CONESTOGA-ROVERS & ASSOCIATES

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TRANSMITTAL

DATE: April 27, 2012

REFERENCE NO.: 060057

PROJECT NAME: Chevron 90917
Case No. RO 0000439

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

RECEIVED
11:52 am, Apr 30, 2012
Alameda County
Environmental Health

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

Sent via:
- ☐ Mail
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- ☐ Same Day Courier
- ☒ Other FTP/GeoTracker upload/Electronic upload

QUANTITY	DESCRIPTION
1	Soil Vapor and Ambient Air Sampling Report

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

COMMENTS:
Please call Nathan Lee at (510) 420-3333 if you have any questions or concerns.
Thank you.

Copy to: Mr. Dave Patten, Chevron
Copy to:

Completed by: Nathan Lee [Please Print] Signed: Nathan Lee

Filing: **Correspondence File**

Dave Patten
Project Manager
Marketing Business Unit

Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 790-6491
dpatten@chevron.com

Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Chevron Service Station No. 9-0917
5280 Hopyard Road
Pleasanton, CA

I have reviewed the attached report dated April 27, 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,

Mark E. Horn for/

Dave Patten
Project Manager

Attachment: Report

SOIL VAPOR AND AMBIENT AIR SAMPLING REPORT

CHEVRON STATION No. 90917
5280 HOPYARD ROAD
PLEASANTON, CALIFORNIA
Fuel Leak Case No. RO 0000439

Prepared for:

Mr. Jerry Wickham P.G.
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Prepared by:
Conestoga-Rovers & Associates

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APRIL 27, 2012
REF. NO. 060057 (18)
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SOIL VAPOR AND AMBIENT AIR SAMPLING REPORT

CHEVRON STATION No. 9-0917
5280 HOPYARD ROAD
PLEASANTON, CALIFORNIA
Fuel Leak Case RO 0000439

Oliver Yan

Nathan Lee, PG 8486

Prepared by:
Conestoga-Rovers & Associates

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APRIL 27, 2012
REF. NO. 060057 (18)
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1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) is submitting this Soil Vapor and Ambient Air Sampling Report on behalf of Chevron Environmental Management Company (Chevron) to document additional sampling of sub-slab vapor probes, vapor probes, and indoor and outdoor air at the site referenced above. CRA performed this work in accordance with the sampling protocol used during the July 2010 sampling as requested by the Alameda County Environmental Health (ACEH) in a letter dated January 9, 2012 (Appendix A). The site background, a summary of sampling activities and CRA's conclusions and recommendations are presented below.

2.0 SITE BACKGROUND

2.1 SITE DESCRIPTION

The site is an active Chevron station located at the southern corner of the intersection of Hopyard Road and Owens Drive in Pleasanton, California (Figure 1). Site facilities include a station building, car wash, four underground storage tanks (USTs) and six dispenser islands under a common canopy (Figure 2). A Shell-branded service station is located to the east across Hopyard Road and has an open case with ACEH. Surrounding land use is primarily commercial.

2.2 ENVIRONMENTAL SUMMARY

A total of 5 soil borings, 9 groundwater monitoring wells, 1 extraction well, 6 soil vapor wells and 3 sub-slab vapor probes have been installed. A remedial excavation was also conducted. A summary of environmental investigations conducted to date at the site is included as Appendix B.

2.3 SITE GEOLOGY

The site is located in the Dublin Sub-Basin (DSB) of the Livermore Valley Groundwater Basin. Soils in this sub-basin consist mainly of Holocene age valley-fill deposits with a surficial clay layer cap up to 40 feet thick. Alluvial fan and stream deposits consisting of unconsolidated sand, gravel, silt and clay have been encountered below the clay cap in

this sub-basin. The Park Fault trends east-northeast approximately 1 mile south of the site.[1]

Based on historic and recent boring logs, sediments observed beneath the site consist of clay, silty clay, clayey silt, sandy silt and silt to the maximum explored depth of 60 feet below grade (fbg).

2.4 SITE HYDROGEOLOGY

The upper, unconfined groundwater in the DSB generally flows southward. Aquifers in the DSB are generally flat lying; however, there is a drop in groundwater elevation of approximately 50 feet across the Parks Fault.[2] Groundwater depth at the site ranges between approximately 5 and 11 fbg.

3.0 SOIL VAPOR AND AMBIENT AIR SAMPLING

As requested by ACEH, on March 6, 2012 CRA collected vapor samples from the sub-slab vapor probes SSVP-3 through SSVP-5, soil vapor probe VP-6, from indoor air (IA-1 and IA-2) , and from outdoor ambient air (OA-1) to confirm previous sampling results from the July 2010 event. Sampling locations are illustrated on Figure 3. A chemical survey was conducted and the Department of Toxic Substances Control Building Survey Form is included as Appendix C.

3.1 SAMPLING PROCEDURES

Soil Vapor

Vapor samplesVP-6 and VP-6 DUP were collected in one-liter Summa™ canisters connected directly to the vapor probe tubing. 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-steel manifold. A flow rate of 167 milliliters per minute (mL/min) was used to collect the sample.

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,

1 Pacific Environmental Group, Inc., *Soil and Groundwater Investigation*, dated August 11, 1997.

2 Evaluation of Groundwater Resources: Livermore and Sunol Valleys, Department of the Water Resources Bulletin Number 118-2, June 1974

opening the purge Summa™ canister to establish a vacuum inside the sampling train and waiting to ensure the vacuum remained stable for 10 minutes. The "shut-in" test reduces the potential for ambient air to infiltrate into the sample.

After the "shut in" test was completed, the probe tubing was connected to the sampling train and approximately three probe tubing volumes of stagnant air were purged. After purging, the sample Summa™ canister valve was opened. The Summa™ canister vacuum was used to draw soil vapor through the flow controller and into the sample canister until a negative pressure of approximately 5-inches of mercury was observed on the vacuum gauge.

In accordance with the DTSC *Advisory-Active Soil Gas Investigations* guidance document, leak testing was performed during sampling. Laboratory grade helium was utilized to determine if ambient air was entering the Summa™ canisters during sampling. A shroud was used to surround the vapor sampling equipment and the connections between the sampling equipment and the vapor probe tubing. A helium detector was also placed inside the shroud to quantify helium concentrations inside the shroud. An atmosphere of approximately 40 percent helium was created and maintained for the duration of vapor sampling.

Sub-Slab Vapor

CRA collected sub-slab vapor samples from SSVP-3, SSVP-4, and SSVP-5. A "shut-in" test was performed prior to connecting the sampling equipment to the sub-slab vapor probes. 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 for 10 minutes.

After the "shut in" test was completed, the probes were connected to the sampling train and approximately three probe volumes of stagnant air were purged. After purging, a helium shroud with an atmosphere of approximately 40 percent helium atmosphere was established. The Summa™ canister was opened and the sub-slab probe was sampled. The Summa™ canister vacuum was used to draw soil vapor through the flow controller at a flow rate of 167 mL/min and into the sample canister until a negative pressure of approximately five-inches of mercury was observed on the vacuum gauge. A helium detector was used to continually maintain the helium atmosphere around the entire sampling train.

Indoor and Outdoor Ambient Air

Indoor air samples IA-1 and IA-2 were collected in the breathing zone inside the station building. Ambient air sample OA-1 was collected from outside the station building.

Samples were collected in 6- liter Summa™ canisters at a flow rate of 11.5 mL/min until a negative pressure of approximately 5-inches of mercury was observed on the vacuum gauge.

All samples were labeled, logged on a chain-of-custody, stored at ambient temperature, and shipped to Air Toxics LTD. of Fresno, California for analysis.

3.2 LABORATORY ANALYSES

Vapor Chemical Analysis: Vapor samples were analyzed for the following:

- Total Petroleum Hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes and methyl tert butyl ether, and naphthalene by EPA Method TO-15 (GC/MS)
- Oxygen (O_2), carbon dioxide (CO_2), methane (CH_4), nitrogen (N_2), and helium by ASTM D-1946 (GC/TCD)

4.0 DISTRIBUTION OF HYDROCARBONS IN SOIL VAPOR AND AMBIENT AIR

Results from soil vapor samples are presented in Table A below and compared to ESLs.[3] Hydrocarbon concentrations in soil vapor only exceed ESLs in VP-6. The laboratory analytical reports for vapor are included as Appendix D and cumulative vapor analytical data is presented in Table 1.

[3] Environmental Screening Levels (ESLs) Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns from the *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* by the California Regional Water Quality Control Board, San Francisco Bay Region Interim Final November 2007, revised May 2008, Table E-2.

TABLE A: SOIL VAPOR ANALYTICAL TABLE (HYDROCARBONS)									
Sample ID	*Date*	*Depth (fbg)*	*TPHg (by TO-15)*	*Benzene*	*Toluene*	*Ethyl benzene*	*Total Xylenes[1]*	*MTBE*	*Naphthalene*
			Reported in microgram per cubic meter (ug/m³)						
ESLs Shallow Soil Gas (C/I)[4]			***29,000***	***280***	***180,000***	***3,300***	***58,000***	***31,000***	***240***
ESLs Shallow Soil Gas (R)[4]			***10,000***	***84***	***63,000***	***980***	***21,000***	***9,400***	***72***
VP-6	3/6/2012	5.5	**120,000,000**	**16,000**	<4,200	<4,900	<4,900	<4,000	<23,000
V-6 DUP	3/6/2012	5.5	**180,000,000**	**21,000**	<3,200	<3,600	<3,600	<3,000	<18,000
SSVP-3	3/6/2012	0.5	<170	<2.6	<3.1	<3.6	<3.6	<3.0	<17
SSVP-4	3/6/2012	0.5	<160	<2.5	<2.9	<3.4	<3.4	<2.8	<16
SSVP-5	3/6/2012	0.5	250	<2.5	<2.9	<3.4	<3.4	<2.8	<16
IA-1	3/6/2012	—	<180	<2.8	<2.8	<3.8	<3.8	<3.2	<18
IA-2	3/6/2012	--	<180	<3.3	<3.3	<3.8	<3.8	<3.2	<18
OA-1	3/6/2012	--	<170	<2.6	3.8	<3.6	<3.6	<3.0	<17
[1] = Highest xylene, either m, p-xylene or o-xylene, concentration reported									

No helium was detected in any sub-slab or vapor probe samples. The absence of helium indicates that no ambient air entered the canisters during the sampling process.

5.0 CONCLUSIONS AND RECOMMENDATIONS

- Soil vapor hydrocarbon concentrations in VP-6 are the same order of magnitude as those detected previously detected in VP1 and SB8.
- TPHg was detected in sub-slab probe SSVP-5 (at concentrations 100 times lower then commercial/industrial ESL), but was not detected in indoor air.
- No hydrocarbons were detected in indoor air.
- Toluene was detected in outside ambient air.
- The results from this investigation demonstrate that sub-slab soil vapor, indoor air and ambient air concentrations indicate that a vapor intrusion pathway is not likely complete. These results are very similar to the results from the investigation conducted in July 2010.

CRA recommends and will submit a low-risk case closure request.

FIGURES

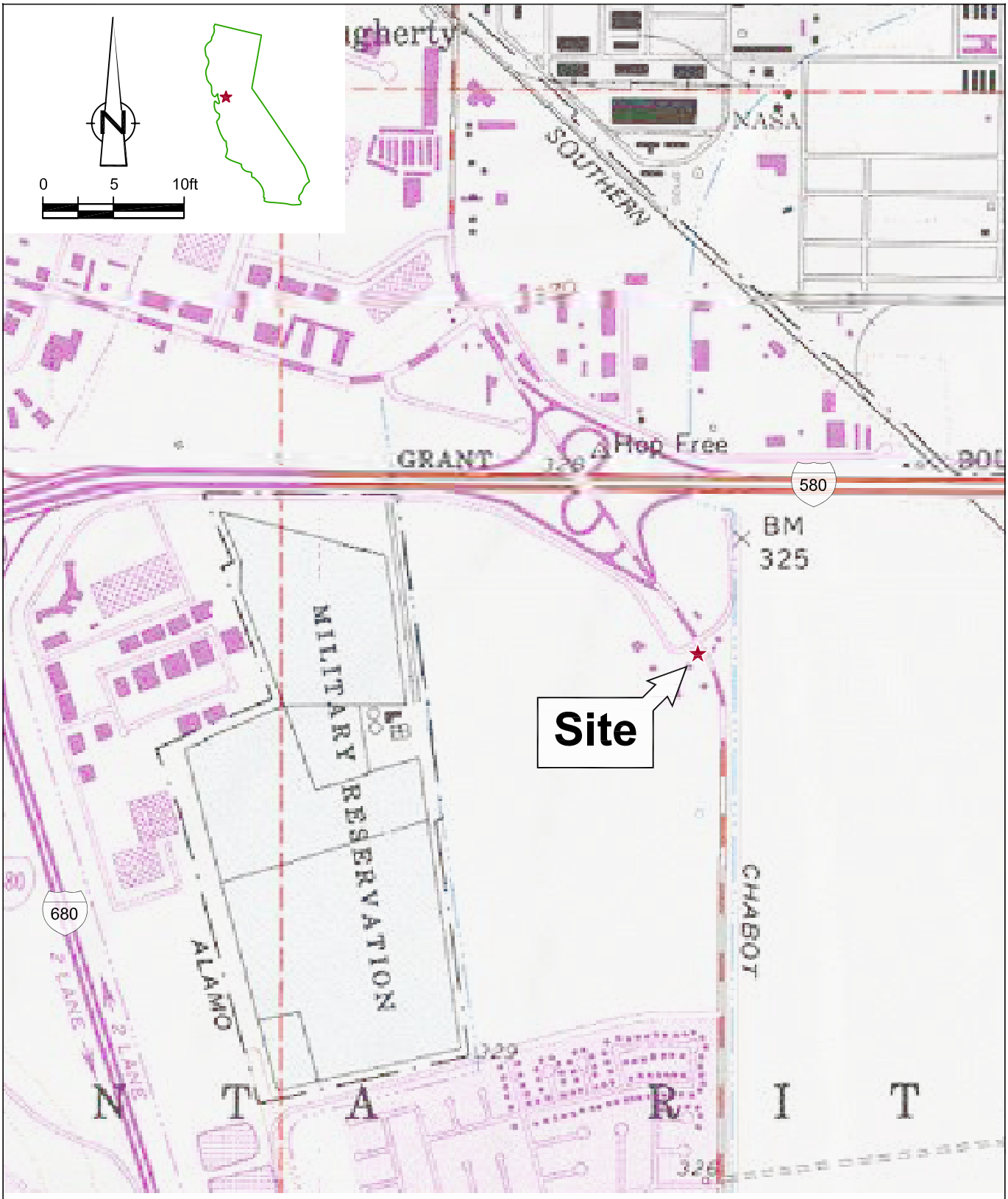
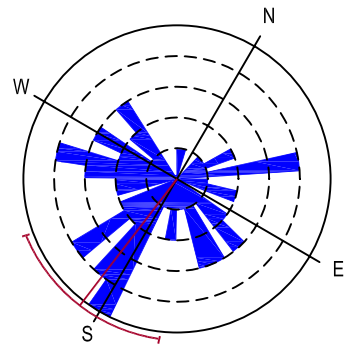


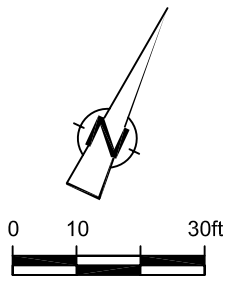
FIGURE 1

VICINITY MAP
CHEVRON STATION 90917
5280 HOPYARD ROAD
Pleasanton, California

060057-2012(018)GN-EM001 APR 12/2012



Historical Groundwater Flow Direction
(1987 - 2009)



DRIVEWAY
OWENS DRIVE
APPROXIMATE PROPERTY LINE
FUEL VENTS
MW-4
MW-1
BUILDING
VP4
CANOPY
MW-2
USTs
GP-5
MW-3
PUMP ISLAND
OIL/WATER SEPARATOR
VP-3
GP-4
VP5
DRIVEWAY
HOPYARD ROAD
S-7
SB9
BUILDING ADDITION
GP-2
VP2
OA-1
EX-4
EX-3
TRASH ENCLOSURE
GP-1
SSVP-4
SSVP-1
VP-1
IW-1
SSVP-3
IA-1
VP-6
SB6
SB8
MW-6
STATION BUILDING
SSVP-2
IA-2
SB7
SSVP-5
MW-5
CAR WASH
EX-1
EXCAVATION EXTENTS
EX-2
MW-7
GP-3
DRIVEWAY
S-6
CONCRETE CURB, GUTTER, AND WALK
MW-9
MEDIAN
MW-8
RESTAURANT

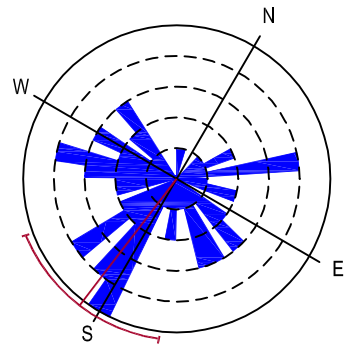
LEGEND

- MW-1 ● MONITORING WELL LOCATION
- VP1 ▲ SOIL VAPOR WELL LOCATION
- SSVP-4 △ SUB-SLAB PROBE LOCATION
- SB6 ⊠ SOIL/VAPOR BORING LOCATION (CRA, 2009)
- GP-2 ■ SOIL BORING LOCATION (CAMBRIA, 2006)
- S-8 ◒ MONITORING WELL LOCATION (SHELL)
- EX-1 ⬓ EXCAVATION SAMPLE LOCATIONS
- VP-3 ◭ ATTEMPTED SOIL VAPOR PROBE LOCATION
- IA-1 ⊕ INSIDE AMBIENT AIR SAMPLING LOCATION
- OA-1 ⊕ OUTSIDE AMBIENT AIR SAMPLING LOCATION
- MW-3 ● DESTROYED WELL LOCATION
- IW-1 ⊠ DESTROYED REMEDIATION WELL LOCATION
- VP-1 ✕ DESTROYED SOIL VAPOR WELL LOCATION
- SSVP-1 ⊠ DESTROYED SUB-SLAB PROBE LOCATION
- APPROXIMATE PROPERTY LINE
- EXCAVATION EXTENT 2010
- BUILDING EXTENSION FOOTPRINT

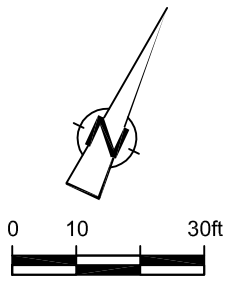
Figure 2

SITE PLAN
CHEVRON STATION 90917
5280 HOPYARD ROAD
Pleasanton, California

060057-2012(018)GN-EM002 APR 12/2012



Historical Groundwater Flow Direction
(1987 - 2009)



DRIVEWAY
OWENS DRIVE
APPROXIMATE PROPERTY LINE
FUEL VENTS
MW-4
MW-1
BUILDING
VP4
CANOPY
MW-2
USTs
GP-5
MW-3
PUMP ISLAND
OIL/WATER SEPARATOR
VP-3
GP-4
VP5
DRIVEWAY
HOPYARD ROAD
S-7
SB9
BUILDING ADDITION
GP-2
VP2
OA-1
EX-4
EX-3
TRASH ENCLOSURE
GP-1
SSVP-4
SSVP-1
SSVP-3
IA-1
VP-1
IW-1
VP-6
SB6
SB8
IA-2
SB7
MW-6
STATION BUILDING
SSVP-2
SSVP-5
MW-5
EXCAVATION EXTENTS
CAR WASH
EX-1
EX-2
MW-7
GP-3
DRIVEWAY
S-6
CONCRETE CURB, GUTTER, AND WALK
MW-9
MEDIAN
MW-8
RESTAURANT

LEGEND

MW-1	●	MONITORING WELL LOCATION
VP1	▲	SOIL VAPOR WELL LOCATION
SSVP-4	△	SUB-SLAB PROBE LOCATION
SB6	⊠	SOIL/VAPOR BORING LOCATION (CRA, 2009)
GP-2	■	SOIL BORING LOCATION (CAMBRIA, 2006)
S-8	⊕	MONITORING WELL LOCATION (SHELL)
EX-1	⬓	EXCAVATION SAMPLE LOCATIONS
VP-3	◮	ATTEMPTED SOIL VAPOR PROBE LOCATION
IA-1	⊕	INSIDE AMBIENT AIR SAMPLING LOCATION
OA-1	⊕	OUTSIDE AMBIENT AIR SAMPLING LOCATION

MW-3	DESTROYED WELL LOCATION
IW-1	DESTROYED REMEDIATION WELL LOCATION
VP-1	DESTROYED SOIL VAPOR WELL LOCATION
SSVP-1	DESTROYED SUB-SLAB PROBE LOCATION

APPROXIMATE PROPERTY LINE
EXCAVATION EXTENT 2010
BUILDING EXTENSION FOOTPRINT

Figure 3

SITE PLAN WITH AMBIENT AIR AND SOIL VAPOR LOCATIONS
CHEVRON STATION 90917
5280 HOPYARD ROAD
Pleasanton, California

060057-2012(018)GN-EM003 APR 20/2012

TABLE

TABLE 1

CUMMULATIVE SOIL VAPOR DATA
CHEVRON STATION 90917
5280 HOPYARD ROAD
PLEASANTON, CALIFORNIA

Sample ID	*Date*	*Sample Depth (fbg)*	*TPHg (by TO-3) ($\mu g/m^3$)*	*TPHg (by TO-15) ($\mu g/m^3$)*	*Benzene ($\mu g/m^3$)*	*Toluene ($\mu g/m^3$)*	*Ethyl-benzene ($\mu g/m^3$)*	*Total Xylenes[1] ($\mu g/m^3$)*	*MTBE ($\mu g/m^3$)*	*Naphthalene ($\mu g/m^3$)*	*Helium (% Vol)*	*Oxygen (% Vol)*	*Methane (% Vol)*	*CO_2 (% Vol)*	*N_2 (% Vol)*	*Hydorgen Sulfide (ppbv)*	*Carbonyl Sulfide (ppbv)*	*Thiophene (ppbv)*
ESLs - Shallow Soil Gas (C/I)[2]			***29,000***	***29,000***	***280***	***180,000***	***3,300***	***58,000***	***31,000***	***240***	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*
ESLs - Shallow Soil Gas (Res)			***10,000***	***10,000***	***84***	***63,000***	***980***	***21,000***	***9,400***	***72***	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*
ESL - Ambient and Indoor Air (C/I)			***14***	***14***	***0.14***	***88***	***1.6***	***29***	***16***	***0.12***	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*
ESLs - Ambient and Indoor Air (Res)			***10***	***10***	***0.084***	***63***	***0.98***	***21***	***9.4***	***0.072***	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*
2012 CRA Soil Vapor and Sub-Slab Vapor Sampling																		
VP-6	03/06/12	5.5	--	**120,000,000**	**16,000**	<4,200	<4,900	<4,900	<4,000	<23,000	<0.11	9.4	32	9.1	48	--	--	--
VP-6 DUP	03/06/12	5.5	--	**180,000,000**	**21,000**	<3,200	<3,600	<3,600	<3,000	<18,000	<0.084	0.81	42	12	43	--	--	--
SSVP-3	03/06/12	0.5	--	<170	<2.6	<3.1	<3.6	<3.6	<3.0	<17	<0.11	20	<0.00022	0.60	79	--	--	--
SSVP-4	03/06/12	0.5	--	<160	<2.5	<2.9	<3.4	<3.4	<2.8	<16	<0.10	20	<0.00021	0.19	80	--	--	--
SSVP-5	03/06/12	0.5	--	250	<2.5	<2.9	<3.4	<3.4	<2.8	<16	<0.10	19	0.00040	<0.020	81	--	--	--
IA-1	03/06/12	--	--	<180	<2.8	<3.3	<3.8	<3.8	<3.2	<18	<0.088	22	0.00021	0.056	78	--	--	--
IA-2	03/06/12	--	--	<180	<2.8	<3.3	<3.8	<3.8	<3.2	<18	<0.088	22	0.00020	0.054	78	--	--	--
OA-1	03/06/12	--	--	<170	<2.6	3.8	<3.6	<3.6	<3.0	<17	<0.082	22	0.00022	0.046	78	--	--	--
2010 CRA Soil Vapor Probe Re-Installation and Sampling Report																		
VP-6	07/13/10	5.5	--	**61,000,000**	**48,000**	<9,100	<10,000	<10,000	<8,700	<51,000	<0.12	2.0	22	9.8	65	--	--	--
SSVP-3	07/14/10	0.5	--	<250	<3.9	<4.6	<5.2	<5.2	<4.4	<25	<0.12	20	<0.00024	0.60	79	--	--	--
SSVP-4	07/14/10	0.5	--	1,300	<3.6	<4.2	<4.9	<4.9	<4.0	<23	<0.11	19	<0.00022	0.34	81	--	--	--
SSVP-5	07/14/10	0.5	--	2,100	<3.6	<4.2	<4.9	<4.9	<4.0	<23	<0.23	14	0.0026	<0.045	86	--	--	--
IA-1	07/14/10	--	--	410	<3.6	4.2	<4.9	<4.9	<4.0	<23	<0.15	24	0.00042	0.079	76	--	--	--
IA-1	LAB DUPLICATE		--	--	--	--	--	--	--	--	<0.15	25	0.00042	0.082	75	--	--	--
IA-1 DUP	07/14/10	--	--	<220	<3.5	4.4	<4.8	<4.8	<4.0	<23	<0.18	22	<0.00035	0.080	78	--	--	--
IA-2	07/14/10	--	--	<240	<3.7	4.9	<5.0	<5.0	<4.2	<24	<0.12	21	<0.00023	0.098	79	--	--	--
OA-1	07/14/10	--	--	<220	<3.4	<4.1	<4.7	<4.7	<3.9	<23	<0.11	22	0.00022	0.041	78	--	--	--
OA-1	LAB DUPLICATE		--	<220	<3.4	<4.1	<4.7	<4.7	<3.9	<23	--	--	--	--	--	--	--	--

TABLE 1

CUMMULATIVE SOIL VAPOR DATA
CHEVRON STATION 90917
5280 HOPYARD ROAD
PLEASANTON, CALIFORNIA

Sample ID	*Date*	*Sample Depth (fbg)*	*TPHg (by TO-3) ($\mu g/m^3$)*	*TPHg (by TO-15) ($\mu g/m^3$)*	*Benzene ($\mu g/m^3$)*	*Toluene ($\mu g/m^3$)*	*Ethyl-benzene ($\mu g/m^3$)*	*Total Xylenes[1] ($\mu g/m^3$)*	*MTBE ($\mu g/m^3$)*	*Naphthalene ($\mu g/m^3$)*	*Helium (% Vol)*	*Oxygen (% Vol)*	*Methane (% Vol)*	*CO_2 (% Vol)*	*N_2 (% Vol)*	*Hydorgen Sulfide (ppbv)*	*Carbonyl Sulfide (ppbv)*	*Thiophene (ppbv)*
ESLs - Shallow Soil Gas (C/I)[2]			***29,000***	***29,000***	***280***	***180,000***	***3,300***	***58,000***	***31,000***	***240***	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*
ESLs - Shallow Soil Gas (Res)			***10,000***	***10,000***	***84***	***63,000***	***980***	***21,000***	***9,400***	***72***	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*
ESL - Ambient and Indoor Air (C/I)			***14***	***14***	***0.14***	***88***	***1.6***	***29***	***16***	***0.12***	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*
ESLs - Ambient and Indoor Air (Res)			***10***	***10***	***0.084***	***63***	***0.98***	***21***	***9.4***	***0.072***	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*
2009 Sub-Slab Vapor Sampling																		
SSVP-1	11/25/09	--	--	140	<3.9	<4.6	<5.2	<5.2	<4.4	<25	0.25	20	<0.00024	0.66	79	--	--	--
SSVP-2	11/25/09	--	--	6,700	<3.9	<4.6	<5.2	<5.2	<4.4	<25	1.9	20	0.00061	0.39	78	--	--	--
IA-1	11/25/09	--	--	250	<3.5	11	<4.8	5.9	<4.0	<23	<0.11	20	0.00026	0.080	80	--	--	--
IA-1	LAB DUPLICATE		--	--	--	--	--	--	--	--	<0.11	20	0.00026	0.080	80	--	--	--
OA-1	11/25/09	--	--	290	<3.5	7.6	<4.8	4.9	<4.0	<23	<0.11	22	0.00028	0.064	78	--	--	--
OA-1 DUP	11/25/09	--	--	180	<3.9	7.8	<5.2	8.1	<4.4	<25	<0.12	21	0.00027	0.057	79	--	--	--
OA-1	LAB DUPLICATE		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2009 CRA Additional Assessment - Area of Planned Station Building Expansion																		
SB6	10/29/09	6	--	<970	<38	<45	<52	<52	<43	<250	<0.12	20	<0.00024	2.0	--	--	--	--
SB8	10/29/09	6	--	**130,000,000**	**23,000**	<4,500	<5,200	<5,200	<4,300	<25,000	<0.12	6.6	38	11	--	--	--	--
SB8 DUP	10/29/09	6	--	**120,000,000**	**22,000**	<4,500	<5,200	<5,200	<4,300	<25,000	<0.12	6.8	38	11	--	--	--	--
SB9	10/29/09	6	--	**260,000**	190	120	500	71	<43	**420**	<0.12	21	0.054	0.32	--	--	--	--
2009 Soil Vapor Probe Installation																		
VP1	02/02/09	6 - 6.5	**120,000,000**	--	**960,000**	5,400	470,000	**84,000**	<4,500	<26,000	0.35	5.0	34	5.9	--	--	--	--
VP1 DUPLICATE	02/02/09	6 - 6.5	**120,000,000**	--	**750,000**	<4,600	320,000	54,000	<4,400	<26,000	0.34	4.9	33	5.8	--	--	--	--
VP1 RESAMPLE	02/02/09	6 - 6.5	**200,000,000**	--	**840,000**	<4,600	400,000	**87,000**	<4,400	<26,000	<0.12	2.9	57	6.7	--	--	--	--
VP1	05/14/09	6 - 6.5	**190,000,000**	**140,000,000**	**1,500,000**	<13,000	98,000	55,000	<12,000	<70,000	<0.34	1.4	26	12	57	6.1	15	8.0
VP1 DUPLICATE	05/14/09	6 - 6.5	**200,000,000**	**160,000,000**	**1,500,000**	<12,000	95,000	**59,000**	<12,000	<69,000	<0.33	0.96	26	12	58	--	--	--
VP1 RESAMPLE	05/14/09	6 - 6.5	**120,000,000**	**110,000,000**	**980,000**	<8,400	180,000	**66,000**	<8,000	<47,000	<0.22	11	23	7.5	56	--	--	--
VP2	02/02/09	6 - 6.5	**36,000**	--	**280**	89	150	180	<6.8	<40	<0.44	6.5	0.012	6.3	--	--	--	--

TABLE 1

CUMMULATIVE SOIL VAPOR DATA
CHEVRON STATION 90917
5280 HOPYARD ROAD
PLEASANTON, CALIFORNIA

Sample ID	*Date*	*Sample Depth (fbg)*	*TPHg (by TO-3) ($\mu g/m^3$)*	*TPHg (by TO-15) ($\mu g/m^3$)*	*Benzene ($\mu g/m^3$)*	*Toluene ($\mu g/m^3$)*	*Ethyl-benzene ($\mu g/m^3$)*	*Total Xylenes[1] ($\mu g/m^3$)*	*MTBE ($\mu g/m^3$)*	*Naphthalene ($\mu g/m^3$)*	*Helium (% Vol)*	*Oxygen (% Vol)*	*Methane (% Vol)*	*CO_2 (% Vol)*	*N_2 (% Vol)*	*Hydorgen Sulfide (ppbv)*	*Carbonyl Sulfide (ppbv)*	*Thiophene (ppbv)*
ESLs - Shallow Soil Gas (C/I)[2]			***29,000***	***29,000***	***280***	***180,000***	***3,300***	***58,000***	***31,000***	***240***	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*
ESLs - Shallow Soil Gas (Res)			***10,000***	***10,000***	***84***	***63,000***	***980***	***21,000***	***9,400***	***72***	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*
ESL - Ambient and Indoor Air (C/I)			***14***	***14***	***0.14***	***88***	***1.6***	***29***	***16***	***0.12***	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*
ESLs - Ambient and Indoor Air (Res)			***10***	***10***	***0.084***	***63***	***0.98***	***21***	***9.4***	***0.072***	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*
VP2	LAB DUPLICATE		**36,000**	--	**280**	91	160	190	<14	<79	--	--	--	--	--	--	--	--
VP2	05/14/09	6 - 6.5	17,000	13,000	150	400	54	490	23	82J	<0.22	1.4	0.0051	20	78	--	--	--
VP4	02/02/09	5 - 5.5	4,700	--	26	24	120	88	<4.2	<24	<0.12	9.3	0.00030	8.1	--	--	--	--
VP4	05/14/09	5 - 5.5	1,800	1,100	9	<4.5	<5.2	10	<4.3	<25UJ	<0.12	5.9	0.00037	11	83	--	--	--
VP5	02/02/09	5 - 5.5	**890,000**	--	230	350	<50	110	<41	<240	<0.12	1.7	5.2	2.2	--	--	--	--
VP5	LAB DUPLICATE		**--**	--	**--**	**--**	**--**	**--**	**--**	**--**	<0.12	1.7	5.2	2.2	--	--	--	--
VP5	05/14/09	5 - 5.5	**1,100,000**	**1,200,000**	**1,400**	<530	<610	<610	<510	<3,000	<0.11	1.4	6.0	4.7	88	1300	<4.0	<4.0

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg).

Benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tertiary butyl ether (MTBE), and naphthalene by EPA Method TO-15.

Helium, oxygen, methane, carbon dioxide (CO_2), and nitrogen (N_2) by ASTM D-1946.

Hydrogen sulfide, carbonyl sulfide and thiophene by ASTM D-5504.

fbg = Feet below grade.

Micrograms per meter cubed ($\mu g/m^3$).

Percent Volume (%Vol).

Parts per billion volume (ppbv).

<X = Not detected above method detection limit x.

-- = not analyzed or not applicable.

Environmental Screening Levels (ESLs) for shallow soil gas 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, Table E-2.

1 = Highest xylene, either m,p-xylene or o-xylene, concentration reported.

2 = A full suite of mercaptans were run by ASTM D-5504. Only detected compounds are reported.

J = Estimated value due to bias in the CCV.

UJ = Non-detected compound associate with low bias in the CCV.

NE = Not Established

Bold = Concentration exceeds applicable ESL.

APPENDIX A

REGULATORY CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

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

January 9, 2012

Mr. Dave Patten (*Sent via E-mail to: DRPatten@chevron.com*)
Chevron
6111 Bollinger Canyon Road, BR-Y-3608
San Ramon, CA 94583

Lamorinda Development and Investment
89 Davis Road, Suite 160
Orinda, CA 94563

C & H Development Company
43 Panoramic Way
Walnut Creek, CA 94595

Subject: Case File Review for Fuel Leak Case No. RO0000439 and GeoTracker Global ID T0600100345, Chevron #9-0917, 5280 Hopyard Road, Pleasanton, CA 94566

Dear Mr. Costa:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site. The most recent technical report in the case file is a report entitled, "*Sub-slab Vapor Results,"* dated December 15, 2009 and "*Soil Vapor Probe Re-installation and Sampling Report,"* dated August 27, 2010 (Report). The Report presents the results from vapor samples collected on July 14, 2010 from one soil vapor probe, three sub-slab vapor probes within the station building, and ambient air. Total petroleum hydrocarbons as gasoline (TPHg) and benzene were detected in the soil vapor sample collected from probe VP-6, which is adjacent to the station building, at concentrations of 61,000,000 and 48,000 micrograms per cubic meter (µg/m^3), respectively. TPHg was detected in the three sub-slab vapor samples and ambient air at concentrations ranging from 410 to 2,100 µg/m^3.

A remedial excavation was conducted within the footprint of a planned addition to the station building. Four confirmation soil samples were collected from depths of 5.5 to 6.5 feet bgs at the corners of the excavation. TPHg and benzene were detected in the confirmation soil samples at concentrations up to 19 and 0.56 milligrams per kilogram (mg/kg), respectively. The station building expansion was completed above the excavated area.

The August 27, 2010 Report concludes that there is not a pathway from the subsurface into the station building and indicates that a low-risk case closure request will be submitted by November 10, 2010. To date, no request for low-risk case closure has been received. Prior to submitting a request for low-risk case closure, we request that you re-sample the soil vapor probes and collect ambient air samples to confirm the previous results. Please conduct the re-sampling event using the same protocols used during the July 2010 sampling event and present the results in the report requested below.

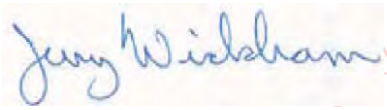
TECHNICAL REPORT REQUEST

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

- **April 23, 2012** – Soil Vapor and Ambient 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. Case files can be reviewed online at the following website: http://www.acgov.org/aceh/index.htm. If your email address does not appear on the cover page of this notification ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

Sincerely,


Digitally signed by Jerry Wickham
DN: cn=Jerry Wickham, o=Environmental Health, ou=Alameda County, email=jerry.wickham@acgov.org, c=US
Date: 2012.01.10 08:26:00 -08'00'

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

Attachment: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Danielle Stefani, Livermore Pleasanton Fire Department, 3560 Nevada St, Pleasanton, CA 94566 (*Sent via E-mail to: dstefani@lpfire.org*)

Colleen Winey (QIC 8021), Zone 7 Water Agency, 100 North Canyons Pkwy, Livermore, CA 94551 (*Sent via E-mail to: cwiney@zone7water.com*)

Bill Hurtido, Accor North America, 4001 International Parkway, Carrollton, TX 75007

Nathan Lee, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A, Emeryville, CA 94608 (*Sent via E-mail to: NLee@craworld.com*)

Brandon Wilken, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A, Emeryville, CA 94608 (*Sent via E-mail to: BWilken@craworld.com*)

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

GeoTracker, eFile

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.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).

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)	**REVISION DATE:** July 20, 2010
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
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

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**.
- 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)

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 deh.loptoxic@acgov.org
   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, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   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 deh.loptoxic@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 AND REMEDIATION

SUMMARY OF PREVIOUS ENVIRONMENTAL WORK
FORMER CHEVRON SERVICE STATION NO. 90917
5280 HOPYARD ROAD, PLEASANTON, CALIFORNIA

July 1989 Monitoring Well Installation

Groundwater Technology, Inc. (GTI) installed onsite groundwater monitoring wells MW-1 through MW-3. Details of this investigation can be found in GTI's *Site Assessment Report* dated August, 1989.

June 1991 UST Replacement and Soil Excavation

Blaine Tech Services, Inc. observed the underground storage tank (UST) system removal and soil excavation, and collected soil and groundwater samples. Five fiberglass USTs including three 10,000-gallon gasoline, one 10,000-gallon diesel, and one 500-gallon used-oil UST were removed and replaced with four 12,000-gallon double-walled fiberglass gasoline USTs. Over-excavation of UST and product piping areas was conducted.

Approximately 90 cubic yards of soil, not including pea gravel, were removed during UST removal and over-excavation, and approximately 70 cubic yards of soil were removed during product line removal and over-excavation. Based on hydrocarbon distribution in soil, the probable hydrocarbon source area was the former dispenser island and associated northeastern product lines. Details of this investigation can be found in Gettler-Ryan's (G-R) *Site Conceptual Model and Closure Request*, dated January 25, 2002.

July 1991 Monitoring Well Destruction and Well Installation

GTI destroyed wells MW-1 through MW-3 and installed groundwater monitoring wells MW-4 through MW-6. Groundwater was encountered at a depth of approximately 13 fbg. Details of this investigation can be found in GTI's *Well Installation Report*, November 14, 1991.

May 1997 Monitoring Well Installation

Pacific Environmental Group, Inc. (PEG) installed offsite groundwater monitoring wells MW-7 through MW-9 to define the extent of petroleum hydrocarbons and methyl tertiary-butyl ether (MTBE) in groundwater south of the source area. Details of this investigation can be found in PEG's *Soil and Groundwater Investigation*, dated August 11, 1997.

March 1999 Enhanced Bioremediation

G-R installed oxygen release compound (ORC) socks in wells MW-5 and MW-6 to increase the dissolved oxygen concentrations in groundwater and enhance hydrocarbon biodegradation. ORC in this application had an estimated release time of approximately six months. Total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene and xylenes (BTEX) concentrations decreased by one to two orders of magnitude in well MW-5, but

rebounded within two years. Hydrocarbon concentrations changes in well MW-6 were not as apparent. G-R removed the ORC socks on September 7, 2001 at the request of ACEH.

February 2006 Subsurface Investigation

Cambria Environmental Technology, Inc. (Cambria) advanced soil borings GP-1 through GP-5 onsite. Two of the borings were advanced to deeper groundwater bearing zones using a Cone Penetration Testing (CPT) direct push drill rig to collect groundwater samples for vertical plume definition. Details of this investigation can be found in Cambria's *Subsurface Investigation Report*, dated March 29, 2006.

August 2006 Well Installation

Cambria installed remediation well IW-1 for potential surfactant enhanced non-aqueous-phase liquid removal. Details of this investigation can be found in Cambria's *Subsurface Investigation Report*, dated September 26, 2006.

January 2007 Groundwater Batch Extraction

Cambria performed batch groundwater extraction from well IW-1 to remove aqueous-phase hydrocarbon mass. The calculated TPHg mass removed was only 0.0051 pounds. Review of the boring log and physical soil data indicate the majority of soil encountered beneath the site has high clay content and low permeability, therefore it yielded little hydrocarbon mass through groundwater extraction. Details of this investigation can be found in Cambria's *Groundwater Batch Extraction Results*, dated March 12, 2007.

January 2009 Soil Vapor Probe Installations

Conestoga-Rovers & Associates (CRA) installed onsite soil vapor probes VP1 through VP5 to evaluate the potential for a vapor intrusion pathway from soil gas to indoor air. Hydrocarbon vapor concentrations in soil gas exceeded environmental screening levels. Details of this investigation can be found in CRA's *Soil Vapor Probe Installation and Sampling Report*, dated April 19, 2009.

May 2009 Soil Vapor Sampling

CRA collected a second set of samples from vapor points VP1, VP2, VP4 and VP5. Hydrocarbon vapor concentrations in soil gas exceeded environmental screening levels. Details of this investigation can be found in CRA's *Soil Vapor Sampling Report and Work Plan for Sub-Slab Vapor Probes*, dated June 29, 2009.

October 2009 Additional Site Assessment

CRA advanced direct-push soil borings SB6 through SB9. Soil samples were collected from borings SB6, SB7 and SB8. Grab-groundwater samples were collected from SB6 and SB7. Subsurface debris prevented soil and groundwater sample collection from SB9. Soil vapor samples were collected from SB6, SB8, and SB9.

Hydrocarbons were detected in soil from borings SB6, SB7 and SB8 with the highest concentrations between about 15 to 19 fbg, which is below the water table. Temporary soil vapor probes were advanced using a direct-push rig and installed inside the direct-push rods at 6 fbg. TPHg and benzene concentrations in soil vapor exceeded screening levels in borings SB8 and SB9. Details of this investigation can be found in CRA's *Site Assessment and Excavation Report*, dated April 22, 2010.

November 2009 Sub-Slab Soil Vapor Sampling

CRA installed sub-slab vapor probes SSVP-1 and SSVP-2 and collected soil vapor samples, ambient indoor air samples, and outdoor air samples. No analytes in the sub-slab samples exceeded screening levels. TPHg was detected in indoor air at concentrations similar to outdoor air concentrations. Additionally, toluene and xylenes were detected in indoor and outdoor air at similar concentrations, although neither of these constituents were detected in the sub-slab vapor samples. Based on these results it was concluded that analytes detected in indoor air are from air exchange with outdoor air, not from sub-slab vapors, and there is not a complete pathway for vapor intrusion from the subsurface into the onsite building. Therefore, onsite workers are not at risk from sub-slab vapor intrusion. Details of this investigation can be found in CRA's *Sub-Slab Vapor Results*, dated December 15, 2009.

July 2009 Groundwater Monitoring Suspended

Alameda County Environmental Health approved of suspending groundwater monitoring in a letter dated July, 23, 2009.

January-February 2010 Well Destruction and Excavation

CRA destroyed extraction well IW-1 and vapor well VP1 to facilitate station building expansion. Sub-slab vapor probes SSVP-1 and SSVP-2 were destroyed during the building remodeling. From February 22 to February 26, 2010, CRA observed Wendt & Son's Construction Incorporated of Lodi, California excavate approximately 182-tons of hydrocarbon-bearing soil from beneath the building extension footprint, including an additional 5 lateral feet towards the north and east. The excavation was completed to depths ranging from 6 to 7 fbg (near the water table). The objective was to remove hydrocarbon-bearing soil from beneath the proposed building to reduce risk from vapor intrusion from the subsurface into the building. Details can be found in CRA's *Site Assessment and Excavation Report*, dated April 22, 2010.

July 2010 Vapor Probe and Sub-slab Probes Re-Installation

Vapor probe VP-6 and sub-slab probes SSVP-3 through SSVP-5 were installed to replace VP-1, SSVP-1 and SSVP-2. No analytes were detected in the sub-slab samples above screening levels. Based on these results it was concluded that onsite workers are not at risk from vapor intrusion. Details of this investigation can be found in CRA's *Soil Vapor Probe Re-Installation and Sampling Report,* dated August 27, 2010.

APPENDIX C

BUILDING SURVEY FORM

APPENDIX L - BUILDING SURVEY FORM

Preparer's Name: Sequoia Patterson Date/Time Prepared: 3/6/12 1740
Affiliation: Conestoga-Rovers & Associates (Environmental Consultant) Phone Number: (510) 420-0700

Occupant Information

Occupant Name: Chevron Interviewed: ☐ Yes ☐ No
Mailing Address: 6101 Bollinger Canyon Road
City: San Ramon State: CA Zip Code: 94538
Phone: (925) 463-9650 Email:

Owner/Landlord Information (Check if same as occupant ☐)

Occupant Name: Chevron Interviewed: ☐ Yes ☐ No
Mailing Address: 6101 Bollinger Canyon Road
City: San Ramon State: CA Zip Code: 94538
Phone: (925) 842-7175 Email:

Building Type (Check appropriate boxes)

☐ Residential ☐ Residential Duplex ☐ Apartment Building ☐ Mobile Home ☐ Commercial (office)
☐ Commercial (warehouse) ☐ Industrial ☐ Strip Mall ☐ Split Level ☐ Church ☐ School
☒ OTHER - SERVICE STATION KIOSK

Building Characteristics

Approximate Building Age (years): unknown Number of Stories: 1
Approximate Building Area (square feet): 780 Number of Elevators: 0

Foundation Type (Check appropriate boxes)

☑ Slab-on-Grade ☐ Crawl Space ☐ Basement

Basement Characteristics (Check appropriate boxes)

☐ Dirt Floor ☐ Sealed ☐ Wet Surfaces ☐ Sump Pump ☐ Concrete Cracks ☐ Floor Drains

Factors Influencing Indoor Air Quality

Is there an attached garage?	☐ Yes	☑ No	
Is there smoking in the building?	☐ Yes	☑ No	
Is there new carpet or furniture?	☐ Yes	☑ No	Describe:
Have clothes or drapes been recently dry cleaned?	☐ Yes	☑ No	Describe:
Has painting or staining been done with the last six months?	☐ Yes	☑ No	Describe:
Has the building been recently remodeled?	☐ Yes	☑ No	Describe:
Has the building ever had a fire?	☐ Yes	☑ No	
Is there a hobby or craft area in the building?	☐ Yes	☑ No	Describe:
Is gun cleaner stored in the building?	☑ Yes	☐ No	
Is there a fuel oil tank on the property?	☑ Yes	☐ No	
Is there a septic tank on the property?	☐ Yes	☑ No	
Has the building been fumigated or sprayed for pests recently?	☐ Yes	☑ No	Describe:
Do any building occupants use solvents at work?	☐ Yes	☑ No	Describe:

APPENDIX M – BUILDING SCREENING FORM

Occupant of Building Chevron

Address 5280 HOPYARD ROAD

City PLEASANTON, CA

Field Investigator SEQUOIA PATTERSON Date 3/6/12 1740

Field Instrument Reading	Measurement Location (Ambient Air, Foundation Opening, or Consumer Product)	If Consumer Product, Potential Volatile Ingredients
0.0 ppm	Peak natural Windshield wash	
	Techron Concentrait Plus Fuel system clean	
	Chevron 2-Cycle Oil	
	Havoline 10W-30 Motor Oil	
	Havoline Automatic Trans fluid /multi vehicle	
	" " " " " " MD-3	
	" " 5W-30 Motor oil	
↓	" " Universal concentrated Antifreeze	
0.0 ppm	Banana boat sport spf 30 sunblock	
	Vaseline total moisture	
	Hydrogen peroxide	
↓	Isopropyl rubbing alcohol.	
0.0	Contendor cleaner / degreaser	
	Multishoen Glass and Multisurface cleaner	

Store room

Store shelves by register

Cleaning supplies in store room

Comments:

APPENDIX M – BUILDING SCREENING FORM

Occupant of Building CHEVRON

Address 5280 HOPYARD ROAD

City PLEASANTON, CA

Field Investigator SEQUOIA PATTERSON Date 3/6/12 1740

Field Instrument Reading	Measurement Location (Ambient Air, Foundation Opening, or Consumer Product)	If Consumer Product, Potential Volatile Ingredients
0.0	Gunk Puncture Seal	
	Armorall original	
	WD-40	
	STP Dot3 Brake fluid	
	STP octane booster	
	STP Gas treatment	
	Chevron Techron Fuel system cleaner	
	" " Pro guard Fuel injector cleaner	
	Havoline 10w-30 Motor oil	
	" " 5w-30 " "	
	" " 10w-40 " "	
	Delo 15w-40 " "	
	Havoline 20w-50 " "	
	" " power steering fluid	
	" " Automatic trans fluid MD-3	
	" " " " " Multivehicle	
	Chevron 2-cycle oil	

Store shelves by restrooms

Comments: ~~Have~~ Peak Natural windshield wash
Havoline 50-50 antifreeze concentrate " "

APPENDIX D

LABORATORY ANALYTICAL REPORTS

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4/5/2012
Mr. Oliver Yan
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: CHEVRON 9-0917
Project #: 060057
Workorder #: 1203215AR1

Dear Mr. Oliver Yan

The following report includes the data for the above referenced project for sample(s) received on 3/9/2012 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 #: 1203215AR1

Work Order Summary

CLIENT:	Mr. Oliver Yan Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Mr. Oliver Yan Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-0700	**P.O. #**	4031644
FAX:	510-420-9170	**PROJECT #**	060057 CHEVRON 9-0917
DATE RECEIVED:	03/09/2012	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	03/16/2012		
DATE REISSUED:	04/05/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	OA-1	Modified TO-15	5.6 "Hg	5 psi
02A	IA-1	Modified TO-15	7.0 "Hg	5 psi
03A	IA-2	Modified TO-15	7.0 "Hg	5 psi
04A	SSVP-3	Modified TO-15	5.8 "Hg	5 psi
05A	SSVP-4	Modified TO-15	4.0 "Hg	5 psi
06A	SSVP-5	Modified TO-15	4.0 "Hg	5 psi
07A	VP-6	Modified TO-15	5.6 "Hg	5 psi
08A	VP-6-DUP	Modified TO-15	6.0 "Hg	5 psi
09A	TRIP BLANK	Modified TO-15	28.0 "Hg	5 psi
10A	Lab Blank	Modified TO-15	NA	NA
10B	Lab Blank	Modified TO-15	NA	NA
10C	Lab Blank	Modified TO-15	NA	NA
11A	CCV	Modified TO-15	NA	NA
11B	CCV	Modified TO-15	NA	NA
11C	CCV	Modified TO-15	NA	NA
12A	LCS	Modified TO-15	NA	NA
12AA	LCSD	Modified TO-15	NA	NA
12B	LCS	Modified TO-15	NA	NA
12BB	LCSD	Modified TO-15	NA	NA
12C	LCS	Modified TO-15	NA	NA
12CC	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 04/05/12

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# 1203215AR1

Three 6 Liter Summa Canister (100% Certified) and six 1 Liter Summa Canister (100% Certified) samples were received on March 09, 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.

The recovery of surrogate 1,2-Dichloroethane-d4 in sample VP-6-DUP was outside laboratory control limits due to high level hydrocarbon matrix interference. The surrogate recovery is flagged.

Dilution was performed on samples VP-6 and VP-6-DUP due to the presence of high level non-target species.

THE WORK ORDER WAS REISSUED ON APRIL 05, 2012 TO CORRECT IDENTIFICATION OF THE FOLLOWING SAMPLES VP-6 AND VP-6-DUP DUE TO LABORATORY TRANSCRIPTION ERROR.

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: OA-1

Lab ID#: 1203215AR1-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	0.82	1.0	3.1	3.8

Client Sample ID: IA-1

Lab ID#: 1203215AR1-02A

No Detections Were Found.

Client Sample ID: IA-2

Lab ID#: 1203215AR1-03A

No Detections Were Found.

Client Sample ID: SSVP-3

Lab ID#: 1203215AR1-04A

No Detections Were Found.

Client Sample ID: SSVP-4

Lab ID#: 1203215AR1-05A

No Detections Were Found.

Client Sample ID: SSVP-5

Lab ID#: 1203215AR1-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	39	62	160	250

Client Sample ID: VP-6

Lab ID#: 1203215AR1-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1100	5100	3600	16000
TPH ref. to Gasoline (MW=100)	22000	29000000	92000	120000000

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

Client Sample ID: VP-6-DUP

Lab ID#: 1203215AR1-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	840	6600	2700	21000
TPH ref. to Gasoline (MW=100)	17000	44000000	69000	180000000

Client Sample ID: TRIP BLANK

Lab ID#: 1203215AR1-09A

No Detections Were Found.

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Client Sample ID: OA-1

Lab ID#: 1203215AR1-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p031018**	**Date of Collection: 3/6/12 11:25:00 AM**	
Dil. Factor:	**1.65**	**Date of Analysis: 3/11/12 08:21 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	1.0	3.1	3.8
m,p-Xylene	0.82	Not Detected	3.6	Not Detected
o-Xylene	0.82	Not Detected	3.6	Not Detected
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: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: IA-1

Lab ID#: 1203215AR1-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p031019**	**Date of Collection: 3/6/12 11:34:00 AM**	
Dil. Factor:	**1.75**	**Date of Analysis: 3/11/12 08:49 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.88	Not Detected	2.8	Not Detected
Ethyl Benzene	0.88	Not Detected	3.8	Not Detected
Toluene	0.88	Not Detected	3.3	Not Detected
m,p-Xylene	0.88	Not Detected	3.8	Not Detected
o-Xylene	0.88	Not Detected	3.8	Not Detected
Methyl tert-butyl ether	0.88	Not Detected	3.2	Not Detected
Naphthalene	3.5	Not Detected	18	Not Detected
TPH ref. to Gasoline (MW=100)	44	Not Detected	180	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	108	70-130

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Client Sample ID: IA-2

Lab ID#: 1203215AR1-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p031020**	**Date of Collection: 3/6/12 11:35:00 AM**	
Dil. Factor:	**1.75**	**Date of Analysis: 3/11/12 09:11 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.88	Not Detected	2.8	Not Detected
Ethyl Benzene	0.88	Not Detected	3.8	Not Detected
Toluene	0.88	Not Detected	3.3	Not Detected
m,p-Xylene	0.88	Not Detected	3.8	Not Detected
o-Xylene	0.88	Not Detected	3.8	Not Detected
Methyl tert-butyl ether	0.88	Not Detected	3.2	Not Detected
Naphthalene	3.5	Not Detected	18	Not Detected
TPH ref. to Gasoline (MW=100)	44	Not Detected	180	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: SSVP-3

Lab ID#: 1203215AR1-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p031021**	**Date of Collection: 3/6/12 4:54:00 PM**	
Dil. Factor:	**1.66**	**Date of Analysis: 3/11/12 09:37 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.83	Not Detected	2.6	Not Detected
Ethyl Benzene	0.83	Not Detected	3.6	Not Detected
Toluene	0.83	Not Detected	3.1	Not Detected
m,p-Xylene	0.83	Not Detected	3.6	Not Detected
o-Xylene	0.83	Not Detected	3.6	Not Detected
Methyl tert-butyl ether	0.83	Not Detected	3.0	Not Detected
Naphthalene	3.3	Not Detected	17	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	102	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	108	70-130

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Client Sample ID: SSVP-4

Lab ID#: 1203215AR1-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p031024**	**Date of Collection: 3/6/12 3:39:00 PM**	
Dil. Factor:	**1.55**	**Date of Analysis: 3/11/12 10:57 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	Not Detected	2.9	Not Detected
m,p-Xylene	0.78	Not Detected	3.4	Not Detected
o-Xylene	0.78	Not Detected	3.4	Not Detected
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	101	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	113	70-130

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Client Sample ID: SSVP-5

Lab ID#: 1203215AR1-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p031023**	**Date of Collection: 3/6/12 3:01:00 PM**	
Dil. Factor:	**1.55**	**Date of Analysis: 3/11/12 10:25 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	Not Detected	2.9	Not Detected
m,p-Xylene	0.78	Not Detected	3.4	Not Detected
o-Xylene	0.78	Not Detected	3.4	Not Detected
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	62	160	250

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	111	70-130

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Client Sample ID: VP-6

Lab ID#: 1203215AR1-07A

EPA METHOD TO-15 GC/MS

File Name:	**14031519**	**Date of Collection: 3/6/12 12:41:00 PM**	
Dil. Factor:	**224**	**Date of Analysis: 3/15/12 05:43 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1100	5100	3600	16000
Toluene	1100	Not Detected	4200	Not Detected
Ethyl Benzene	1100	Not Detected	4900	Not Detected
m,p-Xylene	1100	Not Detected	4900	Not Detected
o-Xylene	1100	Not Detected	4900	Not Detected
Methyl tert-butyl ether	1100	Not Detected	4000	Not Detected
Naphthalene	4500	Not Detected	23000	Not Detected
TPH ref. to Gasoline (MW=100)	22000	29000000	92000	120000000

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: VP-6-DUP

Lab ID#: 1203215AR1-08A

EPA METHOD TO-15 GC/MS

File Name:	**14031520**	**Date of Collection:**	**3/6/12 12:41:00 PM**
Dil. Factor:	**168**	**Date of Analysis:**	**3/15/12 06:12 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	840	6600	2700	21000
Toluene	840	Not Detected	3200	Not Detected
Ethyl Benzene	840	Not Detected	3600	Not Detected
m,p-Xylene	840	Not Detected	3600	Not Detected
o-Xylene	840	Not Detected	3600	Not Detected
Methyl tert-butyl ether	840	Not Detected	3000	Not Detected
Naphthalene	3400	Not Detected	18000	Not Detected
TPH ref. to Gasoline (MW=100)	17000	44000000	69000	180000000

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	141 Q	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: TRIP BLANK

Lab ID#: 1203215AR1-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**2031424**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/15/12 02:33 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: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1203215AR1-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p031007**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/10/12 04:19 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	93	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	90	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1203215AR1-10B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**2031408**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/14/12 12:49 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	93	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1203215AR1-10C

EPA METHOD TO-15 GC/MS

File Name:	**14031507**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/15/12 11:10 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
Methyl tert-butyl ether	5.0	Not Detected	18	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	100	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: CCV

Lab ID#: 1203215AR1-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p031002**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/10/12 02:00 PM**	

Compound	%Recovery
Benzene	96
Ethyl Benzene	98
Toluene	88
m,p-Xylene	101
o-Xylene	105
Methyl tert-butyl ether	101
Naphthalene	91
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	91	70-130
4-Bromofluorobenzene	121	70-130

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Client Sample ID: CCV

Lab ID#: 1203215AR1-11B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**2031402**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/14/12 08:58 AM**	

Compound	%Recovery
Benzene	98
Ethyl Benzene	104
Toluene	96
m,p-Xylene	106
o-Xylene	102
Methyl tert-butyl ether	102
Naphthalene	93
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: CCV

Lab ID#: 1203215AR1-11C

EPA METHOD TO-15 GC/MS

File Name:	**14031503**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/15/12 09:26 AM**	

Compound	**%Recovery**
Benzene	108
Toluene	104
Ethyl Benzene	110
m,p-Xylene	108
o-Xylene	115
Methyl tert-butyl ether	106
Naphthalene	99
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: LCS

Lab ID#: 1203215AR1-12A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p031003**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/10/12 02:41 PM**	

Compound	**%Recovery**
Benzene	99
Ethyl Benzene	108
Toluene	96
m,p-Xylene	116
o-Xylene	117
Methyl tert-butyl ether	108
Naphthalene	125
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	98	70-130
4-Bromofluorobenzene	113	70-130

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Client Sample ID: LCSD

Lab ID#: 1203215AR1-12AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p031004**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/10/12 02:58 PM**	

Compound	**%Recovery**
Benzene	98
Ethyl Benzene	103
Toluene	88
m,p-Xylene	109
o-Xylene	119
Methyl tert-butyl ether	106
Naphthalene	113
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	90	70-130
4-Bromofluorobenzene	117	70-130

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Client Sample ID: LCS

Lab ID#: 1203215AR1-12B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**2031403**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/14/12 09:36 AM**	

Compound	**%Recovery**
Benzene	103
Ethyl Benzene	105
Toluene	98
m,p-Xylene	112
o-Xylene	107
Methyl tert-butyl ether	102
Naphthalene	76
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCSD

Lab ID#: 1203215AR1-12BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**2031404**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/14/12 10:07 AM**	

Compound	**%Recovery**
Benzene	101
Ethyl Benzene	107
Toluene	96
m,p-Xylene	111
o-Xylene	106
Methyl tert-butyl ether	102
Naphthalene	79
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: LCS

Lab ID#: 1203215AR1-12C

EPA METHOD TO-15 GC/MS

File Name:	**14031505**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/15/12 10:24 AM**	

Compound	**%Recovery**
Benzene	86
Toluene	81
Ethyl Benzene	86
m,p-Xylene	90
o-Xylene	90
Methyl tert-butyl ether	84
Naphthalene	93
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: LCSD

Lab ID#: 1203215AR1-12CC

EPA METHOD TO-15 GC/MS

File Name:	**14031506**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/15/12 10:44 AM**	

Compound	**%Recovery**
Benzene	85
Toluene	82
Ethyl Benzene	87
m,p-Xylene	89
o-Xylene	91
Methyl tert-butyl ether	84
Naphthalene	104
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

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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 NATHAN LEE

Collected by: (Print and Sign) SEQUOIA PATTERSON

Company CRA Email NLEE@CRAWORLD.COM

Address 5900 HOLLIS ST STE.A City EMERYVILLE State CA Zip 94608

Phone 510-420-0700 Fax 510-420-9170

Project Info:
P.O. # 4031644
Project # 060057
Project Name CHEVRON 9-0917

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	OA-1	5607	3-6-2012	1125	For All:	-30	-8		
02A	IA-1	34389		1134	• TO-15: TPH$_g$,	-30	-8.5		
03A	IA-2	12680		1135	BTEX, TMTBE,	-30	-9		
04A	SSVP-3	36522		1654	NAPHTHALENE	-30	-7.5		
05A	SSVP-4	36494		1539		-30	-6		
06A	SSVP-5	34166		1501	• ATSM D-1946:	-30	-6		
07A	VP-6	36523		1241	O_2, N_2, CO_2,	-30	-7		
08A	VP-6-DUP	36565		1241	CH_4, Helium	-30	-7		
09A	TRIP BLANK	34177	—	—		—	—		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Sequoia Patterson	3-6-12 2100	Secure Location	3-6-12 2100
Secure Location	3/8/12 1200	Fed Ex	3/8/12
			3.9.12 1320

Notes:
Please report results in ppbv and ug/m^3

Email results and EDF to Nlee@craworld.com and spatterson@craworld.com

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		NA	Good	Yes No None	1203215

Form 1293 rev.11

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4/5/2012
Mr. Oliver Yan
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: CHEVRON 9-0917
Project #: 060057
Workorder #: 1203215BR1

Dear Mr. Oliver Yan

The following report includes the data for the above referenced project for sample(s) received on 3/9/2012 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 #: 1203215BR1

Work Order Summary

CLIENT:	Mr. Oliver Yan Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Mr. Oliver Yan Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-0700	**P.O. #**	4031644
FAX:	510-420-9170	**PROJECT #**	060057 CHEVRON 9-0917
DATE RECEIVED:	03/09/2012	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	03/16/2012		
DATE REISSUED:	04/05/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	OA-1	Modified ASTM D-1946	5.6 "Hg	5 psi
02A	IA-1	Modified ASTM D-1946	7.0 "Hg	5 psi
03A	IA-2	Modified ASTM D-1946	7.0 "Hg	5 psi
04A	SSVP-3	Modified ASTM D-1946	5.8 "Hg	5 psi
05A	SSVP-4	Modified ASTM D-1946	4.0 "Hg	5 psi
06A	SSVP-5	Modified ASTM D-1946	4.0 "Hg	5 psi
07A	VP-6	Modified ASTM D-1946	5.6 "Hg	5 psi
08A	VP-6-DUP	Modified ASTM D-1946	6.0 "Hg	5 psi
09A	TRIP BLANK	Modified ASTM D-1946	28.0 "Hg	5 psi
10A	Lab Blank	Modified ASTM D-1946	NA	NA
10B	Lab Blank	Modified ASTM D-1946	NA	NA
11A	LCS	Modified ASTM D-1946	NA	NA
11AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 04/05/12

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# 1203215BR1

Three 6 Liter Summa Canister (100% Certified) and six 1 Liter Summa Canister (100% Certified) samples were received on March 09, 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. Reanalysis confirm initial result.
THE WORK ORDER WAS REISSUED ON 04/05/12 TO CORRECT THE IDENTIFICATION OF SAMPLES VP-6 AND VP-6-DUP DUE TO LABORATORY TRANSCRIPTION ERROR.

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: OA-1

Lab ID#: 1203215BR1-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	22
Nitrogen	0.16	78
Carbon Dioxide	0.016	0.046
Methane	0.00016	0.00022

Client Sample ID: IA-1

Lab ID#: 1203215BR1-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.18	22
Nitrogen	0.18	78
Carbon Dioxide	0.018	0.056
Methane	0.00018	0.00021

Client Sample ID: IA-2

Lab ID#: 1203215BR1-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.18	22
Nitrogen	0.18	78
Carbon Dioxide	0.018	0.054
Methane	0.00018	0.00020

Client Sample ID: SSVP-3

Lab ID#: 1203215BR1-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	20
Nitrogen	0.22	79
Carbon Dioxide	0.022	0.60

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

Client Sample ID: SSVP-4

Lab ID#: 1203215BR1-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.21	20
Nitrogen	0.21	80
Carbon Dioxide	0.021	0.19

Client Sample ID: SSVP-5

Lab ID#: 1203215BR1-06A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.20	19
Nitrogen	0.20	81
Methane	0.00020	0.00040

Client Sample ID: VP-6

Lab ID#: 1203215BR1-07A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	9.4
Nitrogen	0.22	48
Carbon Dioxide	0.022	9.1
Methane	0.00022	32

Client Sample ID: VP-6-DUP

Lab ID#: 1203215BR1-08A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	0.81
Nitrogen	0.17	43
Carbon Dioxide	0.017	12
Methane	0.00017	42

Client Sample ID: TRIP BLANK

Lab ID#: 1203215BR1-09A

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

Client Sample ID: TRIP BLANK

Lab ID#: 1203215BR1-09A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.32
Nitrogen	0.10	100

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Client Sample ID: OA-1

Lab ID#: 1203215BR1-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9031436**	**Date of Collection: 3/6/12 11:25:00 AM**	
Dil. Factor:	**1.65**	**Date of Analysis: 3/14/12 12:44 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Oxygen	0.16	22
Nitrogen	0.16	78
Carbon Dioxide	0.016	0.046
Methane	0.00016	0.00022
Helium	0.082	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

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Client Sample ID: IA-1

Lab ID#: 1203215BR1-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9031437**	**Date of Collection: 3/6/12 11:34:00 AM**	
Dil. Factor:	**1.75**	**Date of Analysis: 3/14/12 01:33 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Oxygen	0.18	22
Nitrogen	0.18	78
Carbon Dioxide	0.018	0.056
Methane	0.00018	0.00021
Helium	0.088	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

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Client Sample ID: IA-2

Lab ID#: 1203215BR1-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9031438**	**Date of Collection: 3/6/12 11:35:00 AM**	
Dil. Factor:	**1.75**	**Date of Analysis: 3/14/12 01:57 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Oxygen	0.18	22
Nitrogen	0.18	78
Carbon Dioxide	0.018	0.054
Methane	0.00018	0.00020
Helium	0.088	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

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Client Sample ID: SSVP-3

Lab ID#: 1203215BR1-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9031442**	**Date of Collection: 3/6/12 4:54:00 PM**	
Dil. Factor:	**2.19**	**Date of Analysis: 3/14/12 03:34 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	20
Nitrogen	0.22	79
Carbon Dioxide	0.022	0.60
Methane	0.00022	Not Detected
Helium	0.11	Not Detected

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

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Client Sample ID: SSVP-4

Lab ID#: 1203215BR1-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9031443**	**Date of Collection: 3/6/12 3:39:00 PM**	
Dil. Factor:	**2.11**	**Date of Analysis: 3/14/12 03:58 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.21	20
Nitrogen	0.21	80
Carbon Dioxide	0.021	0.19
Methane	0.00021	Not Detected
Helium	0.10	Not Detected

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

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Client Sample ID: SSVP-5

Lab ID#: 1203215BR1-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9031444**	**Date of Collection: 3/6/12 3:01:00 PM**	
Dil. Factor:	**2.02**	**Date of Analysis: 3/14/12 04:20 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.20	19
Nitrogen	0.20	81
Carbon Dioxide	0.020	Not Detected
Methane	0.00020	0.00040
Helium	0.10	Not Detected

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

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Client Sample ID: VP-6

Lab ID#: 1203215BR1-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9031445**	**Date of Collection: 3/6/12 12:41:00 PM**	
Dil. Factor:	**2.24**	**Date of Analysis: 3/14/12 04:44 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	9.4
Nitrogen	0.22	48
Carbon Dioxide	0.022	9.1
Methane	0.00022	32
Helium	0.11	Not Detected

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

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Client Sample ID: VP-6-DUP

Lab ID#: 1203215BR1-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9031439**	**Date of Collection: 3/6/12 12:41:00 PM**	
Dil. Factor:	**1.68**	**Date of Analysis: 3/14/12 02:19 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	0.81
Nitrogen	0.17	43
Carbon Dioxide	0.017	12
Methane	0.00017	42
Helium	0.084	Not Detected

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

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Client Sample ID: TRIP BLANK

Lab ID#: 1203215BR1-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9031441**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/14/12 03:07 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.32
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)

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1203215BR1-10A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9031432**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/14/12 11:03 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

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1203215BR1-10B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9031431b**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/14/12 10:41 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#: 1203215BR1-11A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9031430**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/14/12 10:15 AM**	

Compound	%Recovery
Oxygen	100
Nitrogen	101
Carbon Dioxide	101
Methane	100
Helium	93

Container Type: NA - Not Applicable

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Client Sample ID: LCSD

Lab ID#: 1203215BR1-11AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9031452**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/14/12 11:12 PM**	

Compound	%Recovery
Oxygen	99
Nitrogen	101
Carbon Dioxide	101
Methane	101
Helium	93

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 NATHAN LEE

Collected by: (Print and Sign) SEQUOIA PATTERSON

Company CRA Email NLEE@CRAWORLD.COM

Address 5900 HOLLIS ST STE.A City EMERYVILLE State CA Zip 94608

Phone 510-420-0700 Fax 510-420-9170

Project Info:
P.O. # 4031644
Project # 060057
Project Name CHEVRON 9-0917

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	OA-1	5607	3-6-2012	1125	For All:	-30	-8		
02A	IA-1	34389		1134	• TO-15: TPH$_g$,	-30	-8.5		
03A	IA-2	12680		1135	BTEX, TMTBE,	-30	-9		
04A	SSVP-3	36522		1654	NAPHTHALENE	-30	-7.5		
05A	SSVP-4	36494		1539		-30	-6		
06A	SSVP-5	34166		1501	• ATSM D-1946:	-30	-6		
07A	VP-6	36523		1241	O_2, N_2, CO_2,	-30	-7		
08A	VP-6-DUP	36565		1241	CH_4, Helium	-30	-7		
09A	TRIP BLANK	34177	—	—		—	—		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Sequoia Patterson	3-6-12 2100	Secure Location	3-6-12 2100
Secure Location	3/8/12 1200	Fed Ex	3/8/12
			3.9.12 1320

Notes:
Please report results in ppbv and ug/m^3

Email results and EDF to Nlee@craworld.com and spatterson@craworld.com

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fed Ex		NA	Good	Yes No None	1203215

Form 1293 rev.11