



**CONESTOGA-ROVERS
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TRANSMITTAL

DATE: August 27, 2010 REFERENCE NO.: 060057
 PROJECT NAME: Chevron 9-0917
 TO: Mr. Jerry Wickham RO #439
ACEHS
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

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 9:41 am, Sep 01, 2010
 Alameda County
 Environmental Health

Please find enclosed: Draft Final
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Sent via: Mail Same Day Courier
 Overnight Courier Other Electronic Upload

QUANTITY	DESCRIPTION
1	Soil Vapor Probe Re-Installation And Sampling Report

As Requested For Review and Comment
 For Your Use

COMMENTS:
 Please contact Nathan Lee at (510) 420-3333 if you have any questions or require additional information.

Copy to: Aaron Costa, Chevron Environmental Management Company

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

Filing: **Correspondence File**



Aaron Costa
Project Manager
Marketing Business Unit

**Chevron Environmental
Management Company**
6111 Bollinger Canyon Road
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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 August 27, 2010.

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,

A handwritten signature in black ink that reads "Aaron Costa".

Aaron Costa
Project Manager

Attachment: Report



SOIL VAPOR PROBE RE-INSTALLATION AND SAMPLING REPORT

CHEVRON STATION No. 9-0917
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

AUGUST 27, 2010

REF. NO. 060057 (15)

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**Prepared by:
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SOIL VAPOR PROBE RE-INSTALLATION AND SAMPLING REPORT

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

Belew Yifru

Nathan Lee, PG 8486



**Prepared by:
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AUGUST 27, 2010

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1.0 INTRODUCTION

1.1 GENERAL

On behalf of Chevron Environmental Management Company (Chevron), Conestoga-Rovers and Associates (CRA) is submitting this report to document the installation and sampling of soil vapor probes at the site referenced above. CRA installed the vapor probes as proposed in the *Site Assessment and Excavation Report* dated April 22, 2010 and approved by Alameda County Environmental Health (ACEH) in a letter dated December 21, 2009 and an extension was granted by ACEH in an e-mail dated May 27, 2010 (Appendix A).

On June 16, 2010 CRA installed soil vapor probe VP-6 and sub-slab vapor probes SSVP-3, SSVP-4 and SSVP-5 to further evaluate the potential vapor intrusion pathway to indoor air. The site description, background, CRA's soil vapor probe installation activities and soil vapor probe sampling results are presented below.

1.2 BACKGROUND

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. A summary of previous environmental investigation and remediation is presented as Appendix B.

1.3 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

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

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).

1.4 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.

2.0 SOIL VAPOR ASSESSMENT

The purpose of this investigation was to obtain soil vapor data following station building expansion and remedial excavation. Sub-slab vapor probes SSVP-3, SSVP-4 and SSVP-5 were installed to replace sub-slab vapor probes SSVP-1 and SSVP-2, that were destroyed during construction. Vapor probe VP-6 was installed in native soil approximately 10 feet east of former VP1 which was over-excavated (Figure 2).

2.1 VAPOR PROBE INSTALLATIONS

Site Health and Safety Plan

CRA performed all work under the guidelines set forth in the site health and safety plan. The plan was reviewed, signed and followed by all site workers and visitors at all times.

Permits

CRA conducted work under Zone 7 Water Agency permit number 2010056. A copy of the permit is included as Appendix C.

Installation and Sampling Dates

CRA installed the soil vapor probes on June 16, 2010 and collected soil vapor samples on July 13 and 14, 2010.

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

Personnel

Ian Hull and Belew Yifru of CRA supervised the vapor probe installation and collected soil vapor samples under the supervision of California Professional Geologist Nathan Lee, PG 8486.

Underground Utility Location

Prior to drilling, CRA contacted Underground Service Alert to coordinate the location of subsurface utilities. CRA also hired the private utility locator NorCal Geophysical Consultants Inc. of Cotati, California to confirm subsurface utility locations and locate unmarked utilities.

Drilling Company

CRA contracted Vapor Tech Services (Vapor Tech) of Berkeley, California (C57 #916085) for the soil vapor probe installation.

Soil Vapor Probe Installation and Construction

The soil vapor probe was installed according to the Department of Toxic Substances Control (DTSC) January 28, 2003 *Advisory-Active Soil Gas Investigations* guidance document. Soil vapor probe VP-6 was installed utilizing a hand auger and CRA personnel logged the soil lithology and collected a soil sample at 6 fbg for laboratory analysis.

The probe was constructed with porous stainless-steel implants attached to ¼-inch Teflon tubing and placed at 5.5 fbg and surrounded by a 12-inch sand pack. Half a foot of hydrated bentonite was placed at the bottom of the boring underneath the sand filter pack. One foot of dry bentonite was placed on top of the sand and the rest of the boring was sealed by hydrated bentonite. The vapor probe was finished at the surface with a traditional well vault set in concrete.

Sub-Slab Vapor Probe Installation and Construction

The sub-slab vapor probes were installed based on the U.S. Environmental Protection Agency's 2004 *Standard Operating Procedure (SOP) for Installation of Sub-Slab Vapor Probes and Sampling Using EPA Method TO 15 to Support Vapor Intrusion Investigations (Draft)*. Sub-slab vapor probes SSVP-3, SSVP-4 and SSVP-5 were installed within the station building. A rotary hammer drill was used to create a 2-inch diameter and 1-inch deep "outer" hole that partially penetrated the concrete slab. A small portable vacuum cleaner was used to remove cuttings from the hole. Removal of cuttings in this manner from the non-penetrated slab does not compromise soil vapor samples because the lack of pneumatic communication between sub-slab material and the vacuum cleaner.

A smaller diameter “inter” hole was created utilizing a rotary hammer drill to penetrate the remaining concrete slab and into the sub-slab material to a depth of approximately six inches below the concrete slab.

Sub-slab vapor probes were constructed using stainless-steel tubing and stainless-steel compression fittings. Stainless-steel was used to ensure that construction materials were not a source of volatile organic compounds. Quick drying Portland cement slurry was placed into the annular space between the probe and “outer” hole. The probe was completed flush with the slab surface capped with stainless steel plugs to prevent interference with facility operations.

Waste Disposal

All waste generated from field activities were placed into Department of Transportation approved drums. The waste was profiled, transported and disposed of by Integrated Waste Management of Dublin, California at Republic Services Inc. Vasco Road in Livermore, California and water was disposed of at Chemical Waste Management Inc. in Kettleman Hills, California.

2.2 SAMPLING PROCEDURES

Soil

On June 16, 2010 a soil sample was collected during soil vapor probe VP-6 installation. The soil was recovered from a hand auger and packed in a stainless steel sleeve and covered with Teflon™ tape, capped with a polyethylene lid, labeled, entered onto a chain-of-custody form, placed on ice and transported to Lancaster Laboratories of Lancaster, Pennsylvania. The boring log showing sediment descriptions, sample depths and vapor probe installation details is presented as Appendix D.

Soil Vapor

On July 13, 2010, a vapor sample was collected from VP-6 in a one-liter Summa™ canister 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 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, 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 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 for a representative soil gas sample. 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 negative pressure of approximately five-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 at least 80 percent helium was created and maintained for the duration of vapor sampling. 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.

Sub-slab Vapor

On July 14, 2010, CRA collected sub-slab vapor samples from SSVP-3, SSVP-4, and SSVP-5. The sub-slab probes were purged of approximately three probe volumes. First the sub-slab probes were closed to ambient air by connecting a closed, clean ball-valve directly to the probe. A flow regulator set to 167 milliliters per minute was connected to the ball-valve and a Summa™ canister for purging. After purging, the Summa™ canister and ball-valve were closed and the purge Summa™ canister was removed. While the ball-valve was still closed, the sample Summa™ canister was connected. The ball-valve was opened, but the sample Summa™ canister remained closed. Once the helium shroud with an approximately 80% helium atmosphere was established, the sample Summa™ canister was opened and the sub-slab probe was sampled. A helium detector was used to continually maintain the helium atmosphere around the entire sampling train. 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.

Indoor and Outdoor Ambient Air

Indoor air samples, IA-1, IA-1 DUP and IA-2 were collected in the breathing zone inside the station building in normal conditions for the building. Ambient air sample OA-1 was collected from outside the station building in the breathing zone. Samples were collected in a Summa™ canister at a flow rate of 167 milliliters per minute until a

negative pressure of approximately five-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.

2.3 LABORATORY ANALYSES

Soil

The soil sample was analyzed for the following constituents:

- Total Petroleum Hydrocarbons as gasoline (TPHg) by EPA Method 8015B Modified
- Benzene, toluene, ethyl benzene, xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8260B

Vapor

Vapor samples were analyzed for the following constituents:

- TPHg by EPA Method TO-15 (GC/MS)
- BTEX, MTBE and Naphthalene by EPA Method TO-15 (GC/MS)
- O₂, N₂, CO₂, CH₄ and He by Modified ASTM D-1946 (GC/TCD)

3.0 DISTRIBUTION OF HYDROCARBONS

3.1 DISTRIBUTION OF HYDROCARBONS IN SOIL

Results from the soil sample collected during the installation of soil vapor probe VP-6 are presented in Table A below and compared to Environmental Screening Levels (ESLs)³. No hydrocarbon concentrations detected in boring VP-6 exceed ESLs.

The laboratory analytical report for soil is included as Appendix E and cumulative soil analytical data is presented in Table 1.

³ Environmental Screening Levels (ESLs) for shallow soil (≤3 meters below grade) where groundwater is current or potential source of drinking water 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 A.

TABLE A : SOIL ANALYTICAL TABLE								
Sample ID	Date	Depth (fbg)	TPHg	Benzene	Toluene	Ethyl benzene	Total Xylenes	MTBE
			Reported in milligram per kilogram (mg/kg)					
<i>ESLs Shallow Soil (Residential)</i> ³			83	0.044	2.9	2.3	2.3	0.023
VP-6	6/16/2010	6	4.6	0.009	<0.001	0.011	0.007	0.002

3.2 DISTRIBUTION OF HYDROCARBONS IN SOIL VAPOR AND AMBIENT AIR

Results from soil vapor samples from VP-6, SSVP-3, SSVP-4, SSVP-5 and ambient air samples from inside and outside of the station building (IA-1, IA-1 DUP and OA-1) are presented in Table B below and compared to ESLs.⁴ Hydrocarbon concentrations in soil vapor only exceed ESLs in VP-6. The laboratory analytical reports for vapor are included as Appendix F and cumulative vapor analytical data is presented in Table 2.

⁴ 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 B: 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/m ³)						
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	7/13/2010	5.5	61,000,000	48,000	<9,100	<10,000	<10,000	<8,700	<51,000
SSVP-3	7/14/2010	0.5	<250	<3.9	<4.6	<5.2	<5.2	<4.4	<25
SSVP-4	7/14/2010	0.5	1,300	<3.6	<4.2	<4.9	<4.9	<4.0	<23
SSVP-5	7/14/2010	0.5	2,100	<3.6	<4.2	<4.9	<4.9	<4.0	<23
IA-1	7/14/2010	--	410	<3.6	4.2	<4.9	<4.9	<4.0	<23
IA-1 DUP	7/14/2010	--	<220	<3.5	4.4	<4.8	<4.8	<4.0	<23
IA-2	7/14/2010	--	<240	<3.7	4.9	<5.0	<5.0	<4.2	<24
OA-1	7/14/2010	--	<220	<3.4	<4.1	<4.7	<4.7	<3.9	<23
OA-1	LAB DUPLICATE		<220	<3.4	<4.1	<4.7	<4.7	<3.9	<23

Helium was not detected in any of the vapor probe samples above laboratory method detection limits. The absence of helium in the samples indicates that no ambient air entered the canisters during the sampling process.

4.0 CONCLUSIONS AND RECOMMENDATIONS

- Soil vapor hydrocarbon concentrations in VP-6 are similar to concentrations detected previously in VP1 and SB8
- Remedial excavation in the vicinity of VP1 has significantly reduced soil vapor hydrocarbon concentrations as evidenced by data from SSVP-5
- Concentrations of toluene were detected in indoor ambient air but not in sub-slab samples, indicating the source of toluene is not from soil gas
- Current ambient air data is similar to previous results and consistent with retail fuel service station operations
- The results from this investigation and the similarities to the results from sub-slab investigation conducted in November 2009 demonstrate that there is not a pathway from the subsurface into the station building

CRA recommends and will submit a low-risk case closure request by November 30, 2010.

FIGURES

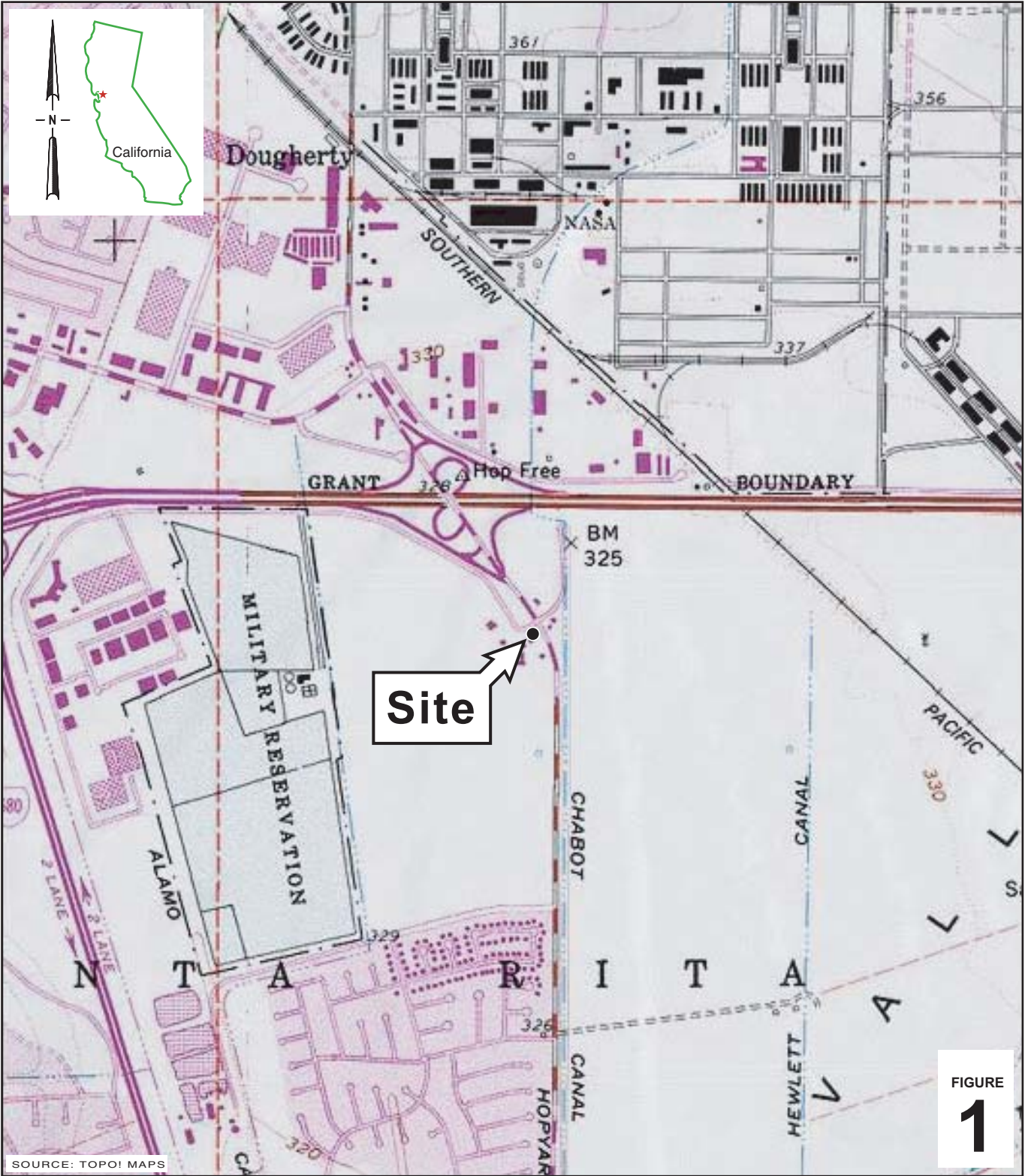


FIGURE 1

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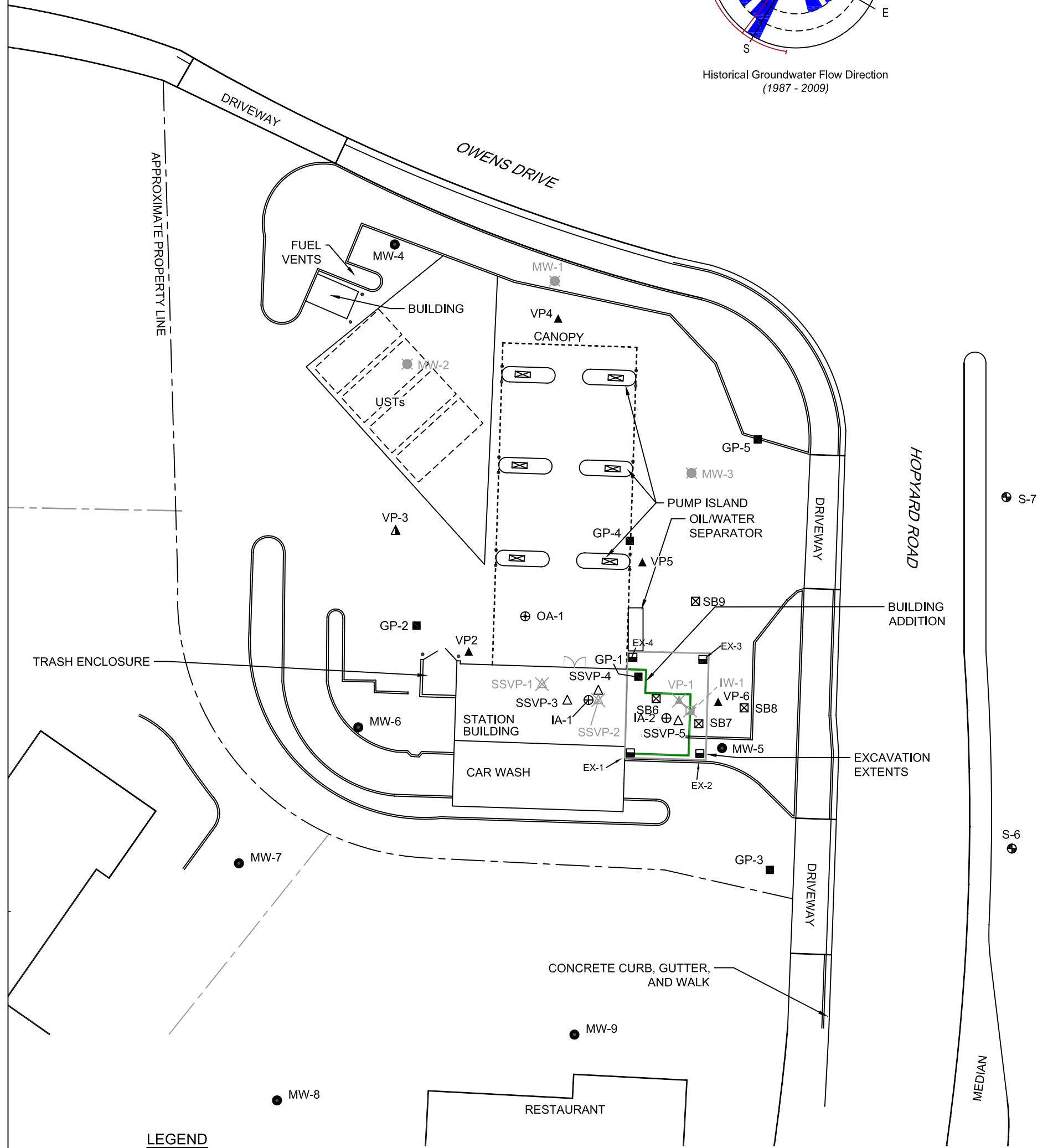
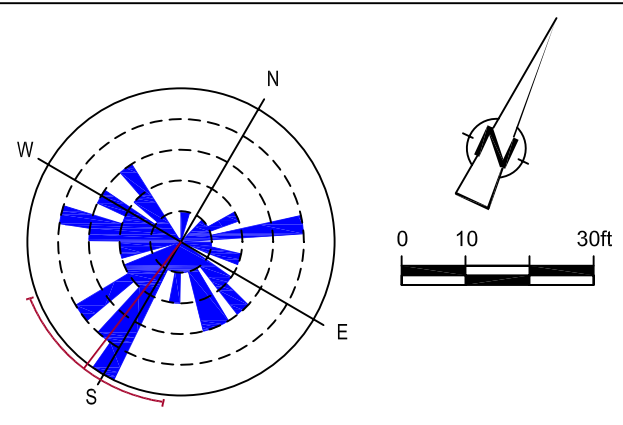
SOURCE: TOPOI MAPS
0 1/8 1/4 1/2 1
SCALE : 1" = 1/4 MILE

Chevron Service Station 9-0917
5280 Hopyard Road
Pleasanton, California



CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map



LEGEND

- MW-1 ● MONITORING WELL LOCATION
- VP-1 ▲ SOIL VAPOR WELL LOCATION
- SSVP-4 △ SUB-SLAB PROBE LOCATION
- SB-6 ☒ 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 9-0917
5280 HOPYARD ROAD
Pleasanton, California



TABLES

TABLE 1

CUMULATIVE SOIL ANALYTICAL DATA
 CHEVRON STATION #9-0917
 5280 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Depth (fbg)	TOG	TPHd	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	DIPE	TAME	TBA	ETBE	EPA 8010 Compounds	As	Ba	Cd	Cr(VI)	Pb	Hg	Se	Ag
ESLs - Shallow, Residential soil																							
			370	83	83	0.044	2.9	2.3	2.3	0.023	NE	NE	0.075	NE	--	6.3	750	1.7	8.0	200	1.3	10	20
ESLs - Deep, Residential soil																							
			5,000	83	83	0.044	2.9	3.3	2.3	0.023	NE	NE	0.075	NE	--	310	2,500	39	0.53	750	58	2,500	2,500
2010 CRA Soil Vapor Probe Re-Installation and Sampling Report																							
VP-6	06/16/10	6.0	--	--	4.6	0.009	<0.001	0.011	0.007	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--
2010 CRA Excavation - Area of Station Building Expansion																							
EX-1	02/24/10	6.5	--	<4.0	1.2	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.022	<0.001	--	--	--	--	--	--	--	--	--
EX-2	02/24/10	5.5	--	<4.0	4.3	0.007	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.021	<0.001	--	--	--	--	--	--	--	--	--
EX-3	02/24/10	5.5	--	<4.0	4.5	0.006	<0.001	0.001	0.002	0.004	<0.001	<0.001	<0.021	<0.001	--	--	--	--	--	--	--	--	--
EX-4	02/24/10	6.0	--	<4.0	19	0.56	0.005	0.099	0.11	<0.0005	<0.001	<0.001	<0.020	<0.001	--	--	--	--	--	--	--	--	--
2009 CRA Additional Assessment - Area of Planned Station Building Expansion																							
SB6	10/28/09	3.0	--	--	<1.1	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
SB6	10/28/09	7.5	--	--	<1	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
SB6	10/28/09	11.5	--	--	<1	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
SB6	10/28/09	12.5	--	--	6.2	0.002	<0.001	<0.001	<0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
SB6	10/28/09	15.5	--	--	61	0.041	<0.056	<0.056	<0.056	<0.028	--	--	--	--	--	--	--	--	--	--	--	--	--
SB6	10/28/09	19.0	--	--	93	0.23	<0.051	1.7	<0.051	<0.026	--	--	--	--	--	--	--	--	--	--	--	--	--
SB6	10/28/09	22.0	--	--	2.2	0.001	<0.001	0.013	<0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
SB6	10/28/09	23.5	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
SB7	10/29/09	3.0	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
SB7	10/29/09	6.0	--	--	<1.1	0.0007	<0.0009	<0.0009	0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
SB7	10/29/09	9.0	--	--	34	0.055	0.002	0.047	0.011	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
SB7	10/29/09	12.0	--	--	37	0.011	<0.001	0.033	<0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
SB7	10/29/09	15.0	--	--	190	0.17	<0.049	1.0	<0.049	<0.024	--	--	--	--	--	--	--	--	--	--	--	--	--
SB7	10/29/09	18.0	--	--	730	3.4	<0.051	14	4.8	<0.026	--	--	--	--	--	--	--	--	--	--	--	--	--
SB7	10/29/09	21.0	--	--	3.0	0.014	<0.001	0.096	0.023	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
SB7	10/29/09	23.5	--	--	<1.1	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
SB8	10/29/09	3.0	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--
SB8	10/29/09	5.5	--	--	7.6	0.023	0.001	0.007	0.004	0.006	--	--	--	--	--	--	--	--	--	--	--	--	--
SB8	10/29/09	10.0	--	--	4.2	0.046	<0.001	0.024	0.001	0.007	--	--	--	--	--	--	--	--	--	--	--	--	--
SB8	10/29/09	12.0	--	--	5.9	0.032	<0.001	0.063	0.001	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--
SB8	10/29/09	15.0	--	--	230	0.27	<0.049	1.5	<0.049	<0.025	--	--	--	--	--	--	--	--	--	--	--	--	--
SB8	10/29/09	18.0	--	--	<1	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
SB8	10/29/09	21.0	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1

CUMULATIVE SOIL ANALYTICAL DATA
 CHEVRON STATION #9-0917
 5280 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Depth (fbg)	TOG	TPHd	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	DIPE	TAME	TBA	ETBE	EPA 8010		Cd	Cr(VI)	Pb	Hg	Se	Ag	
															Compounds	As							Ba
Concentrations reported in milligrams per kilogram (mg/kg) unless otherwise noted																							
ESLs - Shallow, Residential soil			370	83	83	0.044	2.9	2.3	2.3	0.023	NE	NE	0.075	NE	--	6.3	750	1.7	8.0	200	1.3	10	20
ESLs - Deep, Residential soil			5,000	83	83	0.044	2.9	3.3	2.3	0.023	NE	NE	0.075	NE	--	310	2,500	39	0.53	750	58	2,500	2,500
SB8	10/29/09	23.5	--	--	<1.1	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
2009 CRA Soil Vapor Probe Installation																							
VP1	01/27/09	4.0	--	--	100	1.2	<0.046	2.4	0.54	<0.023	--	--	--	--	--	--	--	--	--	--	--	--	--
VP2	01/27/09	4.0	--	--	<1.0	0.0007	<0.001	<0.001	<0.001	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
VP4	01/27/09	4.0	--	--	<1.0	0.0007	<0.0009	<0.0009	<0.0009	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
VP5	01/27/09	4.0	--	--	<1.0	0.001	<0.0009	<0.0009	<0.0009	<0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
2006 Cambria Injection Well Installation																							
IW-1	08/04/06	5.0	--	--	3.2	<0.0005	<0.001	0.003	<0.001	<0.0005	<0.001	<0.001	<0.020	<0.001	--	--	--	--	--	--	--	--	--
IW-1	08/04/06	12.0	--	--	260	0.11	0.007	0.97	0.17	<0.002	<0.005	<0.005	<0.099	<0.005	--	--	--	--	--	--	--	--	--
IW-1	08/04/06	15.5	--	--	880	<0.003	0.007	3.4	1.6	<0.003	<0.005	<0.005	<0.10	<0.005	--	--	--	--	--	--	--	--	--
IW-1	08/04/06	20.0	--	--	130	0.35	<0.005	1.5	1.4	<0.003	<0.005	<0.005	<0.10	<0.005	--	--	--	--	--	--	--	--	--
IW-1	08/04/06	24.0	--	--	2.7	<0.0005	<0.001	0.001	<0.001	<0.0005	<0.001	<0.001	<0.020	<0.001	--	--	--	--	--	--	--	--	--
2006 Cambria Subsurface Investigation																							
GP-1	02/09/06	5.0	--	--	110	0.026	<0.005	1.4	0.063	<0.003	<0.005	<0.005	0.1	0.005	--	--	--	--	--	--	--	--	--
GP-1	02/09/06	7.0	--	--	7.9	0.003	<0.001	0.003	<0.001	<0.0005	<0.001	<0.001	<0.020	<0.001	--	--	--	--	--	--	--	--	--
GP-1	02/09/06	10.0	--	--	70	0.090	<0.005	1.3	<0.005	<0.002	<0.005	<0.005	0.099	<0.005	--	--	--	--	--	--	--	--	--
GP-2	02/02/06	3.0	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.020	<0.001	--	--	--	--	--	--	--	--	--
GP-2	02/02/06	5.0	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.020	<0.001	--	--	--	--	--	--	--	--	--
GP-2	02/02/06	10.0	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	0.0006	<0.001	<0.001	<0.020	<0.001	--	--	--	--	--	--	--	--	--
GP-3	02/02/06	5.0	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.020	<0.001	--	--	--	--	--	--	--	--	--
GP-3	02/02/06	10.0	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.020	<0.001	--	--	--	--	--	--	--	--	--
GP-4	02/02/06	5.0	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.020	<0.001	--	--	--	--	--	--	--	--	--
GP-4	02/02/06	10.0	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.020	<0.001	--	--	--	--	--	--	--	--	--
GP-5	02/02/06	5.0	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.020	<0.001	--	--	--	--	--	--	--	--	--
GP-5	02/02/06	10.0	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.020	<0.001	--	--	--	--	--	--	--	--	--
1997 PEG Offsite Well Installation																							
MW-7	05/05/97	5.0	--	--	<1000	<5	<5	<5	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	05/05/97	10.5	--	--	<1000	<5	<5	<5	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	05/05/97	5.5	--	--	<1000	<5	<5	<5	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	05/05/97	10.5	--	--	<1000	<5	<5	<5	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	05/05/97	5.0	--	--	<1000	<5	<5	<5	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	05/05/97	10.0	--	--	<1000	<5	<5	<5	<5	<10	--	--	--	--	--	--	--	--	--	--	--	--	--
1991 GTI Well Replacement																							

TABLE 1

CUMULATIVE SOIL ANALYTICAL DATA
 CHEVRON STATION #9-0917
 5280 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Depth (fbg)	TOG	TPHd	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	DIPE	TAME	TBA	ETBE	EPA 8010 Compounds		As	Ba	Cd	Cr(VI)	Pb	Hg	Se	Ag
															As	Ba								
Concentrations reported in milligrams per kilogram (mg/kg) unless otherwise noted																								
ESLs - Shallow, Residential soil			370	83	83	0.044	2.9	2.3	2.3	0.023	NE	NE	0.075	NE	--	6.3	750	1.7	8.0	200	1.3	10	20	
ESLs - Deep, Residential soil			5,000	83	83	0.044	2.9	3.3	2.3	0.023	NE	NE	0.075	NE	--	310	2,500	39	0.53	750	58	2,500	2,500	
MW-4	08/22/91	12.0	--	--	1	<0.005	0.010	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	08/22/91	9.0	--	--	3	<0.005	0.022	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	08/22/91	13.0	--	--	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	08/22/91	12.5	--	--	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1991 Station Reconfiguration (former UST excavation samples)																								
AF	06/07/91	8.5	--	--	14	0.26	0.08	<0.03	0.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AM	06/07/91	9.0	--	--	4.1	0.23	0.047	0.31	0.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Aop	06/07/91	9.0	--	--	9	0.11	0.06	<0.03	0.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
BF	06/07/91	8.5	--	<1	--	0.077	0.007	0.025	0.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
BF	06/07/91	8.5	--	<1	--	0.26	0.015	0.009	0.008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Bop	06/07/91	10.0	--	<1	--	0.052	0.024	0.071	0.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
CF	06/07/91	9.0	--	--	4.8	0.11	<0.005	0.16	0.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Cop	06/07/91	9.5	--	--	43	0.64	0.12	2.3	0.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
DF	06/07/91	9.0	--	--	3.6	0.027	0.01	0.091	0.053	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Dop	06/07/91	10.0	--	--	70	0.36	0.3	0.13	0.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1991 Station Reconfiguration (product line samples)																								
14	06/07/91	2.0	--	<100	970	32	120	0.6	130	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
15	06/07/91	8.0	--	<1	50	0.16	0.25	0.14	0.27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
16	06/07/91	7.5	--	--	4.8	<0.005	0.067	0.040	0.044	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
17	06/07/91	3.0	--	--	59	0.1	0.070	0.54	0.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
18	06/07/91	7.0	--	--	58	<0.005	0.090	0.45	1.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
19	06/07/91	3.0	--	--	<5	<0.005	0.010	<0.005	0.019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
20	06/07/91	6.0	--	--	<0.3	<0.005	0.011	<0.005	<0.005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
21	06/07/91	9.0	--	--	<0.3	<0.005	0.013	<0.005	0.008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
22	06/07/91	3.0	--	--	<0.3	<0.005	0.035	<0.005	0.032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
23	06/07/91	6.0	--	--	<60	<0.03	0.24	0.21	0.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
24	06/07/91	3.0	--	<1	53	0.32	0.42	0.22	3.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
25	06/07/91	7.0	--	<3	440	1.1	5.2	0.54	22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
26	06/07/91	3.0	--	<4	1,800	12	15	2.9	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
27	06/07/91	10.0	--	8	<0.5	<0.005	0.017	<0.005	0.075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
1991 Station Reconfiguration (waste oil storage tank pit samples)																								
WoM	06/07/91	9.0	<50	<1	4	0.051	0.054	0.011	0.13	--	--	--	--	--	ND	<1.0	1.6	<0.05	<0.1	<0.1b	<0.01c	<0.1	<0.1	
1989 GTI Well Installation																								

TABLE 1

CUMULATIVE SOIL ANALYTICAL DATA
CHEVRON STATION #9-0917
5280 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Depth (fbg)	TOG	TPHd	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	DIPE	TAME	TBA	ETBE	EPA 8010 Compounds	As	Ba	Cd	Cr(VI)	Pb	Hg	Se	Ag
<i>ESLs - Shallow, Residential soil</i>			370	83	83	0.044	2.9	2.3	2.3	0.023	NE	NE	0.075	NE	--	6.3	750	1.7	8.0	200	1.3	10	20
<i>ESLs - Deep, Residential soil</i>			5,000	83	83	0.044	2.9	3.3	2.3	0.023	NE	NE	0.075	NE	--	310	2,500	39	0.53	750	58	2,500	2,500
MW1A	07/13/89	4.5	--	--	<1	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	<0.25	--	--	--
MW1B	07/13/89	9.5	--	--	1	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	<0.25	--	--	--
MW2A	07/13/89	4.5	--	--	<1	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	<0.25	--	--	--
MW2B	07/13/89	9.5	--	--	<1	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	<0.25	--	--	--
MW3A	07/13/89	4.5	--	--	<1	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	<0.25	--	--	--
MW3B	07/13/89	9.5	--	--	<1	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--	<0.25	--	--	--

Abbreviations/Notes:

TOG = Total oil and grease analyzed by EPA Method 8015, unless otherwise noted

TPHd = Total petroleum hydrocarbons as diesel, analyzed by GC FID/3550 (1991) or by EPA Method 8015 (2009)

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8015 unless otherwise noted

Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; before 2009, analyzed by EPA Method 8020 unless otherwise noted

MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8260B, unless otherwise noted

DIPE = di-isopropyl ether, TAME = t-amyl methyl ether, TBA = tert-butyl alcohol and ETBE = ethyl tertiary butyl ether analyzed by EPA Method 8260B, unless otherwise noted.

EPA 8010 Compounds = As reported in August 2, 1991 *Tank Removal and Replacement* report. Specific constituents and detection limits not originally reported

As = Antimony, Ba = barium, Cd = cadmium, Cr = chromium, Pb = lead, Hg = mercury, Se = selenium, Ag = silver by EPA Method 6010, unless otherwise noted

fbg = feet below grade

Environmental Screening Levels (ESLs) for shallow and deep soils where groundwater is a current or potential source of drinking water for residential land use from *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, Tables A and C.

-- = not analyzed or not applicable

<x = Not detected at reporting limit x

ND = Not detected; detection limit unknown

* = Concentrations reported in milligrams per liter

a = MTBE analyzed by EPA Method 8020

b = Lead analyzed according to California DHS

c = Mercury analyzed by EPA Method 7470

Bold = Concentration exceeds applicable ESL~~100~~ = Over-excavated sample location

TABLE 2

CUMULATIVE VAPOR ANALYTICAL DATA
CHEVRON STATION 9-0917
5280 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Sample Depth (fbg)	TPHg (by TO-3) ($\mu\text{g}/\text{m}^3$)	TPHg (by TO-15) ($\mu\text{g}/\text{m}^3$)	Benzene ($\mu\text{g}/\text{m}^3$)	Toluene ($\mu\text{g}/\text{m}^3$)	Ethyl-benzene ($\mu\text{g}/\text{m}^3$)	Total Xylenes ¹ ($\mu\text{g}/\text{m}^3$)	MTBE ($\mu\text{g}/\text{m}^3$)	Naphthalene ($\mu\text{g}/\text{m}^3$)	Helium (% Vol)	Oxygen (% Vol)	Methane (% Vol)	CO ₂ (% Vol)	N ₂ (% Vol)	Hydrogen Sulfide ³ (ppbv)	Carbonyl Sulfide ³ (ppbv)	Thiophene ³ (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	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	NE
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	--	--	--	--	--	--	--	--	
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	--	--	--	--	

TABLE 2

CUMULATIVE VAPOR ANALYTICAL DATA
CHEVRON STATION 9-0917
5280 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Sample Depth (fbg)	TPHg (by TO-3) ($\mu\text{g}/\text{m}^3$)	TPHg (by TO-15) ($\mu\text{g}/\text{m}^3$)	Benzene ($\mu\text{g}/\text{m}^3$)	Toluene ($\mu\text{g}/\text{m}^3$)	Ethyl-benzene ($\mu\text{g}/\text{m}^3$)	Total Xylenes ¹ ($\mu\text{g}/\text{m}^3$)	MTBE ($\mu\text{g}/\text{m}^3$)	Naphthalene ($\mu\text{g}/\text{m}^3$)	Helium (% Vol)	Oxygen (% Vol)	Methane (% Vol)	CO ₂ (% Vol)	N ₂ (% Vol)	Hydrogen Sulfide ³ (ppbv)	Carbonyl Sulfide ³ (ppbv)	Thiophene ³ (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
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	--	--	--	--
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

TABLE 2

CUMULATIVE VAPOR ANALYTICAL DATA
CHEVRON STATION 9-0917
5280 HOPYARD ROAD, PLEASANTON, CALIFORNIA

Sample ID	Date	Sample Depth (fbg)	TPHg (by TO-3) ($\mu\text{g}/\text{m}^3$)	TPHg (by TO-15) ($\mu\text{g}/\text{m}^3$)	Benzene ($\mu\text{g}/\text{m}^3$)	Toluene ($\mu\text{g}/\text{m}^3$)	Ethylbenzene ($\mu\text{g}/\text{m}^3$)	Total Xylenes ¹ ($\mu\text{g}/\text{m}^3$)	MTBE ($\mu\text{g}/\text{m}^3$)	Naphthalene ($\mu\text{g}/\text{m}^3$)	Helium (% Vol)	Oxygen (% Vol)	Methane (% Vol)	CO ₂ (% Vol)	N ₂ (% Vol)	Hydrogen Sulfide ³ (ppbv)	Carbonyl Sulfide ³ (ppbv)	Thiophene ³ (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

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 (CO₂), and nitrogen (N₂) by ASTM D-1946.

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

fbg = Feet below grade.

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

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.

3 = Results reported in parts-per-billion by volume (ppbv) only.

J = Estimated value due to bias in the CCV.

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

Bold = Concentration exceeds applicable ESL.

APPENDIX A

REGULATORY CORRESPONDENCE



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

December 21, 2009

Mr. Aaron Costa (Sent via E-mail to: ACosta@chevron.com)
Chevron Environmental Management Company
6001 Bollinger Canyon Road, Room 3660
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: 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 including the recently submitted documents entitled, "*Sub-slab Vapor Results*," dated December 15, 2009 and "*Work Plan for Excavation and Well Destruction*," dated December 16, 2009 (Work Plan). The Sub-slab Vapor Results Report presents the results from sampling of two sub-slab vapor probes within the station building and ambient air sampling. Total petroleum hydrocarbons as gasoline (TPHg) were detected in the two subslab soil vapor samples and ambient air samples at concentrations ranging from 140 to 6,700 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The Sub-slab Vapor Results Report concludes that there is no complete exposure pathway from the subsurface to the site building. It is not clear that this conclusion can be substantiated based upon the comparison of indoor air, outdoor air, and sub-slab sampling results from a single sampling event. Additional sub-slab and ambient air single sampling will be required to confirm that the November 2009 sampling results are representative.

The Work Plan proposes the excavation of soil to a depth of approximately 8 feet bgs within the area of a proposed building expansion and destruction of wells VP-1 and IW-1. To replace VP-1, a soil vapor probe is to be installed within native soil outside the excavation as close as possible to the location of VP-1. Replacement of well IW-1 is not required at this time. The proposed excavation and well destruction is acceptable and may be implemented as proposed.

We request that you address the technical comment below, perform the proposed work, and send us the reports requested below. Please provide 72-hour advance written notification to this office (e-mail preferred to jerry.wickham@acgov.org) prior to the start of field activities.

Mr. Aaron Costa
Lamorinda Development and Investment
C&H Development
RO0000439
December 21, 2009
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TECHNICAL COMMENTS

1. **Additional Assessment in Area of Planned Building Expansion.** Three soil borings were advanced within the area east of the existing station building on October 29, 2007 for an additional assessment in the area of planned building expansion. Although analytical results from these borings are listed in Table 1 of the Sub-slab Vapor Results Report, the complete results from these borings do not appear to have been presented in a technical report. Please present the complete results from these borings and the assessment in the Excavation and Soil Vapor Probe Installation Report requested below. Please include recommendations for the ongoing soil vapor investigation.

TECHNICAL REPORT REQUEST

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

- **April 23, 2010** – Excavation and Soil Vapor Probe Installation Report

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

ELECTRONIC SUBMITTAL OF REPORTS

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

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:

Mr. Aaron Costa
Lamorinda Development and Investment
C&H Development
RO0000439
December 21, 2009
Page 3

"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.

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

Sincerely,

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

Mr. Aaron Costa
Lamorinda Development and Investment
C&H Development
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December 21, 2009
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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)

Cheryl Dizon (QIC 8021), Zone 7 Water Agency, 100 North Canyons Pkwy, Livermore, CA 94551 (Sent via E-mail to: cdizon@zone7water.com)

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

Charlotte Evans, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A, Emeryville, CA 94608 Evans, 94551 (Sent via E-mail to: Cevans@croworld.com)

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

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

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

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

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

Submission Instructions

- 1) Obtain User Name and Password:
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to dehloptoxic@acgov.org
 - Or
 - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
 - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

- 2) Upload Files to the ftp Site
 - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
 - (i) Note: Netscape and Firefox browsers will not open the FTP site.
 - b) Click on File, then on Login As.
 - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
 - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
 - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
 - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
 - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
 - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

From: Wickham, Jerry, Env. Health [mailto:jerry.wickham@acgov.org]
Sent: Thursday, May 27, 2010 11:15 AM
To: Lee, Nathan
Cc: Wilken, Brandon
Subject: RE: RO 0439 9-0917 5280 Hopyard Road Sub-Slab and Vapor Probe Installation Extension

Nathan,

Based on your request, the schedule for submittal of a report documenting vapor probe installation and sampling for the above referenced case is extended to August 27, 2010.

Regards,

Jerry Wickham

Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
510-567-6791
jerry.wickham@acgov.org

From: Lee, Nathan [mailto:nlee@croworld.com]
Sent: Thursday, May 27, 2010 11:02 AM
To: Wickham, Jerry, Env. Health
Cc: Wilken, Brandon
Subject: RO 0439 9-0917 5280 Hopyard Road Sub-Slab and Vapor Probe Installation Extension

Mr. Jerry Wickham,

As we discussed on the phone, CRA is requesting a deadline extension for the report submittal regarding the installation and sampling of the sub-slab vapor probes and VP-6. We are asking for an extension due to site construction activities and wet weather which have caused delays in the installation of the vapor probes. We would like to submit the report documenting the vapor probe installation activities on August 27, 2010.

Thanks,

Nathan Lee, P.G.
Conestoga-Rovers & Associates (CRA)
5900 Hollis Street, Suite A
Emeryville, CA 94608

Phone: 510.420.3333
Fax: 510.420.9170
Cell: 510.385.2499
Email: nlee@CRAworld.com

APPENDIX B

PREVIOUS ENVIRONMENTAL INVESTIGATION AND REMEDIATION

PREVIOUS ENVIRONMENTAL INVESTIGATION AND REMEDIATION

1989 Monitoring Well Installation

In August 1989, Groundwater Technology, Inc. (GTI) installed onsite groundwater monitoring wells MW-1 through MW-3. Additional information is available in GTI's August 1989 *Site Assessment Report*.

1991 Monitoring Well Destruction and Well Installation

In July 1991, GTI destroyed wells MW-1 through MW-3 and installed groundwater monitoring wells MW-4 through MW-6. Groundwater was encountered in the well borings at a depth of approximately 13 fbg. Additional information is available in GTI's November 14, 1991 *Well Installation Report*.

1991 UST Replacement and Soil Excavation

In June 1991, Blaine Tech Services, Inc. observed the underground storage tank (UST) system removal and soil excavation, and collected soil and groundwater samples for chemical analyses. Five fiberglass USTs were removed and replaced with four double-walled fiberglass USTs. Over-excavation of UST and product piping areas extended to maximum depths of approximately 10 fbg. Depth to water in the excavation was measured at approximately 10 fbg. 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. Additional information is available in Gettler-Ryan's (G-R) January 25, 2002 *Site Conceptual Model and Closure Request*.

1997 Monitoring Well Installation

On May 5, 1997, 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. Additional information is available in PEG's August 11, 1997 *Soil and Groundwater Investigation*.

March 1999 Enhanced Bioremediation

On March 26, 1999, G-R installed oxygen releasing compound (ORC) socks in wells MW-5 and MW-6 to increase the dissolved oxygen concentrations in groundwater to enhance biodegradation of the hydrocarbon plume. ORC in this application had an estimated time release of approximately six months. A significant decrease in dissolved hydrocarbon concentrations was observed in wells MW-5 and MW-6 after installation of the ORC socks. A significant decrease in dissolved oxygen (DO) concentrations in wells MW-5 and MW-6 was reported from samples collected from June 19, 2000 to September 18, 2000, suggesting that the ORC socks were spent. A second significant decrease in DO was reported in samples collected from September 7, 2001 to December 5, 2001. Per the request of Alameda County

Environmental Health (ACEH), G-R removed the ORC socks in wells MW-5 and MW-6 during the monitoring and sampling event on September 7, 2001.

2006 Subsurface Investigation

In February 2006, Cambria Environmental Technology, Inc. (Cambria) advanced five soil borings. Two of the borings were advanced to deeper groundwater bearing zones using a Cone Penetrometer Technology (CPT) direct push drill rig. Additional information is available in Cambria's March 29, 2006 *Subsurface Investigation Report*.

2006 Well Installation

In August 2006, Cambria installed remediation well IW-1. Additional information is available in Cambria's September 26, 2006 *Subsurface Investigation Report*.

2007 Groundwater Batch Extraction

In January 2007, Cambria performed batch groundwater extraction from well IW-1. The calculated TPHg mass removed was 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. Additional information is available in Cambria's March 12, 2007 *Groundwater Batch Extraction Results*.

2009 Soil Vapor Probe Installations

Conestoga-Rovers & Associates (CRA) installed four soil vapor probes onsite to evaluate the potential for a vapor intrusion pathway onsite from soil gas to indoor air. Additional information is available in CRA's April 19, 2009 *Soil Vapor Probe Installation and Sampling Report*.

2009 Soil Vapor Sampling

On May 14, 2009 CRA collected additional samples from vapor points VP1, VP2, VP4 and VP5. Additional information is available in CRA's June 29, 2009 *Soil Vapor Sampling Report and Work Plan for Sub-Slab Vapor Probes*.

2009 Additional Site Assessment

On October 28 and 29, 2009 CRA advanced three direct-push soil borings, installed four temporary soil vapor probes and collected soil, soil vapor and grab-groundwater samples. Additional information is available in CRA's April 22, 2010 *Site Assessment and Excavation Report*.

2010 Well Destruction and Excavation

On January 28, 2010 and February 23, 2010, extraction well IW-1 and vapor well VP1 were destroyed to accommodate station building expansion and excavation. From February 22 to February 26, 2010, CRA observed Wendt & Sons Construction Inc. of Lodi, California excavate approximately 182 tons of soil from beneath the building expansion footprint, including an additional 5 lateral feet towards the north and east. The excavation was completed to depths ranging from 6 to 7 fbg. Additional information is available in CRA's April 22, 2010 *Site Assessment and Excavation Report*.

APPENDIX C

PERMIT



ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306

E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT CHEVRON STATION
5280 HOPYARD ROAD, PLEASANTON

PERMIT NUMBER 2010056
WELL NUMBER 3S/1E-6015
APN 941-1301-074-05

California Coordinates Source _____ ft. Accuracy ± _____ ft.
CCN _____ ft. CCE _____ ft.
APN _____

PERMIT CONDITIONS (Circled Permit Requirements Apply)

CLIENT
Name CHEVRON ENVIRONMENTAL MANAGEMENT CO.
Address 6111 BOLINGER CANYON Phone 925 543-2961
City SAN RAMON Zip 94503

- A. GENERAL**
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
 2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
 3. Permit is void if project not begun within 90 days of approval date.

APPLICANT
Name JAN HULL - COMESTOGA-ROVERS & ASSOC.
Email jhull@craworld.com Fax 510-420-9170
Address 5900 HOLLIS ST., STE A Phone 510-420-8344
City EMERYVILLE Zip 94608

- B. WATER SUPPLY WELLS**
1. Minimum surface seal diameter is four inches greater than the well casing diameter.
 2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
 3. Grout placed by tremie.
 4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
 5. A sample port is required on the discharge pipe near the wellhead.

TYPE OF PROJECT:
Well Construction Geotechnical Investigation
Well Destruction Contamination Investigation
Cathodic Protection Other _____

- C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**
1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
 2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
 3. Grout placed by tremie.

PROPOSED WELL USE:
Domestic Irrigation
Municipal Remediation
Industrial Groundwater Monitoring
Dewatering Other SOIL VAPOR

- D. GEOTECHNICAL.** Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

DRILLING METHOD:
Mud Rotary Air Rotary Hollow Stem Auger
Cable Tool Direct Push Other _____

- E. CATHODIC.** Fill hole above anode zone with concrete placed by tremie.

DRILLING COMPANY VAPOR TECH SERVICES

- F. WELL DESTRUCTION.** See attached.

DRILLER'S LICENSE NO. 916085 (C57)

- G. SPECIAL CONDITIONS.** Submit to Zone 7 within 60 days after completion of permitted work the well installation report including all soil and water laboratory analysis results.

WELL SPECIFICATIONS:
Drill Hole Diameter 3 in. Maximum _____
Casing Diameter 1/4 in. Depth 7 ft.
Surface Seal Depth 4.5 ft. Number ONE

[PERMANENT SOIL VAPOR PROBE]

SOIL BORINGS:
Number of Borings _____ Maximum _____
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE 06/16/2010
ESTIMATED COMPLETION DATE 06/16/2010

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

Approved Wyman Hong Date 6/14/10

APPLICANT'S SIGNATURE [Signature] Date 06/16/2010

Wyman Hong

ATTACH SITE PLAN OR SKETCH

APPENDIX D

BORING LOG



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

BORING / WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	VP-6
JOB/SITE NAME	Chevron Station 9-0917	DRILLING STARTED	16-Jun-10
LOCATION	5280 Hopyard Road, Pleasanton, California	DRILLING COMPLETED	16-Jun-10
PROJECT NUMBER	060057	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	VaporTech Seviles (C57-916085)	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Hand auger	TOP OF CASING ELEVATION	NA
BORING DIAMETER	3 inches	SCREENED INTERVALS	5.5 to 5.6 fbg
LOGGED BY	B. Yifru	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	Nathan Lee P.G. #8486	DEPTH TO WATER (Static)	NA
REMARKS	Soil vapor probe constructed with a permeable push-to-connect stainless-steel tip at 5.5 fbg connected to 1/4-inch Teflon tubing.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT	0.5	
							FILL	1.0	
							SILT: Brown; moist; medium plasticity.		
							@ 2 fbg: color changes to dark grey		
4					ML				Hydrated granular bentonite
24		VP-6- S-6		5					Dry bentonite
22							@ 6 fbg: mottling		Sand #2/12
							Bottom of Boring 6.5 ft.	6.5	Vapor Probe
									Hydrated granular bentonite
									Bottom of Boring @ 6.5 fbg

WELL LOG (PID) I:\CHEVRON\0600-1\060057-1\0600323-1\060057-GINT.GPJ DEFAULT.GDT 8/17/10

APPENDIX E

LABORATORY ANALYTICAL REPORTS - SOIL

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

June 25, 2010

Project: 90917

Submittal Date: 06/17/2010
Group Number: 1199289
PO Number: 0015061031
Release Number: COSTA
State of Sample Origin: CAClient Sample Description

VP-6-S-6-100616 Grab Soil

Lancaster Labs (LLI) #

6009461

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC Chevron
COPY TO
ELECTRONIC CRA
COPY TO
ELECTRONIC CRA
COPY TO

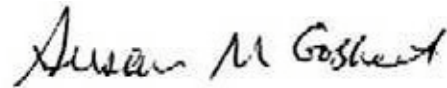
Attn: CRA EDD

Attn: Ian Hull

Attn: Nate Lee

Questions? Contact your Client Services Representative
Angela M Miller at (717) 656-2300 Ext. 1903

Respectfully Submitted,



Susan M. Goshert
Group Leader



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: VP-6-S-6-100616 Grab Soil
 Facility# 90917 CRAW
 5280 Hopyard-Pleasanton T0600100345 VP-6

LLI Sample # SW 6009461
 LLI Group # 1199289
 Account # 10880

Project Name: 90917

Collected: 06/16/2010 07:20 by BY

ChevronTexaco

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/17/2010 09:00

Reported: 06/25/2010 10:33

Discard: 07/26/2010

HRP06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B						
10950	Benzene	71-43-2	0.009	0.0005	0.005	0.99
10950	Ethylbenzene	100-41-4	0.011	0.001	0.005	0.99
10950	Methyl Tertiary Butyl Ether	1634-04-4	0.002	0.0005	0.005	0.99
10950	Toluene	108-88-3	N.D.	0.001	0.005	0.99
10950	Xylene (Total)	1330-20-7	0.007	0.001	0.005	0.99
GC Volatiles SW-846 8015B modified						
01725	TPH-GRO N. CA soil C6-C12	n.a.	4.6	1	1	24.85

General Sample Comments

State of California Lab Certification No. 2501

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10950	BTEX/MTBE 8260 Soil	SW-846 8260B	1	A101741AA	06/23/2010 22:27	Chelsea B Eastep	0.99
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	201016921470	06/18/2010 09:40	Larry E Bevins	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201016921470	06/18/2010 09:40	Larry E Bevins	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201016921470	06/18/2010 09:38	Larry E Bevins	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10168A16B	06/23/2010 15:18	Marie D John	24.85
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201016921470	06/18/2010 09:39	Larry E Bevins	n.a.

*=This limit was used in the evaluation of the final result

Quality Control Summary

 Client Name: ChevronTexaco
 Reported: 06/25/10 at 10:33 AM

Group Number: 1199289

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: A101741AA	Sample number(s): 6009461								
Benzene	N.D.	0.0005	0.005	mg/kg	111	109	80-120	1	30
Ethylbenzene	N.D.	0.001	0.005	mg/kg	106	108	80-120	1	30
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005	mg/kg	111	108	74-121	2	30
Toluene	N.D.	0.001	0.005	mg/kg	107	107	80-120	0	30
Xylene (Total)	N.D.	0.001	0.005	mg/kg	103	106	80-120	3	30
Batch number: 10168A16B	Sample number(s): 6009461								
TPH-GRO N. CA soil C6-C12	N.D.	1.0	1.0	mg/kg	101	94	67-119	7	30

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: A101741AA	Sample number(s): 6009461 UNSPK: P013115								
Benzene	115		55-143						
Ethylbenzene	112		44-141						
Methyl Tertiary Butyl Ether	97		55-129						
Toluene	115		50-146						
Xylene (Total)	107		44-136						

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs by 8260B - Solid

Batch number: A101741AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6009461	101	105	105	101
Blank	103	107	100	95
LCS	105	111*	102	103
LCSD	105	108	102	103
MS	103	97	108	96
Limits:	71-114	70-109	70-123	70-111

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 06/25/10 at 10:33 AM

Group Number: 1199289

Surrogate Quality Control

Analysis Name: TPH-GRO N. CA soil C6-C12
Batch number: 10168A16B
Trifluorotoluene-F

6009461	70
Blank	82
LCS	88
LCSD	85

Limits: 61-122

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron California Region Analysis Request/Chain of Custody



061610-02

Acct. #: 10880

For Lancaster Laboratories use only
Sample #: 6009461

SCR#: _____
249358

G# 1199289

Facility #: 9-0917 AIL
 Site Address: 5280 HOPYARD RD PLEASANTON, CA
 Chevron PM: AARON COSTA Lead Consultant: CRA
 Consultant/Office: EMERYVILLE
 Consultant Prj. Mgr.: NATHAN LEE
 Consultant Phone #: 510 420 0700 Fax #: 510 420 9170
 Sampler: BELEW YIFRU
 Service Order #: _____ Non SAR: _____

Analyses Requested

Preservation Codes									

Preservative Codes
 H = HCl T = Thiosulfate
 N = HNO₃ B = NaOH
 S = H₂SO₄ O = Other

J value reporting needed
 Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation
 Confirm highest hit by 8260
 Confirm all hits by 8260
 Run ___ oxy's on highest hit
 Run ___ oxy's on all hits

Field Point Name	Matrix	Repeat Sample	Top Depth	Year Month Day	Time Collected	New Field Pt.	Grab	Composite	Total Number of Containers	BTEX + MTBE 8260	TPH 8015 MOD GRO	TPH 8015 MOD DRO	8260 full scan	Oxygenates	Lead 7420	7421
VP-6	S	NO	6ft	2010/06/16	0720	YES	X		1	X	X					

Comments / Remarks
 PLEASE SEND RESULTS EMAIL TO: -
 ihull@craworld.com
 nlee@craworld.com
 EDF TO
 johave@craworld.com

Turnaround Time Requested (TAT) (please circle)

STD. TAT 72 hour 48 hour
 24 hour 4 day 5 day

Data Package Options (please circle if required)

QC Summary Type I - Full
 Type VI (Raw Data) Coelt Deliverable not needed
 WIP (RWQCB)
 Disk

Relinquished by: <u>BELEW YIFRU</u>	Date: <u>6/16/10</u>	Time: <u>1040</u>	Received by: <u>[Signature]</u>	Date: <u>6/16/10</u>	Time: <u>1040</u>
Relinquished by: <u>[Signature]</u>	Date: <u>6/16/10</u>	Time: <u>1600</u>	Received by: <u>[Signature]</u>	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by Commercial Carrier: <u>UPS</u>	Received by: <u>[Signature]</u>		Date: <u>6/17/10</u>	Time: <u>0900</u>	
Temperature Upon Receipt: <u>12.4</u> C°	Custody Seals Intact? <u>Yes</u>		No		

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	l	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

APPENDIX F

LABORATORY ANALYTICAL REPORTS - VAPOR

8/6/2010

Mr. Nathan Lee

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

Suite A

Emeryville CA 94608

Project Name: Chevron 9-0917

Project #: 060057

Workorder #: 1007372A

Dear Mr. Nathan Lee

The following report includes the data for the above referenced project for sample(s) received on 7/16/2010 at Air Toxics Ltd.

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

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

Regards,



Kyle Vagadori

Project Manager

WORK ORDER #: 1007372A

Work Order Summary

CLIENT:	Mr. Nathan Lee Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	BILL TO:	Mr. Nathan Lee Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-3333	P.O. #	40-4031644
FAX:	510-420-9170	PROJECT #	060057 Chevron 9-0917
DATE RECEIVED:	07/16/2010	CONTACT:	Kyle Vagadori
DATE COMPLETED:	08/06/2010		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-6-5.5	Modified TO-15	5.0 "Hg	15 psi
02A	SSVP-3	Modified TO-15	5.0 "Hg	15 psi
03A	SSVP-4	Modified TO-15	3.0 "Hg	15 psi
04A	SSVP-5	Modified TO-15	3.0 "Hg	15 psi
05A	IA-1	Modified TO-15	3.0 "Hg	15 psi
06A	IA-1 DUP	Modified TO-15	2.5 "Hg	15 psi
07A	IA-2	Modified TO-15	4.0 "Hg	15 psi
08A	OA-1	Modified TO-15	2.0 "Hg	15 psi
08AA	OA-1 Lab Duplicate	Modified TO-15	2.0 "Hg	15 psi
09A	TRIP BLANK	Modified TO-15	27.0 "Hg	15 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


Continued on next page

WORK ORDER #: 1007372A

Work Order Summary

CLIENT:	Mr. Nathan Lee Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	BILL TO:	Mr. Nathan Lee Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-3333	P.O. #	40-4031644
FAX:	510-420-9170	PROJECT #	060057 Chevron 9-0917
DATE RECEIVED:	07/16/2010	CONTACT:	Kyle Vagadori
DATE COMPLETED:	08/06/2010		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
12B	LCS	Modified TO-15	NA	NA
12C	LCS	Modified TO-15	NA	NA

CERTIFIED BY: 
Laboratory Director

DATE: 08/06/10

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

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

**LABORATORY NARRATIVE
Modified TO-15
Conestoga-Rovers Associates (CRA)
Workorder# 1007372A**

Nine 1 Liter Summa Canister (100% Certified) samples were received on July 16, 2010. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

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

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

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

Receiving Notes

Sample identification for sample SSVP-4 was not provided on the sample tag. Therefore the information on the Chain of Custody was used to process and report the sample.

Analytical Notes

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

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

Dilution was performed on sample VP-6-5.5 due to the presence of high level non-target species.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

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

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

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



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

Client Sample ID: VP-6-5.5

Lab ID#: 1007372A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	2400	15000	7700	48000
TPH ref. to Gasoline (MW=100)	48000	15000000	200000	61000000

Client Sample ID: SSVp-3

Lab ID#: 1007372A-02A

No Detections Were Found.

Client Sample ID: SSVp-4

Lab ID#: 1007372A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	56	320	230	1300

Client Sample ID: SSVp-5

Lab ID#: 1007372A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH ref. to Gasoline (MW=100)	56	510	230	2100

Client Sample ID: IA-1

Lab ID#: 1007372A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.1	1.1	4.2	4.2
TPH ref. to Gasoline (MW=100)	56	100	230	410

Client Sample ID: IA-1 DUP

Lab ID#: 1007372A-06A

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



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

Client Sample ID: IA-1 DUP

Lab ID#: 1007372A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.1	1.2	4.1	4.4

Client Sample ID: IA-2

Lab ID#: 1007372A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.2	1.3	4.4	4.9

Client Sample ID: OA-1

Lab ID#: 1007372A-08A

No Detections Were Found.

Client Sample ID: OA-1 Lab Duplicate

Lab ID#: 1007372A-08AA

No Detections Were Found.

Client Sample ID: TRIP BLANK

Lab ID#: 1007372A-09A

No Detections Were Found.

Client Sample ID: VP-6-5.5

Lab ID#: 1007372A-01A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w072961	Date of Collection: 7/13/10 11:28:00 PM
Dil. Factor:	484	Date of Analysis: 7/30/10 12:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	2400	Not Detected	8700	Not Detected
Benzene	2400	15000	7700	48000
Toluene	2400	Not Detected	9100	Not Detected
Ethyl Benzene	2400	Not Detected	10000	Not Detected
m,p-Xylene	2400	Not Detected	10000	Not Detected
o-Xylene	2400	Not Detected	10000	Not Detected
TPH ref. to Gasoline (MW=100)	48000	15000000	200000	61000000
Naphthalene	9700	Not Detected	51000	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: SSVP-3

Lab ID#: 1007372A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072624	Date of Collection: 7/14/10 12:50:00 AM
Dil. Factor:	2.42	Date of Analysis: 7/27/10 11:51 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
Naphthalene	4.8	Not Detected	25	Not Detected
TPH ref. to Gasoline (MW=100)	60	Not Detected	250	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: SSVP-4

Lab ID#: 1007372A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072620	Date of Collection:	7/14/10 1:29:00 AM
Dil. Factor:	2.24	Date of Analysis:	7/27/10 08:29 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	Not Detected	3.6	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
Toluene	1.1	Not Detected	4.2	Not Detected
m,p-Xylene	1.1	Not Detected	4.9	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
Naphthalene	4.5	Not Detected	23	Not Detected
TPH ref. to Gasoline (MW=100)	56	320	230	1300

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	91	70-130

Client Sample ID: SSVP-5

Lab ID#: 1007372A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072706	Date of Collection: 7/14/10 12:16:00 AM
Dil. Factor:	2.24	Date of Analysis: 7/27/10 06:11 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	Not Detected	3.6	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
Toluene	1.1	Not Detected	4.2	Not Detected
m,p-Xylene	1.1	Not Detected	4.9	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
Naphthalene	4.5	Not Detected	23	Not Detected
TPH ref. to Gasoline (MW=100)	56	510	230	2100

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: IA-1

Lab ID#: 1007372A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072707	Date of Collection: 7/14/10 1:30:00 AM
Dil. Factor:	2.24	Date of Analysis: 7/27/10 06:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	Not Detected	3.6	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
Toluene	1.1	1.1	4.2	4.2
m,p-Xylene	1.1	Not Detected	4.9	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
Naphthalene	4.5	Not Detected	23	Not Detected
TPH ref. to Gasoline (MW=100)	56	100	230	410

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: IA-1 DUP

Lab ID#: 1007372A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072709	Date of Collection:	7/14/10 1:30:00 AM
Dil. Factor:	2.20	Date of Analysis:	7/27/10 08:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	Not Detected	3.5	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
Toluene	1.1	1.2	4.1	4.4
m,p-Xylene	1.1	Not Detected	4.8	Not Detected
o-Xylene	1.1	Not Detected	4.8	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
Naphthalene	4.4	Not Detected	23	Not Detected
TPH ref. to Gasoline (MW=100)	55	Not Detected	220	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

Client Sample ID: IA-2

Lab ID#: 1007372A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072710	Date of Collection: 7/14/10 1:43:00 AM
Dil. Factor:	2.33	Date of Analysis: 7/27/10 09:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	Not Detected	3.7	Not Detected
Ethyl Benzene	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	1.3	4.4	4.9
m,p-Xylene	1.2	Not Detected	5.0	Not Detected
o-Xylene	1.2	Not Detected	5.0	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.2	Not Detected
Naphthalene	4.7	Not Detected	24	Not Detected
TPH ref. to Gasoline (MW=100)	58	Not Detected	240	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	91	70-130

Client Sample ID: OA-1

Lab ID#: 1007372A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072711	Date of Collection: 7/14/10 1:58:00 AM
Dil. Factor:	2.16	Date of Analysis: 7/27/10 10:39 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	Not Detected	3.4	Not Detected
Ethyl Benzene	1.1	Not Detected	4.7	Not Detected
Toluene	1.1	Not Detected	4.1	Not Detected
m,p-Xylene	1.1	Not Detected	4.7	Not Detected
o-Xylene	1.1	Not Detected	4.7	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	3.9	Not Detected
Naphthalene	4.3	Not Detected	23	Not Detected
TPH ref. to Gasoline (MW=100)	54	Not Detected	220	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: OA-1 Lab Duplicate

Lab ID#: 1007372A-08AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072712	Date of Collection: 7/14/10 1:58:00 AM
Dil. Factor:	2.16	Date of Analysis: 7/27/10 11:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	Not Detected	3.4	Not Detected
Ethyl Benzene	1.1	Not Detected	4.7	Not Detected
Toluene	1.1	Not Detected	4.1	Not Detected
m,p-Xylene	1.1	Not Detected	4.7	Not Detected
o-Xylene	1.1	Not Detected	4.7	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	3.9	Not Detected
Naphthalene	4.3	Not Detected	23	Not Detected
TPH ref. to Gasoline (MW=100)	54	Not Detected	220	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: TRIP BLANK

Lab ID#: 1007372A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072713	Date of Collection: 7/14/10 1:55:00 AM
Dil. Factor:	1.00	Date of Analysis: 7/28/10 07:57 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	103	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: Lab Blank

Lab ID#: 1007372A-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072611	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/26/10 05:19 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	92	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: Lab Blank

Lab ID#: 1007372A-10B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/27/10 05:23 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	97	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: Lab Blank

Lab ID#: 1007372A-10C

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w072936	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/29/10 06:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
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
TPH ref. to Gasoline (MW=100)	100	Not Detected	410	Not Detected
Naphthalene	20	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: CCV

Lab ID#: 1007372A-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072608	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/26/10 02:11 PM

Compound	%Recovery
Benzene	105
Ethyl Benzene	122
Toluene	102
m,p-Xylene	122
o-Xylene	122
Methyl tert-butyl ether	106
Naphthalene	71
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

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

Client Sample ID: CCV

Lab ID#: 1007372A-11B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/27/10 02:38 PM

Compound	%Recovery
Benzene	105
Ethyl Benzene	122
Toluene	102
m,p-Xylene	125
o-Xylene	124
Methyl tert-butyl ether	104
Naphthalene	68
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	96	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: CCV

Lab ID#: 1007372A-11C

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w072933	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/29/10 04:46 PM

Compound	%Recovery
Methyl tert-butyl ether	82
Benzene	98
Toluene	97
Ethyl Benzene	98
m,p-Xylene	99
o-Xylene	96
TPH ref. to Gasoline (MW=100)	100
Naphthalene	74

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: LCS

Lab ID#: 1007372A-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072609c	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/26/10 03:30 PM

Compound	%Recovery
Benzene	103
Ethyl Benzene	126
Toluene	96
m,p-Xylene	127
o-Xylene	124
Methyl tert-butyl ether	109
Naphthalene	70
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: LCS

Lab ID#: 1007372A-12B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2072703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/27/10 03:15 PM

Compound	%Recovery
Benzene	105
Ethyl Benzene	125
Toluene	98
m,p-Xylene	127
o-Xylene	123
Methyl tert-butyl ether	106
Naphthalene	71
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: LCS

Lab ID#: 1007372A-12C

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w072934	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 7/29/10 05:26 PM

Compound	%Recovery
Methyl tert-butyl ether	83
Benzene	91
Toluene	88
Ethyl Benzene	94
m,p-Xylene	94
o-Xylene	92
TPH ref. to Gasoline (MW=100)	Not Spiked
Naphthalene	87

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

8/5/2010
Mr. Nathan Lee
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: Chevron 9-0917
Project #: 060057
Workorder #: 1007372B

Dear Mr. Nathan Lee

The following report includes the data for the above referenced project for sample(s) received on 7/16/2010 at Air Toxics Ltd.

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

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

Regards,



Kyle Vagadori
Project Manager

WORK ORDER #: 1007372B

Work Order Summary

CLIENT:	Mr. Nathan Lee Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	BILL TO:	Mr. Nathan Lee Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-3333	P.O. #	40-4031644
FAX:	510-420-9170	PROJECT #	060057 Chevron 9-0917
DATE RECEIVED:	07/16/2010	CONTACT:	Kyle Vagadori
DATE COMPLETED:	08/05/2010		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-6-5.5	Modified ASTM D-1946	5.0 "Hg	15 psi
02A	SSVP-3	Modified ASTM D-1946	5.0 "Hg	15 psi
03A	SSVP-4	Modified ASTM D-1946	3.0 "Hg	15 psi
04A	SSVP-5	Modified ASTM D-1946	3.0 "Hg	15 psi
05A	IA-1	Modified ASTM D-1946	3.0 "Hg	15 psi
05AA	IA-1 Lab Duplicate	Modified ASTM D-1946	3.0 "Hg	15 psi
06A	IA-1 DUP	Modified ASTM D-1946	2.5 "Hg	15 psi
07A	IA-2	Modified ASTM D-1946	4.0 "Hg	15 psi
08A	OA-1	Modified ASTM D-1946	2.0 "Hg	15 psi
09A	TRIP BLANK	Modified ASTM D-1946	27.0 "Hg	15 psi
10A	Lab Blank	Modified ASTM D-1946	NA	NA
10B	Lab Blank	Modified ASTM D-1946	NA	NA
10C	Lab Blank	Modified ASTM D-1946	NA	NA
10D	Lab Blank	Modified ASTM D-1946	NA	NA
11A	LCS	Modified ASTM D-1946	NA	NA
11B	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY: 

DATE: 08/05/10

Laboratory Director

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

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

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

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

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

LABORATORY NARRATIVE
Modified ASTM D-1946
Conestoga-Rovers Associates (CRA)
Workorder# 1007372B

Nine 1 Liter Summa Canister (100% Certified) samples were received on July 16, 2010. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

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

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

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

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

Receiving Notes

Sample identification for sample SSVP-4 was not provided on the sample tag. Therefore the information on the Chain of Custody was used to process and report the sample.

Analytical Notes

Sample TRIP BLANK has reportable levels of target compounds 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

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

Client Sample ID: VP-6-5.5

Lab ID#: 1007372B-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	2.0
Nitrogen	0.24	65
Carbon Dioxide	0.024	9.8
Methane	0.00024	22

Client Sample ID: SSV-3

Lab ID#: 1007372B-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	20
Nitrogen	0.24	79
Carbon Dioxide	0.024	0.60

Client Sample ID: SSV-4

Lab ID#: 1007372B-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	19
Nitrogen	0.22	81
Carbon Dioxide	0.022	0.34

Client Sample ID: SSV-5

Lab ID#: 1007372B-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.45	14
Nitrogen	0.45	86
Methane	0.00045	0.0026

Client Sample ID: IA-1

Lab ID#: 1007372B-05A

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

Client Sample ID: IA-1

Lab ID#: 1007372B-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.30	24
Nitrogen	0.30	76
Carbon Dioxide	0.030	0.079
Methane	0.00030	0.00042

Client Sample ID: IA-1 Lab Duplicate

Lab ID#: 1007372B-05AA

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.30	25
Nitrogen	0.30	75
Carbon Dioxide	0.030	0.082
Methane	0.00030	0.00042

Client Sample ID: IA-1 DUP

Lab ID#: 1007372B-06A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.35	22
Nitrogen	0.35	78
Carbon Dioxide	0.035	0.080

Client Sample ID: IA-2

Lab ID#: 1007372B-07A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	21
Nitrogen	0.23	79
Carbon Dioxide	0.023	0.098

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

Client Sample ID: OA-1

Lab ID#: 1007372B-08A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	22
Nitrogen	0.22	78
Carbon Dioxide	0.022	0.041
Methane	0.00022	0.00022

Client Sample ID: TRIP BLANK

Lab ID#: 1007372B-09A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.17
Nitrogen	0.10	100
Methane	0.00010	0.00032
Helium	0.050	0.17



Client Sample ID: VP-6-5.5

Lab ID#: 1007372B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080405	Date of Collection:	7/13/10 11:28:00 PM
Dil. Factor:	2.42	Date of Analysis:	8/3/10 11:15 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	2.0
Nitrogen	0.24	65
Carbon Dioxide	0.024	9.8
Methane	0.00024	22
Helium	0.12	Not Detected

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



Client Sample ID: SSVP-3

Lab ID#: 1007372B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080330	Date of Collection:	7/14/10 12:50:00 AM
Dil. Factor:	2.42	Date of Analysis:	8/3/10 07:57 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	20
Nitrogen	0.24	79
Carbon Dioxide	0.024	0.60
Methane	0.00024	Not Detected
Helium	0.12	Not Detected

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



Client Sample ID: SSVP-4

Lab ID#: 1007372B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080329	Date of Collection:	7/14/10 1:29:00 AM
Dil. Factor:	2.24	Date of Analysis:	8/3/10 07:22 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	19
Nitrogen	0.22	81
Carbon Dioxide	0.022	0.34
Methane	0.00022	Not Detected
Helium	0.11	Not Detected

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



Client Sample ID: SSVP-5

Lab ID#: 1007372B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080328	Date of Collection:	7/14/10 12:16:00 AM
Dil. Factor:	4.52	Date of Analysis:	8/3/10 06:59 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.45	14
Nitrogen	0.45	86
Carbon Dioxide	0.045	Not Detected
Methane	0.00045	0.0026
Helium	0.23	Not Detected

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



Client Sample ID: IA-1

Lab ID#: 1007372B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080325	Date of Collection:	7/14/10 1:30:00 AM
Dil. Factor:	3.00	Date of Analysis:	8/3/10 05:41 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.30	24
Nitrogen	0.30	76
Carbon Dioxide	0.030	0.079
Methane	0.00030	0.00042
Helium	0.15	Not Detected

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

Client Sample ID: IA-1 Lab Duplicate

Lab ID#: 1007372B-05AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080326	Date of Collection: 7/14/10 1:30:00 AM
Dil. Factor:	3.00	Date of Analysis: 8/3/10 06:10 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.30	25
Nitrogen	0.30	75
Carbon Dioxide	0.030	0.082
Methane	0.00030	0.00042
Helium	0.15	Not Detected

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



Client Sample ID: IA-1 DUP

Lab ID#: 1007372B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080324	Date of Collection:	7/14/10 1:30:00 AM
Dil. Factor:	3.50	Date of Analysis:	8/3/10 05:19 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.35	22
Nitrogen	0.35	78
Carbon Dioxide	0.035	0.080
Methane	0.00035	Not Detected
Helium	0.18	Not Detected

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



Client Sample ID: IA-2

Lab ID#: 1007372B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080323	Date of Collection:	7/14/10 1:43:00 AM
Dil. Factor:	2.33	Date of Analysis:	8/3/10 04:51 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	21
Nitrogen	0.23	79
Carbon Dioxide	0.023	0.098
Methane	0.00023	Not Detected
Helium	0.12	Not Detected

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



Client Sample ID: OA-1

Lab ID#: 1007372B-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080322	Date of Collection:	7/14/10 1:58:00 AM
Dil. Factor:	2.16	Date of Analysis:	8/3/10 04:27 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	22
Nitrogen	0.22	78
Carbon Dioxide	0.022	0.041
Methane	0.00022	0.00022
Helium	0.11	Not Detected

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



Client Sample ID: TRIP BLANK

Lab ID#: 1007372B-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080320	Date of Collection:	7/14/10 1:55:00 AM
Dil. Factor:	1.00	Date of Analysis:	8/3/10 03:23 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.17
Nitrogen	0.10	100
Carbon Dioxide	0.010	Not Detected
Methane	0.00010	0.00032
Helium	0.050	0.17

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



Client Sample ID: Lab Blank

Lab ID#: 1007372B-10A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080305	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/3/10 08:55 AM

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

Container Type: NA - Not Applicable



Client Sample ID: Lab Blank

Lab ID#: 1007372B-10B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080304b	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/3/10 08:32 AM

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

Container Type: NA - Not Applicable



Client Sample ID: Lab Blank

Lab ID#: 1007372B-10C

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080404	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/3/10 10:48 PM

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

Container Type: NA - Not Applicable



Client Sample ID: Lab Blank

Lab ID#: 1007372B-10D

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080403b	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/3/10 10:25 PM

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

Container Type: NA - Not Applicable



Client Sample ID: LCS

Lab ID#: 1007372B-11A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080331	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/3/10 08:30 PM

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

Container Type: NA - Not Applicable



Client Sample ID: LCS

Lab ID#: 1007372B-11B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9080402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/3/10 09:57 PM

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

Container Type: NA - Not Applicable



CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager NATHAN LEE
 Collected by: (Print and Sign) IAN HULL
 Company C.P.A. Email nlee@craworld.com
 Address 5900 HOLLY ST, STE A City INTERVILLE State CA Zip 94608
 Phone 510-420-0700 Fax 510-420-9170

Project Info: P.O. # <u>120-4281644</u> Project # <u>060057</u> Project Name <u>CHIVRON 9-0917</u>	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	<small>Lab Use Only</small> Pressurized by: Date: Pressurization Gas: N ₂ He
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Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psia)
01A	VP-6-5.5	2071	07/12/2010	23:28	FOR ALL	-30	-7		
02A	SSVP-3	9372	07/14/2010	00:50	* TO-15 TPHs	-30	-7		
03A	SSVP-4	97101 IAN		01:29	DTEX, MIBT,	-29	-4		
04A	SSVP-5	9464		00:16	NATHAN LEE	-29	-4		
05A	IA-1	36403		01:30	* ASTM D-1446:	-30	-4		
06A	IA-1 DUP	1257		01:30	O ₂ , N ₂ , CO	-29	-4		
07A	IA-2	1425		01:43	CH ₄ , He ¹ um	-29	-5.5		
08A	CA-1	20771		01:58		-30	-3.5		
09A	TRIP BLANK	4330		01:50		-29	-		

Relinquished by: (signature) <u>IAN HULL</u> Date/Time <u>07/14/2010 00:00</u>	Received by: (signature) <u>FEDEX</u> Date/Time	Notes: PLEASE REPORT IN PPBV AND USM? E-MAIL RESULTS TO nlee@craworld.com ihull
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time	
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
					Yes No None	1007372

REVISED COC
RECEIVED 7/19/10



CHAIN-OF-CUSTODY RECORD

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Page 1 of 1

Project Manager NATHAN LEE
 Collected by: (Print and Sign) JAN HULL
 Company CRA Email nlee@craneworld.com
 Address 570 HULL ST, SUITE 100 City EMERYVILLE State CA Zip 94608
 Phone 510-420-6700 Fax 510-420-9170

Project Info:
 P.O. # 40-431644
 Project # 060057
 Project Name CHEVRON 9-C917

Turn Around Time:
 Normal
 Rush
specify

Lab Use Only
 Pressurized by:
 Date:
 Pressurization Gas:
N₂ 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	VP-6-5.5	2071	07/13/2010	23:28	FOR ALL	-30	-7		
02A	SSVP-3	9772	07/14/2010	00:50	TO-15, TOHA	-30	-7		
03A	SSVP-4	9761		01:29	BTX, MTBT	-29	-4		
04A	SSVP-5	9464		00:16	NATHALINE	-29	-4		
05A	JA-1	36403		01:30	ASTM D-1246	-30	-4		
06A	JA-1 DUP	1357		01:30	O ₂ , N ₂ , CO	-29	-4		
07A	JA-2	1425		01:43	CH ₄ , He, Um	-29	-5.5		
08A	CA-1	2071		01:58		-30	-3.5		
09A	TRIP BLANK	9320		01:58		-29	-		
10A									

BSW
7/17/10

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>07/14/2010 00:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>07/16/10 1245</u>	Notes: PLEASE REPORT IN PPBW AND M/LM? E-MAIL RESULTS TO nlee@craneworld.com jhull
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>Felix good</u>		<u>NA</u>	<u>good</u>	Yes No <u>None</u>	<u>1007372</u>