP-5

Lab ID#: 1202539B-06A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	19
Nitrogen	0.16	78
Carbon Dioxide	0.016	2.6

Client Sample ID: VP-6

Lab ID#: 1202539B-07A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	21
Nitrogen	0.16	78
Carbon Dioxide	0.016	1.0

Client Sample ID: TRIP BLANK

Lab ID#: 1202539B-08A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.24
Nitrogen	0.10	100

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Client Sample ID: VP-1

Lab ID#: 1202539B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022606**	**Date of Collection: 2/21/12 1:55:00 PM**	
Dil. Factor:	**1.94**	**Date of Analysis: 2/26/12 01:12 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Oxygen	0.19	11
Nitrogen	0.19	88
Carbon Dioxide	0.019	0.55
Methane	0.00019	Not Detected
Helium	0.097	Not Detected

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

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Client Sample ID: VP-2

Lab ID#: 1202539B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022607**	**Date of Collection: 2/21/12 11:39:00 AM**	
Dil. Factor:	**1.68**	**Date of Analysis: 2/26/12 01:33 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	14
Nitrogen	0.17	85
Carbon Dioxide	0.017	1.3
Methane	0.00017	Not Detected
Helium	0.084	Not Detected

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

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Client Sample ID: VP-2-DUP

Lab ID#: 1202539B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022608**	**Date of Collection: 2/21/12 11:39:00 AM**	
Dil. Factor:	**1.68**	**Date of Analysis: 2/26/12 01:56 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Oxygen	0.17	15
Nitrogen	0.17	84
Carbon Dioxide	0.017	1.4
Methane	0.00017	Not Detected
Helium	0.084	Not Detected

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

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Client Sample ID: VP-3

Lab ID#: 1202539B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022609**	**Date of Collection: 2/21/12 1:35:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 2/26/12 02:18 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Oxygen	0.16	17
Nitrogen	0.16	80
Carbon Dioxide	0.016	3.2
Methane	0.00016	Not Detected
Helium	0.080	Not Detected

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

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Client Sample ID: VP-4

Lab ID#: 1202539B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022610**	**Date of Collection: 2/21/12 12:08:00 PM**	
Dil. Factor:	**1.55**	**Date of Analysis: 2/26/12 02:40 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	17
Nitrogen	0.16	80
Carbon Dioxide	0.016	2.7
Methane	0.00016	Not Detected
Helium	0.078	Not Detected

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

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Client Sample ID: VP-5

Lab ID#: 1202539B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022611**	**Date of Collection: 2/21/12 1:02:00 PM**	
Dil. Factor:	**1.64**	**Date of Analysis: 2/26/12 03:02 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	19
Nitrogen	0.16	78
Carbon Dioxide	0.016	2.6
Methane	0.00016	Not Detected
Helium	0.082	Not Detected

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

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Client Sample ID: VP-6

Lab ID#: 1202539B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022612**	**Date of Collection: 2/21/12 12:43:00 PM**	
Dil. Factor:	**1.58**	**Date of Analysis: 2/26/12 03:26 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	21
Nitrogen	0.16	78
Carbon Dioxide	0.016	1.0
Methane	0.00016	Not Detected
Helium	0.079	Not Detected

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

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Client Sample ID: TRIP BLANK

Lab ID#: 1202539B-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022605**	**Date of Collection: 2/21/12**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/26/12 12:44 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.24
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)

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Client Sample ID: Lab Blank

Lab ID#: 1202539B-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022604**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/26/12 12:21 PM**	

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

Container Type: NA - Not Applicable

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Client Sample ID: Lab Blank

Lab ID#: 1202539B-09B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022603b**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/26/12 11:59 AM**	

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

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1202539B-10A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022602**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/26/12 11:35 AM**	

Compound	%Recovery
Oxygen	100
Nitrogen	101
Carbon Dioxide	102
Methane	98
Helium	95

Container Type: NA - Not Applicable

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Client Sample ID: LCSD

Lab ID#: 1202539B-10AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9022620**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/27/12 09:36 AM**	

Compound	%Recovery
Oxygen	100
Nitrogen	100
Carbon Dioxide	100
Methane	99
Helium	93

Container Type: NA - Not Applicable