



**CONESTOGA-ROVERS
& ASSOCIATES**

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TRANSMITTAL

DATE: April 14, 2009 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

RECEIVED
 2:44 pm, Apr 15, 2009
 Alameda County
 Environmental Health

Please find enclosed: Draft Final
 Originals Other .pdf
 Prints

Sent via: Mail Same Day Courier
 Overnight Courier Other Electronic Upload

QUANTITY	DESCRIPTION
1	Soil Vapor Probe Installation and Sampling Report

As Requested For Review and Comment
 For Your Use

COMMENTS:
 Please contact Charlotte Evans at: 510-420-3351 with any questions or comments.

Copy to: . Aaron Costa, Chevron Environmental Management Company
 Completed by: Charlotte Evans Signed: *CE*
[Please Print]

Filing: Correspondence File



Aaron Costa
Project Manager
Marketing Business Unit

**Chevron Environmental
Management Company**
6111 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 543-2961
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acosta@chevron.com

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

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

I have reviewed the attached report dated April 14, 2009.

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 INSTALLATION AND SAMPLING REPORT

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

APRIL 14, 2009
REF. NO. 060057 (4)
This report is printed on recycled paper

Prepared by:
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& Associates

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SOIL VAPOR PROBE INSTALLATION AND SAMPLING REPORT

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

A handwritten signature in cursive script, appearing to read 'Charlotte Evans', is written over a horizontal line.

Charlotte Evans



A handwritten signature in cursive script, appearing to read 'Brandon Wilken', is written over a horizontal line.

Brandon Wilken PG #7564

APRIL 14, 2009
REF. NO. 060057 (4)
This report is printed on recycled paper

Prepared by:
**Conestoga-Rovers
& Associates**

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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 probes as proposed in the *Response to Technical Comments and Workplan for Installation of Vapor Probes* dated October 24, 2008 and approved in an Alameda County Environmental Health (ACEH) letters dated July 9 and November 19, 2008 (Appendix A). An extension was granted by ACEH to submit the report on April 15, 2009.

On February 2, 2009, CRA installed soil vapor probes VP1, VP2, VP4 and V5 to 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 three dispenser islands under a common canopy (Figure 2). A Shell-branded service station is located across Hopyard Road to the east of the site and has an open case with ACEH. Land use surrounding the site is primarily commercial. A summary of previous environmental investigations at the site is presented as Appendix B.

1.3 SITE GEOLOGY AND HYDROGEOLOGY

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 upper, unconfined groundwater in the DSB generally flows southward. Aquifers in the DSB are generally flat lying, but there is a drop in groundwater elevation of

approximately 50 feet across the Parks Fault (Evaluation of Groundwater Resources: Livermore and Sunol Valleys, Department of the Water Resources Bulletin Number 118-2, June 1974). The Park Fault trends east-northeast approximately 1 mile south of the site (Pacific Environmental Group, Inc., *Soil and Groundwater Investigation*, dated August 11, 1997).

Based on historic and recent boring logs, sediments observed immediately beneath the site consist of interbedded clay, silty clay, clayey silt, sandy silt and silt to the maximum explored depth of 60 feet below grade (fbg). Groundwater depth ranges between approximately 5 and 10 fbg and flows generally southward at a gradient of 0.004 to 0.009.

2.0 SOIL VAPOR PROBE INSTALLATION

The purpose of this investigation was to obtain current soil vapor data to evaluate potential vapor intrusion risks across the site. To meet this objective, CRA attempted to install five soil vapor probes on the property. As discussed below, only four probes could be completed (Figure 3).

Site Health and Safety Plan: CRA performed all work under the guidelines set forth in a comprehensive site health and safety plan. The plan was reviewed and signed by all site workers and visitors and kept onsite at all times.

Permits: CRA conducted work under Zone 7 Water Agency Permit number 29003. A copy of the permit is included as Appendix C.

Installation and Sampling Dates: CRA installed the soil vapor probes on January 27, 2009 and collected soil vapor samples on February 2, 2009.

Personnel: Charlotte Evans, Ian Hull and Belew Yifru of CRA supervised vapor probe installation and Ian Hull and Belew Yifru collected soil vapor samples under the supervision of California Professional Geologist Brandon S. Wilken (P.G. #7564).

Underground Utility Location: Prior to drilling, CRA contacted Underground Service Alert to coordinate the location of subsurface utilities. CRA also hired a private utility locator to confirm subsurface utility locations and locate unmarked utilities.

Drilling Company: CRA contracted Vironex, Inc. (Vironex) of Pacheco, California (C57 #705927) to advance the borings and install the soil vapor probes.

Soil Vapor Probe Installation: Vironex attempted to install five soil vapor probes using hand augers to depths ranging from 5.5 to 6.5 fbg. Vapor probes VP1 and VP2 were installed at 6-6.5 fbg. VP4 and VP5 were installed at 5-5.5 fbg. Vironex made three attempts to install VP-3 near the current USTs (Figure 3). Pea-gravel was encountered in the original proposed location so the boring was moved roughly 5 feet directly away from the dispenser islands. This process was repeated when pea-gravel was encountered in the second attempted location. Due to the proximity of the USTs and subsurface utilities, the VP3 location was abandoned after three attempts. CRA personnel continuously logged the soil lithology and collected soil samples from the hand auger for laboratory analysis at 4.0 fbg. One undisturbed soil sample was collected with a slide hammer to analyze for physical parameters. Each sample was covered with Teflon™ tape, capped with a polyethylene lid, labeled, entered onto a chain-of-custody

form and placed on ice. Boring logs showing sediment descriptions, sample depths and vapor probe installation details are presented as Appendix D.

Subsurface Sediments: Native material encountered consisted of clayey silt from beneath the surface pavement to the bottoms of all the borings except VP5. Silty sand and sandy silt were encountered in VP5 from 3 to 5.5 fbg, the bottom of the boring.

Vapor Probe Construction: Soil vapor probes were installed according to the Department of Toxic Substances Control (DTSC) January 28, 2003 *Advisory-Active Soil Gas Investigations* guidance document. The probes were constructed with porous polyethylene implants attached to ¼-inch Teflon tubing. Each probe was placed at the desired depth and surrounded by a 12-inch sand pack. Vapor probes were finished at the surface with a traditional well vault.

Soil Disposal: Soil cuttings were placed in labeled drums. These investigation derived wastes was transported to an appropriate Chevron-approved disposal facility following the receipt of profiling analytic results.

3.0 SOIL VAPOR SAMPLING

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

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

After the sampling train passed the “shut in” test, it was connected to the probe tubing and approximately 0.01 liters of stagnant air in the tubing was purged so the sample was representative of actual soil gas concentrations. After purging, the sample Summa™ canister valve was opened. The vacuum of the Summa™ canister was used to draw soil vapor through the flow controller and into the sample canister until a negative pressure of approximately five-inches of mercury was observed on the vacuum gauge. A field duplicate was taken concurrently with the sample for VP1. After sampling, the Summa™ canisters were packaged and sent to Air Toxics laboratory under chain-of-custody for analysis.

In accordance with the DTSC *Advisory-Active Soil Gas Investigations* guidance document, leak testing was performed during sampling. Laboratory grade helium was used for leak detection to determine if ambient air was entering the Summa™ canisters during sampling. A shroud was used to surround the vapor sampling equipment and the connection 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. Helium was reported in two of the samples, with a maximum reported amount of 0.35 percent volume in VP1 at 6-6.5 fbg. Due to the low percentage of helium, and therefore low amount of ambient air that could potentially enter the samples, the samples are considered valid.

4.0 LABORATORY ANALYSES

Laboratory Analyses of Soil Samples: Soil samples were stored on ice and transported under chain-of-custody to Lancaster Laboratories of Lancaster, Pennsylvania and analyzed for the following constituents:

- Total Petroleum Hydrocarbons as gasoline (TPHg) by EPA Method 8015B Modified
- Benzene, toluene, ethyl benzene, xylenes (BTEX) and methyl tert-butyl ether (MTBE) by EPA Method 8260B; and
- One undisturbed sample was collected and analyzed for physical parameters including moisture content, bulk density, total porosity, organic carbon and effective permeability.

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

- TPHg by EPA Method TO-3
- BTEX, MTBE and naphthalene by EPA Method TO-15 (GC/MS)
- O₂, CO₂, CH₄ and Helium by ASTM D-1946 (GC/TCD)

Table 1 summarizes the soil analytical data, Table 2 summarizes the soil physical parameters, and Table 3 summarizes the vapor analytical data. Appendix E presents the laboratory analytical reports for soil and Appendix F presents the laboratory analytical reports for vapor.

5.0 HYDROCARBON DISTRIBUTION

5.1 HYDROCARBON DISTRIBUTION IN SOIL

TPHg was only detected in VP1 at 100 milligrams per kilogram (mg/kg). Benzene was detected in all four soil samples, ranging in concentration from 0.0007 mg/kg in VP2 and VP4 to 1.2 mg/kg in VP1. No toluene, ethylbenzene, xylenes or MTBE were detected above environmental screening levels (ESLs)¹ in any soil sample.

5.2 HYDROCARBON DISTRIBUTION IN SOIL VAPOR

Probe VP1 had hydrocarbon concentrations above ESLs² with maximum concentrations of 200,000,000 micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) TPHg, 960,000 $\mu\text{g}/\text{m}^3$ benzene, and 87,000 $\mu\text{g}/\text{m}^3$ xylenes. No toluene, ethylbenzene, or MTBE was detected above ESLs in any of the probes. These concentrations were confirmed by both a duplicate sample, and a resampling of the original sample.

Elevated methane concentrations were detected in samples from VP1 and VP5, with concentrations ranging up to 57 percent. Both VP1 and VP5 are adjacent to sewer lines that exit the station building (Figure 3). The lower explosive limit of methane is 5 percent and the upper explosive limit is 15 percent. Methane should not interfere with the Modified EPA Methods TO-3 or TO-15 analyses, except for potentially elevating detection limits on all constituents due to high concentrations of non-target species. It is unknown what other constituents may be present in the sewer lines and if those could be contributing to the elevated TPHg and benzene detections.

¹ Environmental Screening Levels (ESLs) for shallow soils ($\leq 3\text{m}$) where groundwater is current or potential source of drinking water for commercial/industrial land use from the 2007 *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.

² Environmental Screening Levels (ESLs) soil gas (Vapor Intrusion concerns) for commercial/industrial land use from the 2007 *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

6.0 CONCLUSIONS

Based on review of the chromatograms for VP1 by Air Toxics, Ltd. (ATL), the majority of the non-target compounds from the Modified EPA Method TO-15 analysis appear to be aliphatic (noncarcinogenic) hydrocarbons that elute prior to hexane (C6). By comparing the VP1 TPHg pattern to the gasoline standard, the compounds detected in VP1 are lighter than gasoline. From this analysis, it appears that the elevated vapor concentrations may be from a non-gasoline source.

We have contacted Chevron Environmental Technology Company (CETC) to discuss the vapor results for VP1. Based on their experiences with fuel leak cases and hydrocarbon sources, the patterns and concentrations detected are not consistent with a release of gasoline to soil and groundwater or with a hydrocarbon source likely to originate at a fueling station. None of the consulted experts have previously seen field concentrations of this magnitude and composition.

Due to the elevated concentrations detected in the TPHg and benzene range of the analytical methods used and due to the elution patterns, we recommend resampling VP1 through VP5 and analyzing the soil gas using a full scan by Modified EPA Method TO-15, including the top 20 tentatively identified compounds (TICs). These TICs will be identified so that the composition of the TPHg sample may be divided into aromatic (carcinogenic) and aliphatic (noncarcinogenic) components, and also to confirm that the compound identified in the benzene range is actually benzene. We will use the results of this more compound-specific analysis to evaluate potential risk to human health from vapor intrusion to indoor air.

FIGURES

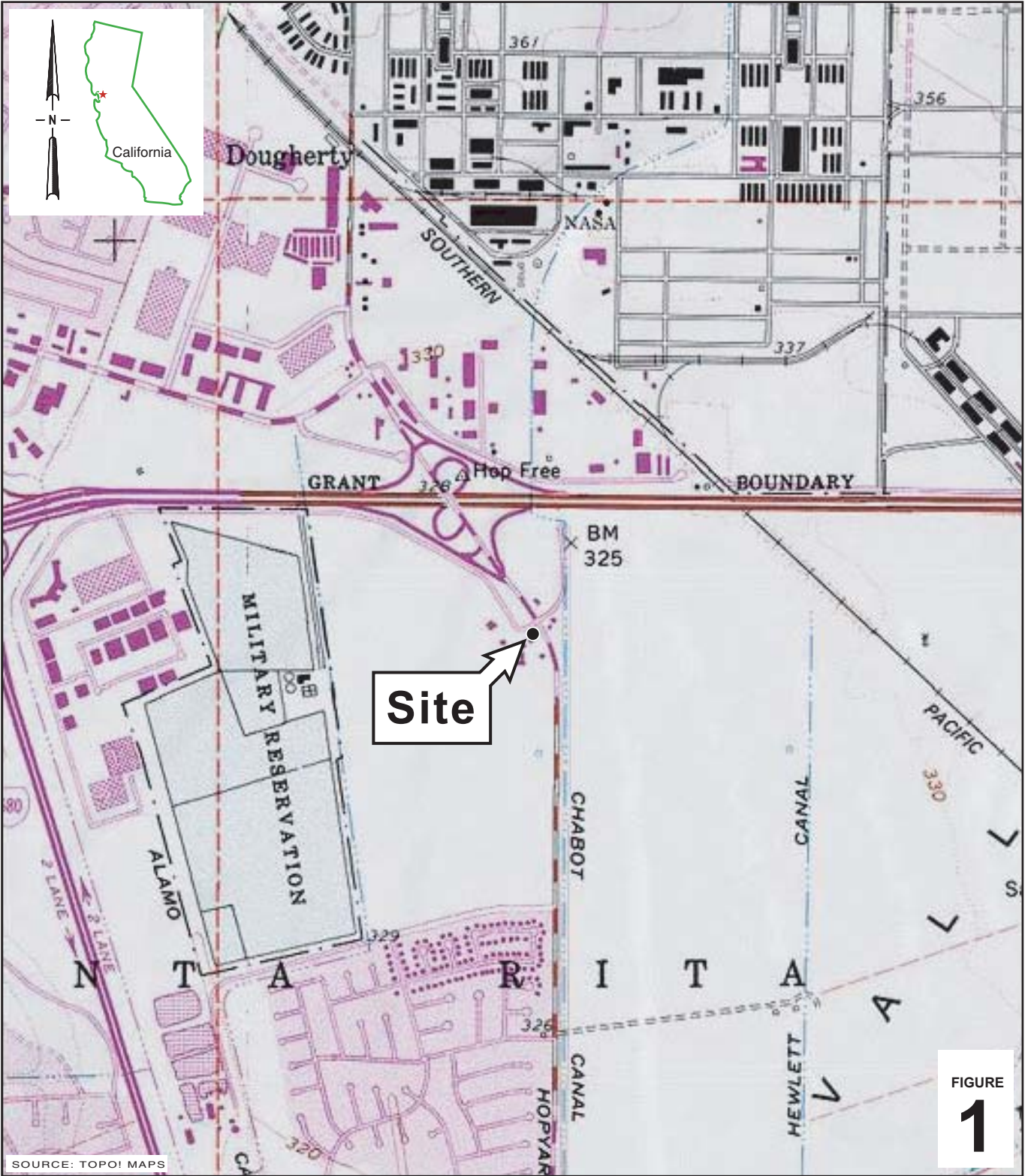


FIGURE 1

I:\Chevron\0600--\060057_9-0917_Pleasanton\060057-FIGURES\060057_VICINITY_MAP.A1

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

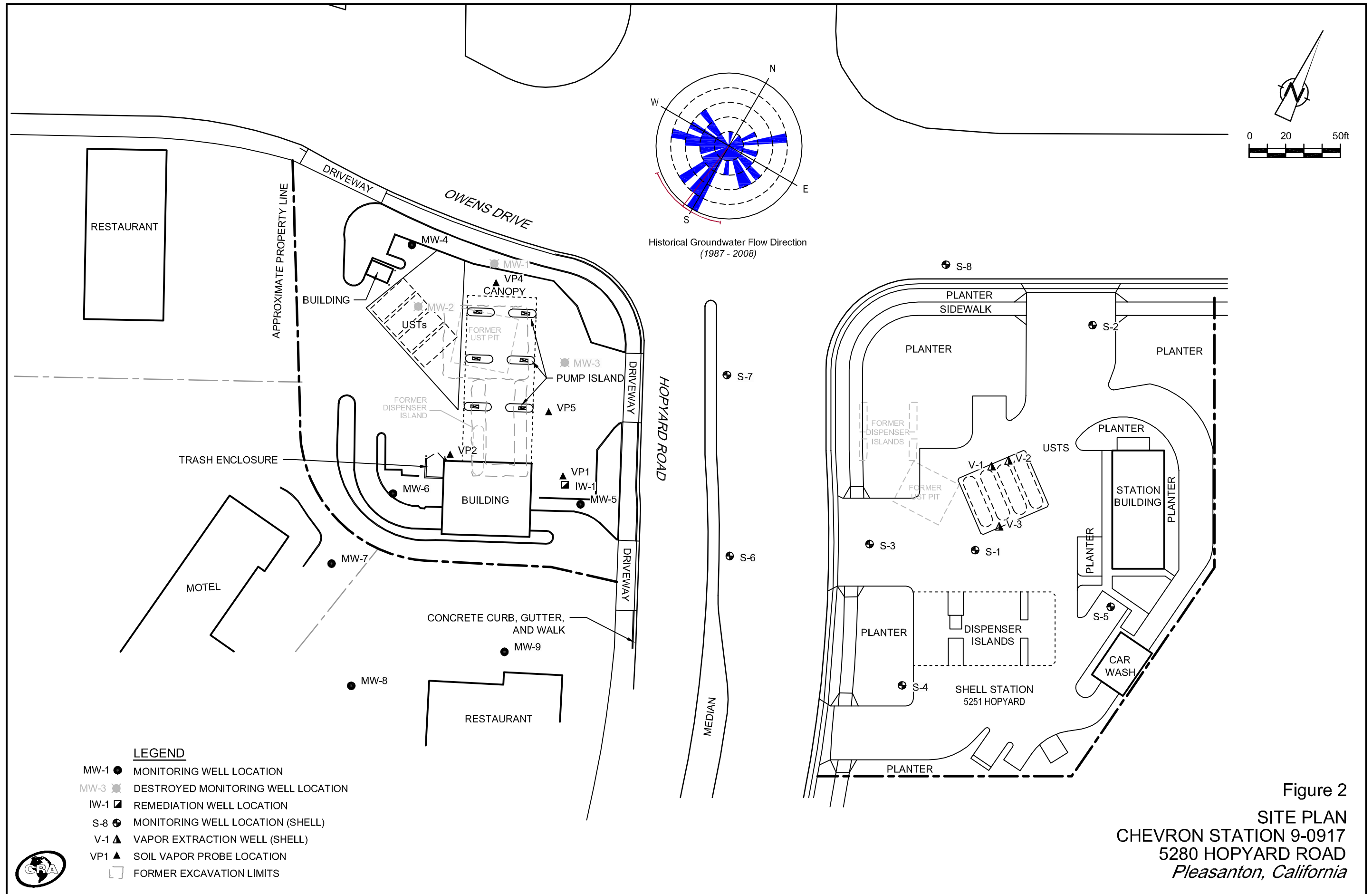


Figure 2
 SITE PLAN
 CHEVRON STATION 9-0917
 5280 HOPYARD ROAD
 Pleasanton, California

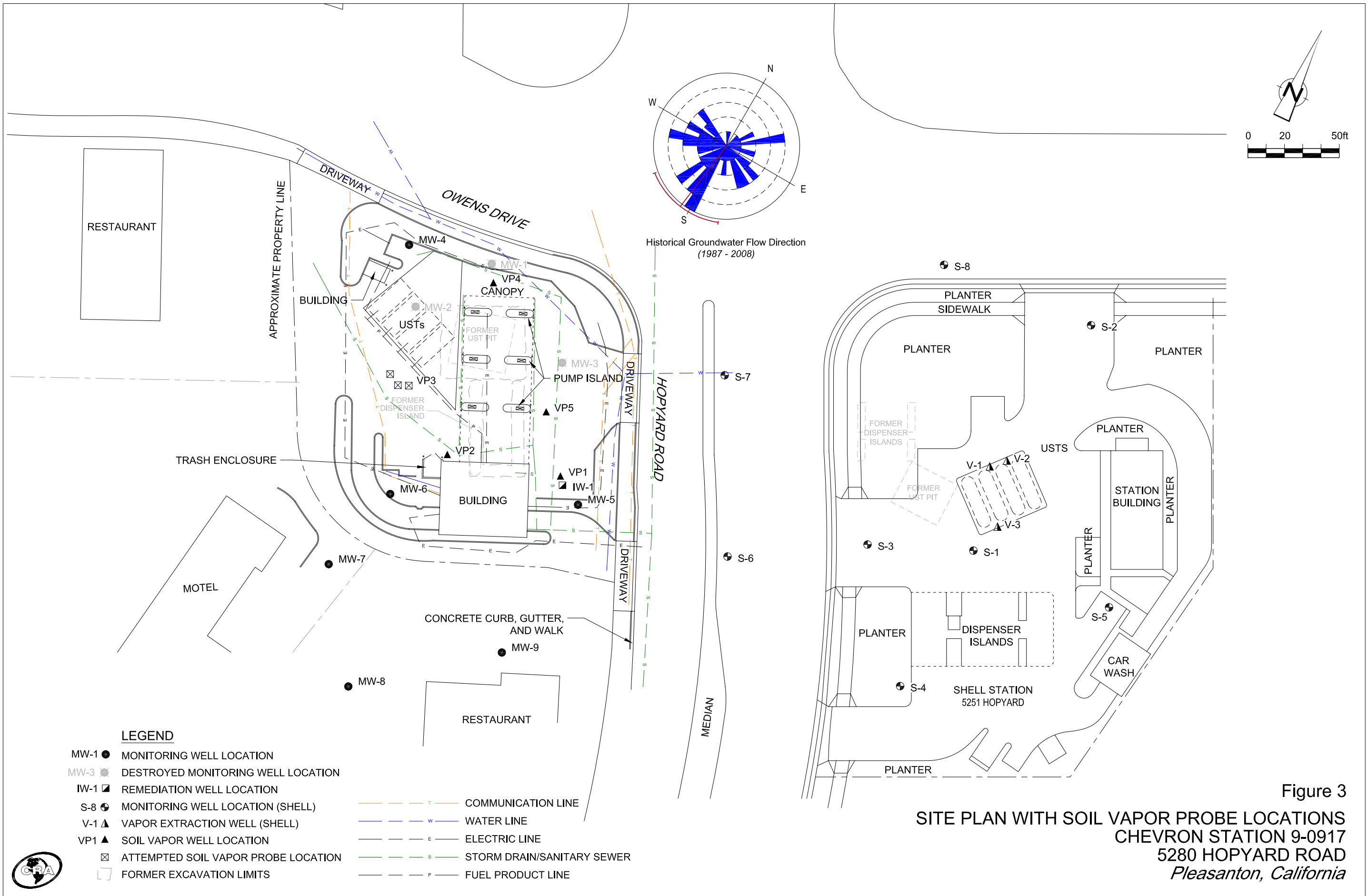


Figure 3
SITE PLAN WITH SOIL VAPOR PROBE LOCATIONS
CHEVRON STATION 9-0917
5280 HOPYARD ROAD
Pleasanton, California

TABLES

TABLE 1

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

<i>Sample ID</i>	<i>Date</i>	<i>Depth (fbg)</i>	<i>TPHg</i>	<i>Benzene</i>	<i>Toluene</i>	<i>Ethyl-</i>	<i>Total</i>	<i>MTBE</i>
						<i>benzene</i>	<i>Xylenes</i>	
<i>Reported in milligrams per kilogram (mg/kg)</i>								
ESL ¹	--	--	83	0.044	290	3.3	230	0.023
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

Notes:

fbg = feet below grade

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8015B Modified Benzene, toluene, ethylbenzene, total xylenes and methyl tertiary butyl ether (MTBE) analyzed by EPA Method 8260B

<x = Not detected at reporting limit x

1 = Environmental Screening Levels (ESLs) for shallow soils (≤ 3 m) where groundwater is current or potential source of drinking water for commercial/industrial land use from the 2007 *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 2

**SOIL PHYSICAL PARAMETER DATA
CHEVRON STATION 9-0917
5280 HOPYARD ROAD, PLEASANTON, CALIFORNIA**

<i>Sample ID</i>	<i>Date</i>	<i>Depth (fbg)</i>	<i>Bulk Density (g/cc)</i>	<i>Moisture Content (% wt)</i>	<i>Total Porosity (%Vb)</i>	<i>Effective Porosity (%Vb)</i>	<i>Water Filled Porosity (%Vb)</i>	<i>Air Filled Porosity (%Vb)</i>	<i>Total Organic Carbon (mg/kg)</i>	<i>Effective Air Permeability (md)</i>
VP1	01/27/09	4	1.39	26.4	45.1	45.1	36.7	8.5	7650	6560

Notes:

Bulk density, total porosity, water filled porosity, air filled porosity, effective permeability by method API RP40

Moisture content by ASTM D2216

Total Porosity by method ASTM D425M

Total organic carbon by Walkley-Black Method

fbg = Feet below grade

g/cc = grams per cubic centimeter

% wt = percent weight

% Vb = percent bulk volume

mg/kg = milligrams per kilogram

md = millidarcy

TABLE 3

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

Sample ID	Date	Depth (fbg)	Concentrations reported in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)							Reported in % Volume			
			TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes ¹	MTBE	Naphalene	Helium	Oxygen	Methane	CO ₂
ESL ²	--	--	29,000	280	180,000	580,000	58,000	31,000	240	--	--	--	--
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	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
VP2	02/02/09	6 - 6.5	36,000	280	89	150	254	<6.8	<40	<0.44	6.5	0.012	6.3
VP2	LAB DUPLICATE		36,000	280	91	160	265	<14	<79	--	--	--	--
VP4	02/02/09	5 - 5.5	4,700	26	24	120	122	<4.2	<24	<0.12	9.3	0.00030	8.1
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

Notes:

Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method TO-3

Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), Methyl Tertiary Butyl Ether (MTBE) by EPA Method TO-15

Helium, oxygen, methane and carbon dioxide (CO₂) by modified ASTM D-1946

fbg = Feet below grade

<X = Not detected above method detection limit x

-- = not analyzed or not applicable

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

2 = Environmental Screening Levels (ESLs) for shallow soil gas for commercial/industrial land use from the 2007 *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

APPENDIX A

REGULATORY CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



recd: 07/14/08

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

July 9, 2008

Mr. Aaron Costa
Chevron Products Company
6001 Bollinger Canyon Road, K-2256
San Ramon, CA 94583-2324

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 document entitled, "Response to Technical Comments," dated May 20, 2008. The "Response to Technical Comments," provides responses to technical comments contained in our January 8, 2008 correspondence and rescinds the scope of work to install and sample two soil vapor probes adjacent to the station building. ACEH also requested the installation and sampling of three additional soil vapor probes. The "Response to Technical Comments," indicates that no soil vapor sampling is required based on updated screening levels in the San Francisco Bay Regional Water Quality Control Board guidance document entitled, "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater (November 2007)." As discussed in technical comment 1 below, we strongly disagree with this interpretation of the updated screening levels.

An evaluation of potential vapor intrusion is required. Therefore, we request that you implement the proposed installation and sampling of two soil vapor probes and the additional three soil vapor probes requested in our January 8, 2008 correspondence. We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

TECHNICAL COMMENTS

1. **Soil Vapor Probes.** The "Response to Technical Comments," indicates that no soil vapor sampling is required based on updated screening levels in the San Francisco Bay Regional Water Quality Control Board guidance document entitled, "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater (November 2007)." Screening levels for volatilization from groundwater to indoor air are cited as justification for not evaluating potential vapor intrusion. The "Response to Technical Comments," indicates that screening levels for volatilization of constituents from soil were "removed" from the updated

Mr. Aaron Costa
Lamorinda Development and Investment
C & H Development Company
RO0000439
July 9, 2008
Page 2

ESLs. The deletion of soil to indoor air screening levels does not mean that this pathway should no longer be assessed. It indicates that soil vapor data is to be used rather than soil data to evaluate volatilization from soil to indoor air. The station building was built directly over the former dispenser island and product piping. Elevated concentrations of benzene (up to 32 milligrams per kilogram) were detected in soil samples collected from the piping trenches. An evaluation of the potential for vapor intrusion is required for the site. The soil to indoor air pathway cannot be eliminated because screening levels have been modified. Instead, the pathway must be evaluated using soil vapor data.

2. **Well Survey.** The scanned version of the Well Location Map presented in the May 20, 2008 "Response to Technical Comments," is acceptable.

TECHNICAL REPORT REQUEST

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

- **October 24, 2008** – Soil Vapor Investigation Report
- **30 days following the end of each quarter** – Quarterly Monitoring Reports

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).

Mr. Aaron Costa
Lamorinda Development and Investment
C & H Development Company
RO0000439
July 9, 2008
Page 3

PERJURY STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

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

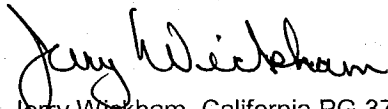
AGENCY OVERSIGHT

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

Mr. Aaron Costa
Lamorinda Development and Investment
C & H Development Company
RO0000439
July 9, 2008
Page 4

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

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Cheryl Dizon, QIC 80201, Zone 7 Water Agency, 100 North Canyons Parkway
Livermore, CA 94551

Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street
Pleasanton, CA 94566

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

Charlotte Evans, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A,
Emeryville, CA 94608

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

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

Effective **January 31, 2006**, 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 Alicia Lam-Finneke.
 - 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 at 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)

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director

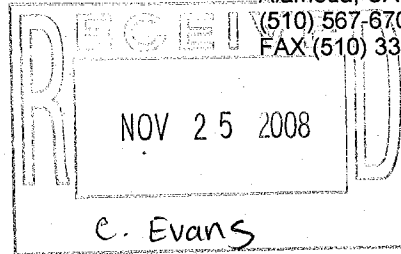


ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

(510) 567-6700
FAX (510) 337-93

November 19, 2008

Mr. Aaron Costa
Chevron Products Company
6001 Bollinger Canyon Road, K-2256
San Ramon, CA 94583-2324



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 – Notice to Comply

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 document entitled, "*Work Plan for Soil Vapor Survey*," dated October 24, 2008. In correspondence dated July 9, 2008, ACEH requested that you implement soil vapor sampling at five locations to evaluate the potential for vapor intrusion and present the results in a report by October 24, 2008. The requested work was not implemented and the "*Work Plan for Soil Vapor Survey*," dated October 24, 2008 indicates that only two soil vapor samples will be collected at a future date. The apparent rationale (page 2 of the Work Plan) for not conducting the requested soil vapor sampling is, "Because the site and area surrounding the site is zoned as commercial and future land use is not expected to change and because hydrocarbon concentrations are currently below ESLs, three vapor probes in addition to the two previously proposed source area probes is not warranted." This rationale for not performing the requested work is unacceptable for the following reasons:

1. The proposed two soil vapor sampling locations only provide data to evaluate vapor intrusion for the existing station building. Future commercial redevelopment of the site could result in construction of commercial buildings in other locations within the site. Therefore, other potential sources of contamination such as the first generation tank pit need to be evaluated for potential vapor intrusion to conclude that human health risks for the site have been addressed.
2. The potential for vapor intrusion must be assessed before making decisions regarding acceptable current commercial land use or more conservative future land use.
3. Commercial zoning and the belief that future land use is not expected to change is not a sufficient basis to assume that land use could not change at some date in the future. If the site were adequately characterized by evaluating the potential for vapor intrusion and the evaluation indicated that commercial land use was acceptable but more conservative land use was not acceptable, land use restrictions would be required. The appropriate land use restrictions cannot be defined without the evaluation of potential vapor intrusion.

Mr. Aaron Costa
Lamorinda Development and Investment
C&H Development
RO0000439
November 19, 2008
Page 2

4. The statement that hydrocarbon concentrations are currently below ESLs does not identify the media for a comparison and is therefore, not useful. We assume this statement regarding ESLs refers to a previous assertion made by Conestoga-Rovers & Associates in a previous document entitled, "*Response to Technical Comments*," dated May 20, 2008. In that document, Conestoga-Rovers & Associates concluded that no soil vapor sampling is required based on updated screening levels in the San Francisco Bay Regional Water Quality Control Board guidance document entitled, "*Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater (Interim Final - November 2007)*." Screening levels for volatilization from groundwater to indoor air were cited as justification for not evaluating potential vapor intrusion. The "*Response to Technical Comments*," indicated that screening levels for volatilization of constituents from soil were "removed" from the updated ESLs. As we previously discussed in ACEH correspondence dated July 9, 2008, the deletion of soil to indoor air screening levels does not mean that this pathway should no longer be assessed. It indicates that soil vapor data is to be used rather than soil data to evaluate volatilization from soil to indoor air.

This correspondence is our fourth request for an evaluation of potential vapor intrusion to indoor air at this site. The rationale provided in various responses to comments and work plans by Conestoga-Rovers & Associates for not implementing the work has been reviewed and is without merit. Therefore, we request that you comply with our directives to implement soil vapor sampling at the five locations described in previous correspondence. **If the work is not completed by February 25, 2009, a Notice of Violation will be issued.**

TECHNICAL REPORT REQUEST

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

- **February 25, 2009** – Soil Vapor Investigation Report
- **30 days following the end of each quarter** – Quarterly Monitoring Reports

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

Mr. Aaron Costa
Lamorinda Development and Investment
C&H Development
RO0000439
November 19, 2008
Page 3

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).

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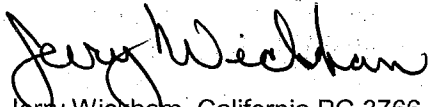
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Jerry Wickham, California PG 3766, CEG 1177, and CHG 297
Senior Hazardous Materials Specialist

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Livermore, CA 94551

Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street
Pleasanton, CA 94566

Ken Mifsud, Alameda County District Attorney's Office, Consumer and Environmental
Protection Division, 7677 Oakport Street, Suite 650, Oakland, CA 94621

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

Charlotte Evans, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A,
Emeryville, CA 94608

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

**Alameda County Environmental Cleanup
Oversight Programs
(LOP and SLIC)**

ISSUE DATE: July 5, 2005

REVISION DATE: December 16, 2005

PREVIOUS REVISIONS: October 31, 2005

SECTION: Miscellaneous Administrative Topics & Procedures

SUBJECT: Electronic Report Upload (ftp) Instructions

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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 at 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)

APPENDIX B

SITE HISTORY

SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

1989 Monitoring Well Installation: In August 1989, Groundwater Technology, Inc. (GTI) installed onsite groundwater monitoring wells MW-1 through MW-3. No total petroleum hydrocarbons as gasoline (TPHg) or benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in soil. Only 6 micrograms per liter ($\mu\text{g}/\text{L}$) ethylbenzene was detected in groundwater, no other fuel hydrocarbons were detected. Additional information 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. TPHg was detected at up to 3 milligrams per kilogram (mg/kg) in MW-5, but the chromatogram was not consistent with a gasoline standard pattern. In particular, a set of peaks are present both before and after the gasoline hydrocarbon range, indicating a suite of hydrocarbons both lighter and heavier than normal gasoline-range hydrocarbons. No benzene, ethylbenzene or xylenes were detected; toluene was detected at a maximum concentration of 0.022 mg/kg . Groundwater was encountered in the well borings at a depth of approximately 13 fbg. Maximum TPHg and benzene concentrations were detected in groundwater in MW-5 at 12,000 $\mu\text{g}/\text{L}$ and 4,000 $\mu\text{g}/\text{L}$, respectively. 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 consisting of three 10,000-gallon gasoline, one 10,000-gallon diesel, and one 500-gallon used-oil UST were removed and replaced with four 12,000-gallon double-walled fiberglass gasoline USTs. TPHg and benzene were detected in soil samples collected from the bottom of the UST excavation at maximum concentrations of 70 mg/kg and 0.64 mg/kg , respectively, at depths of 9.5 fbg to 10 fbg. TPHg and benzene were detected in over-excavation soil samples collected from beneath the fuel product piping at concentrations of 440 mg/kg and 1.1 mg/kg , respectively, at 7 fbg. Total petroleum hydrocarbons as diesel (TPHd) was detected at a maximum concentration of 8.0 mg/kg from 10 fbg in the product piping area. Over-excavation of UST and product piping areas extended to maximum depths of approximately 10 fbg. Concentrations of 24,000 $\mu\text{g}/\text{L}$ TPHg and 1,000 $\mu\text{g}/\text{L}$ benzene were detected in a groundwater sample collected from the UST excavation. 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. The probable hydrocarbon source area, based on reported soil and grab-groundwater samples, is the former dispenser

island and associated northeastern product lines. Additional information can be found in Gettler-Ryan's (G-R) *Site Conceptual Model and Closure Request*, dated January 25, 2002.

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 MTBE in groundwater south of the source area. No TPHg, BTEX or MTBE was detected in any soil samples. Selected soil samples were sent to Cooper Testing Facilities for physical analysis for moisture, density, porosity, specific gravity, and organic content. Details of this investigation can be found in PEG's *Soil and Groundwater Investigation*, dated August 11, 1997.

March 1999 Enhanced Bioremediation: G-R installed oxygen releasing compound (ORC) socks in wells MW-5 and MW-6 on March 26, 1999 to increase the dissolved oxygen concentrations in groundwater in the areas of known petroleum hydrocarbons and enhance biodegradation within the 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. 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. DO concentrations stabilized around 3.6 milligrams per liter (mg/L) and 4.3 mg/L in wells MW-5 and MW-6, respectively, for the next five quarters. A second significant decrease in DO was reported in samples collected from September 7, 2001 to December 5, 2001. Per the request of ACEHS, 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 Penetration Technology (CPT) direct push drill rig. TPHg was only detected in soil samples from boring GP-1, at concentrations ranging from 7.9 mg/kg at 7 fbg to 110 mg/kg at 5 fbg. Benzene was detected only in soil boring GP-1 at concentrations ranging from 0.003 mg/kg at 7 fbg to 0.09 mg/kg at 10 fbg. MTBE was detected only in soil boring GP-2 at 10 fbg at a concentration of 0.006 mg/kg. The highest TPHg concentrations detected in grab-groundwater samples were 2,400 µg/L at 8 fbg from GP-1 and 110 µg/L at 28 fbg in GP-2. Benzene was only detected in samples from GP-1 at concentrations of 2 µg/L (8 fbg) and 0.7 µg/L (36 fbg), respectively. MTBE detections were 19 µg/L in GP-1 at 36 fbg and 22 µg/L in GP-2 at 28 fbg. No TPHg, benzene or MTBE were detected in grab-groundwater samples from borings GP-3 through GP-5, with the exception of 1 µg/L MTBE in GP-5. 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. TPHg and benzene were detected at maximum concentrations of 880 mg/kg at 15.5 fbg and 0.35 mg/kg at 20 fbg, respectively. No MTBE was detected in soil. Details of this investigation can be found in Cambria's *Subsurface Investigation Report*, dated September 26, 2006.

2007 Groundwater Batch Extraction: 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*.

APPENDIX C

PERMIT



ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 445-9306
E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 5280 HOPYARD ROAD
PLEASANTON CA

AT THE CHEVRON STATION

Coordinates Source _____ ft. Accuracy _____ ft.
LAT: _____ ft. LONG _____ ft.
APN _____

PERMIT NUMBER 29003

WELL NUMBER _____

APN 941-1301-074-05

PERMIT CONDITIONS
(Circled Permit Requirements Apply)

CLIENT
Name CHEVRON ENVIRONMENTAL MANAGEMENT A
Address 6001 BOWLINGER CANY Phone 925 842 5005
City SAN RAMON CA Zip 94583

- GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date
 2. Submit to Zone 7 within 50 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller.
 3. Permit is void if project not begun within 90 days of approval date.

APPLICANT
Name BELEW YIFRU FOR CONESTOGA-ROVERS ASSOC.
Email BYIFRU@CRA.WORLD-WIDE.COM Fax 510-420-9170
Address 5900 HOLLIS ST. SUITE A Phone 510-420-3356
City EMERYVILLE CA 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 SOIL VAPOR
INSTALLATION

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

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

DRILLING COMPANY VIRONEX ENVIRONMENTAL
FIELD SERVICES
DRILLER'S LICENSE NO. CS7 # 705927

WELL SPECIFICATIONS:
Drill Hole Diameter 3 in. Maximum _____
Casing Diameter 3 in. Depth 6 ft.
Surface Seal Depth 3 ft. Number FIVE

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

ESTIMATED STARTING DATE 1-27-2009
ESTIMATED COMPLETION DATE 1-27-2009

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

APPLICANT'S SIGNATURE [Signature] Date 1-9-2009
BELEW YIFRU

- 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 practical or 20 feet.
 3. Grout placed by tremie.

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.

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

F. WELL DESTRUCTION See attached.

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.

Approved [Signature] Date 1/13/09
Wyman Hong

ATTACH SITE PLAN OR SKETCH



APPENDIX D



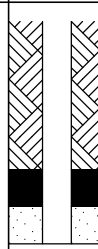
BORING LOGS



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** VP1
JOB/SITE NAME Chevron Station 9-0917 **DRILLING STARTED** 27-Jan-09
LOCATION 5280 Hopyard Road, Pleasanton, CA **DRILLING COMPLETED** 27-Jan-09
PROJECT NUMBER 060057 **WELL DEVELOPMENT DATE (YIELD)** NA
DRILLER Vironex Inc. (C57-705927) **GROUND SURFACE ELEVATION** Not Surveyed
DRILLING METHOD Hand Auger **TOP OF CASING ELEVATION** NA
BORING DIAMETER 3" **SCREENED INTERVAL** NA
LOGGED BY B. Yifru **DEPTH TO WATER (First Encountered)** NA 
REVIEWED BY Brandon S. Wilken P.G. #7564 **DEPTH TO WATER (Static)** NA 
REMARKS Soil vapor probe installed at 6.0 to 6.5 fbg

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
22		VP1-S-4		5	ML		<p><u>ASPHALT</u></p> <p><u>Clayey SILT with gravel:</u> Brown; damp; 10% clay, 75% silt, 10% gravel; medium plasticity; low estimated permeability.</p> <p>Composition and color changes: dark grey; damp; 25% clay, 75% silt; medium plasticity; low estimated permeability.</p>	0.5 6.5	 <p>Portland Type I/II Cement</p> <p>Bentonite Seal</p> <p>Monterey Sand #2/12</p> <p>Bottom of Boring @ 6.5 ft</p>

WELL LOG (PID) I:\CHEVRON\0600-1\060057-1\0600323-1\060057-GINT.GPJ DEFAULT.GDT 4/14/09



CLIENT NAME	<u>Chevron Environmental Management Company</u>	BORING/WELL NAME	<u>VP2</u>
JOB/SITE NAME	<u>Chevron Station 9-0917</u>	DRILLING STARTED	<u>27-Jan-09</u>
LOCATION	<u>5280 Hopyard Road, Pleasanton, CA</u>	DRILLING COMPLETED	<u>27-Jan-09</u>
PROJECT NUMBER	<u>060057</u>	WELL DEVELOPMENT DATE (YIELD)	<u>NA</u>
DRILLER	<u>Vironex Inc. (C57-705927)</u>	GROUND SURFACE ELEVATION	<u>Not Surveyed</u>
DRILLING METHOD	<u>Hand Auger</u>	TOP OF CASING ELEVATION	<u>NA</u>
BORING DIAMETER	<u>3"</u>	SCREENED INTERVAL	<u>NA</u>
LOGGED BY	<u>B. Yifru</u>	DEPTH TO WATER (First Encountered)	<u>NA</u>
REVIEWED BY	<u>Brandon S. Wilken P.G. #7564</u>	DEPTH TO WATER (Static)	<u>NA</u>
REMARKS	<u>Soil vapor probe installed at 6.0 to 6.5 fbg</u>		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0		VP2-4-S		ML		CONCRETE Clayey SILT: Dark grey; damp; 30% clay, 70% silt; high plasticity; low estimated permeability.	0.5	

WELL LOG (PID) I:\CHEVRON\0600-1\060057-1\060057-GINT.GPJ DEFAULT.GDT 4/14/09



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

BORING/WELL LOG

CLIENT NAME	<u>Chevron Environmental Management Company</u>	BORING/WELL NAME	<u>VP3</u>
JOB/SITE NAME	<u>Chevron Station 9-0917</u>	DRILLING STARTED	<u>27-Jan-09</u>
LOCATION	<u>5280 Hopyard Road, Pleasanton, CA</u>	DRILLING COMPLETED	<u>27-Jan-09</u>
PROJECT NUMBER	<u>060057</u>	WELL DEVELOPMENT DATE (YIELD)	<u>NA</u>
DRILLER	<u>Vironex Inc. (C57-705927)</u>	GROUND SURFACE ELEVATION	<u>Not Surveyed</u>
DRILLING METHOD	<u>Hand Auger</u>	TOP OF CASING ELEVATION	<u>NA</u>
BORING DIAMETER	<u>3"</u>	SCREENED INTERVAL	<u>NA</u>
LOGGED BY	<u>B. Yifru</u>	DEPTH TO WATER (First Encountered)	<u>NA</u> ▼
REVIEWED BY	<u>Brandon S. Wilken P.G. #7564</u>	DEPTH TO WATER (Static)	<u>NA</u> ▼
REMARKS	<u>Pea-gravel encountered, soil vapor probe could not be installed</u>		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							ASPHALT FILL: Pea gravel.	0.5 1.0	Bottom of Boring @ 1 ft



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	VP4
JOB/SITE NAME	Chevron Station 9-0917	DRILLING STARTED	27-Jan-09
LOCATION	5280 Hopyard Road, Pleasanton, CA	DRILLING COMPLETED	27-Jan-09
PROJECT NUMBER	060057	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Vironex Inc. (C57-705927)	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand Auger	TOP OF CASING ELEVATION	NA
BORING DIAMETER	3"	SCREENED INTERVAL	NA
LOGGED BY	B. Yifru	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	Brandon S. Wilken P.G. #7564	DEPTH TO WATER (Static)	NA
REMARKS	Soil vapor probe installed at 5.0 to 5.5 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0		VP4-4-S		0 5	GM ML		<p>CONCRETE</p> <p>Silty GRAVEL: Brown; damp; 30% silt, 10% sand, 60% gravel; non-plastic; moderate estimated permeability.</p> <p>Clayey SILT: Dark grey; damp; 20% clay, 80% silt; high plasticity; low estimated permeability.</p>	0.5 1.0 5.5	<p>Portland Type I/II Cement</p> <p>Bentonite Seal</p> <p>Monterey Sand #2/12</p> <p>Bottom of Boring @ 5.5 ft</p>

WELL LOG (PID) I:\CHEVRON\0600-1\060057-1\0600323-1\060057-GINT.GPJ DEFAULT.GDT 4/14/09



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** VP5
JOB/SITE NAME Chevron Station 9-0917 **DRILLING STARTED** 27-Jan-09
LOCATION 5280 Hopyard Road, Pleasanton, CA **DRILLING COMPLETED** 27-Jan-09
PROJECT NUMBER 060057 **WELL DEVELOPMENT DATE (YIELD)** NA
DRILLER Vironex Inc. (C57-705927) **GROUND SURFACE ELEVATION** Not Surveyed
DRILLING METHOD Hand Auger **TOP OF CASING ELEVATION** NA
BORING DIAMETER 3" **SCREENED INTERVAL** NA
LOGGED BY B. Yifru **DEPTH TO WATER (First Encountered)** NA
REVIEWED BY Brandon S. Wilken P.G. #7564 **DEPTH TO WATER (Static)** NA
REMARKS Soil vapor probe installed at 5.0 to 5.5 fbg

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0		VP5-4-S		0.5	ML		ASPHALT Clayey SILT with gravel: Grey; damp; 20% clay, 60% silt, 20% gravel; high plasticity; low estimated permeability.	0.5	 Bottom of Boring @ 5.5 ft
				3.0	SM		Silty SAND: Grey; damp; 5% clay, 15% silt, 80% sand; low plasticity; moderate permeability.	3.0	
				4.0	ML		Sandy SILT with clay: Grey; damp; 10% clay, 70% silt, 20% sand; medium plasticity; moderate estimated permeability.	4.0	
				5.6				5.6	

WELL LOG (PID) I:\CHEVRON\0600-1\060057-1\0600323-1\060057-GINT.GPJ DEFAULT.GDT 4/14/09

APPENDIX E

LABORATORY ANALYTICAL REPORTS - SOIL

ANALYTICAL RESULTS

Prepared for:

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

925-842-8582

Prepared by:

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

The sample group for this submittal is 1129980. Samples arrived at the laboratory on Thursday, January 29, 2009. The PO# for this group is 0015025028 and the release number is COSTA.

Client DescriptionVP4-S-4-090127 Grab Soil
VP2-S-4-090127 Grab Soil
VP5-S-4-090127 Grab Soil
VP1-S-4-090127 Grab SoilLancaster Labs Number5587447
5587448
5587449
5587450ELECTRONIC Chevron
COPY TO
ELECTRONIC CRA
COPY TO
ELECTRONIC CRA
COPY TO

Attn: CRA EDD

Attn: Charlotte Evans

Attn: Ian Hull

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

Respectfully Submitted,



Christine Dulaney
Senior Specialist



Analysis Report

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

Lancaster Laboratories Sample No. SW5587447

Group No. 1129980

VP4-S-4-090127 Grab Soil

Facility# 90917 CRAW

5280 Hopyard-Pleasanton T0600100345 VP4

Collected: 01/27/2009 09:55 by IH

Account Number: 10880

Submitted: 01/29/2009 09:00

Reported: 02/10/2009 at 11:54

Discard: 03/13/2009

ChevronTexaco

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

HOPV4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Units	Dilution Factor
				Method	Detection Limit		
01725	TPH-GRO N. CA soil C6-C12	n.a.	N.D.		1.0	mg/kg	25
07360	BTEX+MTBE by 8260B						
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.0005	mg/kg	0.94
05460	Benzene	71-43-2	0.0007		0.0005	mg/kg	0.94
05466	Toluene	108-88-3	N.D.		0.0009	mg/kg	0.94
05474	Ethylbenzene	100-41-4	N.D.		0.0009	mg/kg	0.94
06301	Xylene (Total)	1330-20-7	N.D.		0.0009	mg/kg	0.94

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	01/30/2009 23:47	Marie D John	25
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	02/02/2009 16:53	Nicholas R Rossi	0.94
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	01/29/2009 18:23	Lois E Hiltz	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	01/29/2009 18:24	Lois E Hiltz	n.a.
01150	GC - Bulk Soil Prep	SW-846 5030A	1	01/29/2009 18:27	Lois E Hiltz	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	01/29/2009 18:25	Lois E Hiltz	n.a.



Analysis Report

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Page 1 of 1

Lancaster Laboratories Sample No. SW5587448

Group No. 1129980

VP2-S-4-090127 Grab Soil

Facility# 90917 CRAW

5280 Hopyard-Pleasanton T0600100345 VP2

Collected: 01/27/2009 10:30 by IH

Account Number: 10880

Submitted: 01/29/2009 09:00

Reported: 02/10/2009 at 11:54

Discard: 03/13/2009

ChevronTexaco

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

HOPV2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Units	Dilution Factor
				Method	Detection Limit		
01725	TPH-GRO N. CA soil C6-C12	n.a.	N.D.		1.0	mg/kg	25
07360	BTEX+MTBE by 8260B						
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.0005	mg/kg	0.97
05460	Benzene	71-43-2	0.0007		0.0005	mg/kg	0.97
05466	Toluene	108-88-3	N.D.		0.001	mg/kg	0.97
05474	Ethylbenzene	100-41-4	N.D.		0.001	mg/kg	0.97
06301	Xylene (Total)	1330-20-7	N.D.		0.001	mg/kg	0.97

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	01/31/2009 00:23	Marie D John	25
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	02/02/2009 17:17	Nicholas R Rossi	0.97
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	01/29/2009 18:29	Lois E Hiltz	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	01/29/2009 18:30	Lois E Hiltz	n.a.
01150	GC - Bulk Soil Prep	SW-846 5030A	1	01/29/2009 18:33	Lois E Hiltz	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	01/29/2009 18:31	Lois E Hiltz	n.a.



Analysis Report

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

Lancaster Laboratories Sample No. SW5587449

Group No. 1129980

VP5-S-4-090127 Grab Soil

Facility# 90917 CRAW

5280 Hopyard-Pleasanton T0600100345 VP5

Collected: 01/27/2009 13:00 by IH

Account Number: 10880

Submitted: 01/29/2009 09:00

Reported: 02/10/2009 at 11:54

Discard: 03/13/2009

ChevronTexaco

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

HOPV5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Units	Dilution Factor
				Method	Detection Limit		
01725	TPH-GRO N. CA soil C6-C12	n.a.	N.D.		1.0	mg/kg	25
07360	BTEX+MTBE by 8260B						
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.0005	mg/kg	0.92
05460	Benzene	71-43-2	0.001		0.0005	mg/kg	0.92
05466	Toluene	108-88-3	N.D.		0.0009	mg/kg	0.92
05474	Ethylbenzene	100-41-4	N.D.		0.0009	mg/kg	0.92
06301	Xylene (Total)	1330-20-7	N.D.		0.0009	mg/kg	0.92

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis		Analyst	Dilution Factor
				Date and Time			
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	01/31/2009 00:59		Marie D John	25
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	02/02/2009 17:40		Nicholas R Rossi	0.92
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	01/29/2009 18:38		Lois E Hiltz	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	01/29/2009 18:39		Lois E Hiltz	n.a.
01150	GC - Bulk Soil Prep	SW-846 5030A	1	01/29/2009 18:42		Lois E Hiltz	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	01/29/2009 18:40		Lois E Hiltz	n.a.



Analysis Report

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

Lancaster Laboratories Sample No. SW5587450

Group No. 1129980

VP1-S-4-090127 Grab Soil

Facility# 90917 CRAW

5280 Hopyard-Pleasanton T0600100345 VP1

Collected: 01/27/2009 15:00 by IH

Account Number: 10880

Submitted: 01/29/2009 09:00

ChevronTexaco

Reported: 02/10/2009 at 11:54

6001 Bollinger Canyon Rd L4310

Discard: 03/13/2009

San Ramon CA 94583

HOPV1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received		Units	Dilution Factor
				Method	Detection Limit		
01725	TPH-GRO N. CA soil C6-C12	n.a.	100		20	mg/kg	500
07360	BTEX+MTBE by 8260B						
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.023	mg/kg	45.79
05460	Benzene	71-43-2	1.2		0.023	mg/kg	45.79
05466	Toluene	108-88-3	N.D.		0.046	mg/kg	45.79
05474	Ethylbenzene	100-41-4	2.4		0.046	mg/kg	45.79
06301	Xylene (Total)	1330-20-7	0.54		0.046	mg/kg	45.79

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	01/31/2009 01:35	Marie D John	500
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	02/07/2009 16:53	Angela D Sneeringer	45.79
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	01/29/2009 18:45	Lois E Hiltz	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	01/29/2009 18:47	Lois E Hiltz	n.a.
01150	GC - Bulk Soil Prep	SW-846 5030A	1	01/29/2009 18:50	Lois E Hiltz	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	01/29/2009 18:49	Lois E Hiltz	n.a.

Quality Control Summary

 Client Name: ChevronTexaco
 Reported: 02/10/09 at 11:54 AM

Group Number: 1129980

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>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: 09030A34A	Sample number(s): 5587447-5587450							
TPH-GRO N. CA soil C6-C12	N.D.	1.0	mg/kg	83	87	67-119	4	30
Batch number: B090331AA	Sample number(s): 5587447-5587449							
Methyl Tertiary Butyl Ether	N.D.	0.0005	mg/kg	101	106	72-117	5	30
Benzene	N.D.	0.0005	mg/kg	100	105	84-115	5	30
Toluene	N.D.	0.001	mg/kg	95	97	81-116	2	30
Ethylbenzene	N.D.	0.001	mg/kg	92	95	82-115	3	30
Xylene (Total)	N.D.	0.001	mg/kg	93	96	82-117	3	30
Batch number: R090381AA	Sample number(s): 5587450							
Methyl Tertiary Butyl Ether	N.D.	0.025	mg/kg	95	95	72-117	0	30
Benzene	N.D.	0.025	mg/kg	95	95	84-115	0	30
Toluene	N.D.	0.050	mg/kg	96	96	81-116	0	30
Ethylbenzene	N.D.	0.050	mg/kg	95	95	82-115	1	30
Xylene (Total)	N.D.	0.050	mg/kg	94	94	82-117	1	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: B090331AA	Sample number(s): 5587447-5587449 UNSPK: P587444								
Methyl Tertiary Butyl Ether	105		59-119						
Benzene	103		66-112						
Toluene	95		58-116						
Ethylbenzene	88		54-116						
Xylene (Total)	87		52-117						

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: TPH-GRO N. CA soil C6-C12
 Batch number: 09030A34A
 Trifluorotoluene-F

5587447 76

*- Outside of specification

- (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: 02/10/09 at 11:54 AM

Group Number: 1129980

Surrogate Quality Control

5587448 72
5587449 69
5587450 5*
Blank 77
LCS 81
LCSD 76

Limits: 61-122

Analysis Name: BTEX+MTBE by 8260B

Batch number: B090331AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5587447	92	89	93	86
5587448	95	92	96	78
5587449	97	96	93	84
Blank	91	90	89	84
LCS	89	91	92	91
LCSD	91	87	91	90
MS	93	97	93	91

Limits: 71-114

70-109

70-123

70-111

Analysis Name: BTEX+MTBE by 8260B

Batch number: R090381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5587450	77	77	81	78
Blank	91	93	94	90
LCS	92	93	94	95
LCSD	91	95	94	91

Limits: 71-114

70-109

70-123

70-111

*- Outside of specification

- (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



012809-07

Acc. #: 10880 Sample #: 5587447-50

For Lancaster Laboratories use only

SCR#: 250811

Group # 1129980

Facility #: 9-0917 (AIL)
 Site Address: 5280 HOPYARD ROAD, PLEASANTON, CA
 Chevron PM: AARON COSTA Lead Consultant: CRA
 Consultant/Office: EMERYVILLE
 Consultant Prj. Mgr.: CHARLOTTE EVANS
 Consultant Phone #: 510-420-3351 Fax #: 510-420-9170
 Sampler: IAN HULL
 Service Order #: _____ Non SAR: _____

Analyses Requested

Preservation Codes

Total Number of Containers	Grab	Composite	BTEX + MTBE 8260 <input checked="" type="checkbox"/> 8021 <input type="checkbox"/>	TPH 8015 MOD GRO	TPH 8015 MOD DRO <input type="checkbox"/> Silica Gel Cleanup	8260 full scan	Oxygenates	Lead 7420 <input type="checkbox"/> 7421 <input type="checkbox"/>
1	X	X	X	X				

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 <input checked="" type="checkbox"/> 8021 <input type="checkbox"/>	TPH 8015 MOD GRO	TPH 8015 MOD DRO <input type="checkbox"/> Silica Gel Cleanup	8260 full scan	Oxygenates	Lead 7420 <input type="checkbox"/> 7421 <input type="checkbox"/>
VP4-S-4-090127	SOIL	NA	4	09 01 27	0955	Y	X	X	1	X	X				
VP2-S-4-090127					1030										
VP5-S-4-090127					1300										
VP1-S-4-090127					1500										

Comments / Remarks
 EMAIL RESULTS TO:
 c.evans@croworld.com
 ihull@croworld.com

EDF DATA TO
 dohare@croworld.com

Turnaround Time Requested (TAT) (please circle)

STD. TAT
 24 hour 4 day 5 day

72 hour 48 hour

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>Ian Hull</u>	Date: <u>01/27/09</u>	Time: <u>1710</u>	Received by: <u>SECURE LOCATION</u>	Date:	Time:
Relinquished by: <u>BELEW YIFRO</u>	Date: <u>1-28-09</u>	Time: <u>11:20</u>	Received by: <u>[Signature]</u>	Date: <u>1/28/09</u>	Time: <u>1120</u>
Relinquished by: <u>A. Salazar</u>	Date: <u>28 JANUARY</u>	Time: <u>1630</u>	Received by: <u>FED EX</u>	Date:	Time:
Relinquished by Commercial Carrier: <u>UPS</u>	<input checked="" type="checkbox"/> FedEx	Other: _____	Received by: <u>Deborah Neslund</u>	Date: <u>1/29/09</u>	Time: <u>0900</u>
Temperature Upon Receipt: <u>0.8-3.0 C°</u>	Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				

Lancaster Laboratories Explanation of Symbols and Abbreviations

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

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	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		
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.		

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

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 of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



AN ENVIRONMENTAL ANALYTICAL LABORATORY

2/17/2009

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

Project Name: CVX 9-0917
Project #: 9-0917
Workorder #: 0902107B

Dear Ms. Charlotte Evans

The following report includes the data for the above referenced project for sample(s) received on 2/5/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-3 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,

A handwritten signature in black ink that reads 'Kyle Vagadori'.

Kyle Vagadori
Project Manager



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0902107B

Work Order Summary

CLIENT: Ms. Charlotte Evans
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville, CA 94608
BILL TO: Ms. Charlotte Evans
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville, CA 94608
PHONE: 510-420-3351
FAX: 510-420-9170
DATE RECEIVED: 02/05/2009
DATE COMPLETED: 02/17/2009
P.O. #: 060057
PROJECT #: 9-0917 CVX 9-0917
CONTACT: Kyle Vagadori

Table with 5 columns: FRACTION #, NAME, TEST, RECEIPT VAC./PRES., FINAL PRESSURE. Rows include various sample IDs (01A-09B) and their corresponding test results and pressures.

CERTIFIED BY: [Signature]

DATE: 02/17/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
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: 07/01/08, Expiration date: 06/30/09

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-3
Conestoga-Rovers Associates (CRA)
Workorder# 0902107B

Seven 1 Liter Summa Canister (100% Certified) samples were received on February 05, 2009. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L.

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-3</i>	<i>ATL Modifications</i>
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch \leq 20 samples
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation $DL = A + 3.3S$, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The recovery of surrogate Fluorobenzene in samples VP1-6 DUPLICATE and VP1-6 RESAMPLE was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: VP1-6

Lab ID#: 0902107B-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	50000	29000000	200000	120000000

Client Sample ID: VP1-6 DUPLICATE

Lab ID#: 0902107B-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	49000	29000000	200000	120000000

Client Sample ID: VP5-5

Lab ID#: 0902107B-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	460	220000	1900	890000

Client Sample ID: VP4-5

Lab ID#: 0902107B-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	58	1200	240	4700

Client Sample ID: VP2-6

Lab ID#: 0902107B-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	95	8700	390	36000

Client Sample ID: VP2-6 Lab Duplicate

Lab ID#: 0902107B-05AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	95	8700	390	36000



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: VP1-6 RESAMPLE

Lab ID#: 0902107B-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	49000	48000000	200000	200000000

Client Sample ID: TRIP BLANK

Lab ID#: 0902107B-07A

No Detections Were Found.



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP1-6

Lab ID#: 0902107B-01A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020810	Date of Collection:	2/2/09	
Dil. Factor:	1980	Date of Analysis:	2/8/09 06:28 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	50000	29000000	200000	120000000

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	124	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP1-6 DUPLICATE

Lab ID#: 0902107B-02A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d021215	Date of Collection:	2/2/09
Dil. Factor:	1970	Date of Analysis:	2/12/09 08:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	49000	29000000	200000	120000000

Q = Exceeds Quality Control limits, due to matrix effects. Matrix effects confirmed by re-analysis.

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	154 Q	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP5-5

Lab ID#: 0902107B-03A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020808	Date of Collection:	2/2/09	
Dil. Factor:	18.4	Date of Analysis:	2/8/09 04:38 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	460	220000	1900	890000

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	99	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP4-5

Lab ID#: 0902107B-04A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020805	Date of Collection: 2/2/09
Dil. Factor:	2.33	Date of Analysis: 2/8/09 02:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	58	1200	240	4700

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	99	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP2-6

Lab ID#: 0902107B-05A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020806	Date of Collection:	2/2/09	
Dil. Factor:	3.79	Date of Analysis:	2/8/09 03:24 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	95	8700	390	36000

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	96	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP2-6 Lab Duplicate

Lab ID#: 0902107B-05AA

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020807	Date of Collection:	2/2/09	
Dil. Factor:	3.79	Date of Analysis:	2/8/09 04:03 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	95	8700	390	36000

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	96	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP1-6 RESAMPLE

Lab ID#: 0902107B-06A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d021216	Date of Collection:	2/2/09
Dil. Factor:	1970	Date of Analysis:	2/12/09 09:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	49000	48000000	200000	200000000

Q = Exceeds Quality Control limits, due to matrix effects. Matrix effects confirmed by re-analysis.

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	211 Q	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: TRIP BLANK

Lab ID#: 0902107B-07A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/8/09 02:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	25	Not Detected	100	Not Detected

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	99	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0902107B-08A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/8/09 11:39 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	25	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	94	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0902107B-08B

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d021203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/12/09 10:38 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	25	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	92	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0902107B-09A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020814	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/8/09 09:39 PM

Compound	%Recovery
TPH (Gasoline Range)	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	102	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0902107B-09B

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d021218	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/12/09 10:30 PM

Compound	%Recovery
TPH (Gasoline Range)	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	118	75-150

PTS File No: 38098
Client: Lancaster Laboratories

PHYSICAL PROPERTIES DATA - PERMEABILITY TO AIR

(METHODOLOGY: API RP40)

PROJECT NAME: N/A
PROJECT NO: 5272263

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	25 PSI CONFINING STRESS
			SPECIFIC (2) PERMEABILITY TO AIR millidarcy
VP1-S-8-080201	N/A	V	6560

PHYSICAL PROPERTIES DATA - PERMEABILITY TO AIR

(METHODOLOGY: API RP40)

PROJECT NAME: N/A
PROJECT NO: 5272263

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	25 PSI CONFINING STRESS
			SPECIFIC (2) PERMEABILITY TO AIR millidarcy

(1) Sample Orientation: H = horizontal; V = vertical (2) Specific = With as-received pore fluids removed

APPENDIX F

LABORATORY ANALYTICAL REPORTS - VAPOR



AN ENVIRONMENTAL ANALYTICAL LABORATORY

2/17/2009

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

Project Name: CVX 9-0917
Project #: 9-0917
Workorder #: 0902107B

Dear Ms. Charlotte Evans

The following report includes the data for the above referenced project for sample(s) received on 2/5/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-3 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,

A handwritten signature in black ink that reads 'Kyle Vagadori'.

Kyle Vagadori
Project Manager



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0902107B

Work Order Summary

CLIENT:	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	BILL TO:	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-3351	P.O. #	060057
FAX:	510-420-9170	PROJECT #	9-0917 CVX 9-0917
DATE RECEIVED:	02/05/2009	CONTACT:	Kyle Vagadori
DATE COMPLETED:	02/17/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP1-6	Modified TO-3	5.6 "Hg	15 psi
02A	VP1-6 DUPLICATE	Modified TO-3	5.4 "Hg	15 psi
03A	VP5-5	Modified TO-3	3.6 "Hg	15 psi
04A	VP4-5	Modified TO-3	4.0 "Hg	15 psi
05A	VP2-6	Modified TO-3	14.0 "Hg	15 psi
05AA	VP2-6 Lab Duplicate	Modified TO-3	14.0 "Hg	15 psi
06A	VP1-6 RESAMPLE	Modified TO-3	5.4 "Hg	15 psi
07A	TRIP BLANK	Modified TO-3	28.2 "Hg	15 psi
08A	Lab Blank	Modified TO-3	NA	NA
08B	Lab Blank	Modified TO-3	NA	NA
09A	LCS	Modified TO-3	NA	NA
09B	LCS	Modified TO-3	NA	NA

CERTIFIED BY: 

DATE: 02/17/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
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: 07/01/08, Expiration date: 06/30/09

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-3
Conestoga-Rovers Associates (CRA)
Workorder# 0902107B

Seven 1 Liter Summa Canister (100% Certified) samples were received on February 05, 2009. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L.

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-3</i>	<i>ATL Modifications</i>
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch \leq 20 samples
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation $DL = A + 3.3S$, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The recovery of surrogate Fluorobenzene in samples VP1-6 DUPLICATE and VP1-6 RESAMPLE was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: VP1-6

Lab ID#: 0902107B-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	50000	29000000	200000	120000000

Client Sample ID: VP1-6 DUPLICATE

Lab ID#: 0902107B-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	49000	29000000	200000	120000000

Client Sample ID: VP5-5

Lab ID#: 0902107B-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	460	220000	1900	890000

Client Sample ID: VP4-5

Lab ID#: 0902107B-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	58	1200	240	4700

Client Sample ID: VP2-6

Lab ID#: 0902107B-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	95	8700	390	36000

Client Sample ID: VP2-6 Lab Duplicate

Lab ID#: 0902107B-05AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	95	8700	390	36000



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: VP1-6 RESAMPLE

Lab ID#: 0902107B-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	49000	48000000	200000	200000000

Client Sample ID: TRIP BLANK

Lab ID#: 0902107B-07A

No Detections Were Found.



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP1-6

Lab ID#: 0902107B-01A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020810	Date of Collection:	2/2/09
Dil. Factor:	1980	Date of Analysis:	2/8/09 06:28 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	50000	29000000	200000	120000000

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	124	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP1-6 DUPLICATE

Lab ID#: 0902107B-02A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d021215	Date of Collection:	2/2/09
Dil. Factor:	1970	Date of Analysis:	2/12/09 08:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	49000	29000000	200000	120000000

Q = Exceeds Quality Control limits, due to matrix effects. Matrix effects confirmed by re-analysis.

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	154 Q	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP5-5

Lab ID#: 0902107B-03A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020808	Date of Collection:	2/2/09	
Dil. Factor:	18.4	Date of Analysis:	2/8/09 04:38 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	460	220000	1900	890000

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	99	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP4-5

Lab ID#: 0902107B-04A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020805	Date of Collection:	2/2/09
Dil. Factor:	2.33	Date of Analysis:	2/8/09 02:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	58	1200	240	4700

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	99	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP2-6

Lab ID#: 0902107B-05A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020806	Date of Collection:	2/2/09	
Dil. Factor:	3.79	Date of Analysis:	2/8/09 03:24 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	95	8700	390	36000

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	96	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP2-6 Lab Duplicate

Lab ID#: 0902107B-05AA

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020807	Date of Collection:	2/2/09	
Dil. Factor:	3.79	Date of Analysis:	2/8/09 04:03 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	95	8700	390	36000

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	96	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP1-6 RESAMPLE

Lab ID#: 0902107B-06A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d021216	Date of Collection: 2/2/09
Dil. Factor:	1970	Date of Analysis: 2/12/09 09:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	49000	48000000	200000	200000000

Q = Exceeds Quality Control limits, due to matrix effects. Matrix effects confirmed by re-analysis.

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	211 Q	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: TRIP BLANK

Lab ID#: 0902107B-07A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/8/09 02:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	25	Not Detected	100	Not Detected

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	99	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0902107B-08A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/8/09 11:39 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	25	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	94	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0902107B-08B

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d021203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/12/09 10:38 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	25	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	92	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0902107B-09A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6020814	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/8/09 09:39 PM

Compound	%Recovery
TPH (Gasoline Range)	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	102	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0902107B-09B

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d021218	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/12/09 10:30 PM

Compound	%Recovery
TPH (Gasoline Range)	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	118	75-150



AN ENVIRONMENTAL ANALYTICAL LABORATORY

2/18/2009

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

Project Name: CVX 9-0917
Project #: 9-0917
Workorder #: 0902107A

Dear Ms. Charlotte Evans

The following report includes the data for the above referenced project for sample(s) received on 2/5/2009 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,

A handwritten signature in black ink that reads 'Kyle Vagadori'.

Kyle Vagadori
Project Manager



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0902107A

Work Order Summary

CLIENT: Ms. Charlotte Evans
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville, CA 94608
BILL TO: Ms. Charlotte Evans
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville, CA 94608
PHONE: 510-420-3351
FAX: 510-420-9170
DATE RECEIVED: 02/05/2009
DATE COMPLETED: 02/18/2009
P.O. #: 060057
PROJECT #: 9-0917 CVX 9-0917
CONTACT: Kyle Vagadori

Table with 5 columns: FRACTION #, NAME, TEST, RECEIPT VAC./PRES., FINAL PRESSURE. Rows include samples like VP1-6, VP5-5, VP4-5, VP2-6, VP2-6 Lab Duplicate, VP1-6 RESAMPLE, TRIP BLANK, Lab Blank, CCV, LCS.

CERTIFIED BY: [Signature]
Laboratory Director

DATE: 02/18/09

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
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: 07/01/08, Expiration date: 06/30/09
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# 0902107A

Seven 1 Liter Summa Canister (100% Certified) samples were received on February 05, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

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

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

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Daily CCV	<= 30% Difference	<= 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

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on samples VP1-6, VP1-6 DUPLICATE, VP5-5 and VP4-5 due to the presence of high level non-target species.

The recovery of surrogate 1,2-Dichloroethane-d4 in samples VP1-6, VP1-6 DUPLICATE, VP5-5 and VP4-5 was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

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 no 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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: VP1-6

Lab ID#: 0902107A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1200	300000	4000	960000
Toluene	1200	1400	4700	5400
Ethyl Benzene	1200	110000	5400	470000
m,p-Xylene	1200	19000	5400	84000

Client Sample ID: VP1-6 DUPLICATE

Lab ID#: 0902107A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1200	230000	3900	750000
Ethyl Benzene	1200	74000	5300	320000
m,p-Xylene	1200	12000	5300	54000

Client Sample ID: VP5-5

Lab ID#: 0902107A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	12	72	37	230
Toluene	12	93	43	350
m,p-Xylene	12	26	50	110

Client Sample ID: VP4-5

Lab ID#: 0902107A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	8.2	3.7	26
Ethyl Benzene	1.2	5.5	5.0	24
Toluene	1.2	31	4.4	120
m,p-Xylene	1.2	20	5.0	88
o-Xylene	1.2	7.8	5.0	34

Client Sample ID: VP2-6

Lab ID#: 0902107A-05A



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: VP2-6

Lab ID#: 0902107A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.9	87	6.0	280
Ethyl Benzene	1.9	20	8.2	89
Toluene	1.9	40	7.1	150
m,p-Xylene	1.9	43	8.2	180
o-Xylene	1.9	17	8.2	74

Client Sample ID: VP2-6 Lab Duplicate

Lab ID#: 0902107A-05AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	3.8	89	12	280
Ethyl Benzene	3.8	21	16	91
Toluene	3.8	42	14	160
m,p-Xylene	3.8	44	16	190
o-Xylene	3.8	17	16	75

Client Sample ID: VP1-6 RESAMPLE

Lab ID#: 0902107A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1200	260000	3900	840000
Ethyl Benzene	1200	93000	5300	400000
m,p-Xylene	1200	20000	5300	87000

Client Sample ID: TRIP BLANK

Lab ID#: 0902107A-07A

No Detections Were Found.



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP1-6

Lab ID#: 0902107A-01A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w020821	Date of Collection: 2/2/09
Dil. Factor:	248	Date of Analysis: 2/9/09 06:52 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1200	300000	4000	960000
Toluene	1200	1400	4700	5400
Ethyl Benzene	1200	110000	5400	470000
m,p-Xylene	1200	19000	5400	84000
o-Xylene	1200	Not Detected	5400	Not Detected
Methyl tert-butyl ether	1200	Not Detected	4500	Not Detected
Naphthalene	5000	Not Detected	26000	Not Detected

Q = Exceeds Quality Control limits.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	137 Q	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP1-6 DUPLICATE

Lab ID#: 0902107A-02A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w020823	Date of Collection: 2/2/09
Dil. Factor:	246	Date of Analysis: 2/9/09 07:49 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1200	230000	3900	750000
Toluene	1200	Not Detected	4600	Not Detected
Ethyl Benzene	1200	74000	5300	320000
m,p-Xylene	1200	12000	5300	54000
o-Xylene	1200	Not Detected	5300	Not Detected
Methyl tert-butyl ether	1200	Not Detected	4400	Not Detected
Naphthalene	4900	Not Detected	26000	Not Detected

Q = Exceeds Quality Control limits.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	138 Q	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP5-5

Lab ID#: 0902107A-03A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w020822	Date of Collection: 2/2/09
Dil. Factor:	2.30	Date of Analysis: 2/9/09 07:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	12	72	37	230
Toluene	12	93	43	350
Ethyl Benzene	12	Not Detected	50	Not Detected
m,p-Xylene	12	26	50	110
o-Xylene	12	Not Detected	50	Not Detected
Methyl tert-butyl ether	12	Not Detected	41	Not Detected
Naphthalene	46	Not Detected	240	Not Detected

Q = Exceeds Quality Control limits.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	131 Q	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP4-5

Lab ID#: 0902107A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x020913	Date of Collection:	2/2/09
Dil. Factor:	2.33	Date of Analysis:	2/9/09 06:15 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	8.2	3.7	26
Ethyl Benzene	1.2	5.5	5.0	24
Toluene	1.2	31	4.4	120
m,p-Xylene	1.2	20	5.0	88
o-Xylene	1.2	7.8	5.0	34
Methyl tert-butyl ether	1.2	Not Detected	4.2	Not Detected
Naphthalene	4.7	Not Detected	24	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	103	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP2-6

Lab ID#: 0902107A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x020915	Date of Collection:	2/2/09
Dil. Factor:	3.79	Date of Analysis:	2/9/09 07:39 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.9	87	6.0	280
Ethyl Benzene	1.9	20	8.2	89
Toluene	1.9	40	7.1	150
m,p-Xylene	1.9	43	8.2	180
o-Xylene	1.9	17	8.2	74
Methyl tert-butyl ether	1.9	Not Detected	6.8	Not Detected
Naphthalene	7.6	Not Detected	40	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP2-6 Lab Duplicate

Lab ID#: 0902107A-05AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x020914	Date of Collection: 2/2/09
Dil. Factor:	7.58	Date of Analysis: 2/9/09 06:53 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	3.8	89	12	280
Ethyl Benzene	3.8	21	16	91
Toluene	3.8	42	14	160
m,p-Xylene	3.8	44	16	190
o-Xylene	3.8	17	16	75
Methyl tert-butyl ether	3.8	Not Detected	14	Not Detected
Naphthalene	15	Not Detected	79	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP1-6 RESAMPLE

Lab ID#: 0902107A-06A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w020824	Date of Collection: 2/2/09
Dil. Factor:	246	Date of Analysis: 2/9/09 08:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1200	260000	3900	840000
Toluene	1200	Not Detected	4600	Not Detected
Ethyl Benzene	1200	93000	5300	400000
m,p-Xylene	1200	20000	5300	87000
o-Xylene	1200	Not Detected	5300	Not Detected
Methyl tert-butyl ether	1200	Not Detected	4400	Not Detected
Naphthalene	4900	Not Detected	26000	Not Detected

Q = Exceeds Quality Control limits.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	144 Q	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: TRIP BLANK

Lab ID#: 0902107A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x020916	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/9/09 08:16 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

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0902107A-08A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w020807	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/8/09 04:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	5.0	Not Detected	16	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
Naphthalene	20	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0902107A-08B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x020909	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/9/09 02:14 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

Container Type: NA - Not Applicable

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0902107A-09A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w020804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/8/09 03:11 PM

Compound	%Recovery
Benzene	95
Toluene	98
Ethyl Benzene	93
m,p-Xylene	94
o-Xylene	92
Methyl tert-butyl ether	126
Naphthalene	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0902107A-09B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x020905	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/9/09 11:04 AM

Compound	%Recovery
Benzene	88
Ethyl Benzene	89
Toluene	92
m,p-Xylene	88
o-Xylene	89
Methyl tert-butyl ether	72
Naphthalene	87

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0902107A-10A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w020806	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/8/09 04:01 PM

Compound	%Recovery
Benzene	92
Toluene	97
Ethyl Benzene	96
m,p-Xylene	94
o-Xylene	97
Methyl tert-butyl ether	79
Naphthalene	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	104	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0902107A-10B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x020906	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/9/09 12:01 PM

Compound	%Recovery
Benzene	87
Ethyl Benzene	84
Toluene	96
m,p-Xylene	85
o-Xylene	87
Methyl tert-butyl ether	69
Naphthalene	84

Container Type: NA - Not Applicable

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

2/25/2009

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

Project Name: CVX 9-0917
Project #: 9-0917
Workorder #: 0902107CR1

Dear Ms. Charlotte Evans

The following report includes the data for the above referenced project for sample(s) received on 2/5/2009 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,

A handwritten signature in black ink that reads 'Kyle Vagadori'.

Kyle Vagadori
Project Manager



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0902107CR1

Work Order Summary

CLIENT:	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	BILL TO:	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-3351	P.O. #	060057
FAX:	510-420-9170	PROJECT #	9-0917 CVX 9-0917
DATE RECEIVED:	02/05/2009	CONTACT:	Kyle Vagadori
DATE COMPLETED:	02/19/2009		
DATE REISSUED:	02/25/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP1-6	Modified ASTM D-1946	5.6 "Hg	15 psi
02A	VP1-6 DUPLICATE	Modified ASTM D-1946	5.4 "Hg	15 psi
03A	VP5-5	Modified ASTM D-1946	3.6 "Hg	15 psi
03AA	VP5-5 Lab Duplicate	Modified ASTM D-1946	3.6 "Hg	15 psi
04A	VP4-5	Modified ASTM D-1946	4.0 "Hg	15 psi
05A	VP2-6	Modified ASTM D-1946	14.0 "Hg	15 psi
06A	VP1-6 RESAMPLE	Modified ASTM D-1946	5.4 "Hg	15 psi
07A	TRIP BLANK	Modified ASTM D-1946	28.2 "Hg	15 psi
08A	Lab Blank	Modified ASTM D-1946	NA	NA
08B	Lab Blank	Modified ASTM D-1946	NA	NA
08C	Lab Blank	Modified ASTM D-1946	NA	NA
08D	Lab Blank	Modified ASTM D-1946	NA	NA
09A	LCS	Modified ASTM D-1946	NA	NA
09B	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY: 

DATE: 02/25/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
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: 07/01/08, Expiration date: 06/30/09

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# 0902107CR1

Seven 1 Liter Summa Canister (100% Certified) samples were received on February 05, 2009. 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.

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

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

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

THE WORKORDER WAS REISSUED ON FEBRUARY 25, 2009 TO CORRECT THE RESULT FOR HELIUM IN SAMPLE VP2-6. PREVIOUSLY REPORTED CONCENTRATION WAS BELOW THE REPORTING LIMIT.

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: VP1-6

Lab ID#: 0902107CR1-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	5.0
Methane	0.00025	34
Carbon Dioxide	0.025	5.9
Helium	0.12	0.35

Client Sample ID: VP1-6 DUPLICATE

Lab ID#: 0902107CR1-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	4.9
Methane	0.00025	33
Carbon Dioxide	0.025	5.8
Helium	0.12	0.34

Client Sample ID: VP5-5

Lab ID#: 0902107CR1-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.7
Methane	0.00023	5.2
Carbon Dioxide	0.023	2.2

Client Sample ID: VP5-5 Lab Duplicate

Lab ID#: 0902107CR1-03AA

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.7
Methane	0.00023	5.2
Carbon Dioxide	0.023	2.2

Client Sample ID: VP4-5

Lab ID#: 0902107CR1-04A

Compound	Rpt. Limit (%)	Amount (%)
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AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: VP4-5

Lab ID#: 0902107CR1-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	9.3
Methane	0.00023	0.00030
Carbon Dioxide	0.023	8.1

Client Sample ID: VP2-6

Lab ID#: 0902107CR1-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.88	6.5
Methane	0.00088	0.012
Carbon Dioxide	0.088	6.3

Client Sample ID: VP1-6 RESAMPLE

Lab ID#: 0902107CR1-06A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	2.9
Methane	0.00025	57
Carbon Dioxide	0.025	6.7

Client Sample ID: TRIP BLANK

Lab ID#: 0902107CR1-07A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.15



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP1-6

Lab ID#: 0902107CR1-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021122	Date of Collection:	2/2/09
Dil. Factor:	2.48	Date of Analysis:	2/11/09 03:37 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	5.0
Methane	0.00025	34
Carbon Dioxide	0.025	5.9
Helium	0.12	0.35

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP1-6 DUPLICATE

Lab ID#: 0902107CR1-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021123	Date of Collection:	2/2/09
Dil. Factor:	2.46	Date of Analysis:	2/11/09 04:00 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	4.9
Methane	0.00025	33
Carbon Dioxide	0.025	5.8
Helium	0.12	0.34

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP5-5

Lab ID#: 0902107CR1-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021124	Date of Collection:	2/2/09
Dil. Factor:	2.30	Date of Analysis:	2/11/09 04:26 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.7
Methane	0.00023	5.2
Carbon Dioxide	0.023	2.2
Helium	0.12	Not Detected

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP5-5 Lab Duplicate

Lab ID#: 0902107CR1-03AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021125	Date of Collection:	2/2/09
Dil. Factor:	2.30	Date of Analysis:	2/11/09 05:03 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.7
Methane	0.00023	5.2
Carbon Dioxide	0.023	2.2
Helium	0.12	Not Detected

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP4-5

Lab ID#: 0902107CR1-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021126	Date of Collection:	2/2/09
Dil. Factor:	2.33	Date of Analysis:	2/11/09 05:25 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	9.3
Methane	0.00023	0.00030
Carbon Dioxide	0.023	8.1
Helium	0.12	Not Detected

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP2-6

Lab ID#: 0902107CR1-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021821	Date of Collection:	2/2/09
Dil. Factor:	8.83	Date of Analysis:	2/18/09 04:59 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.88	6.5
Methane	0.00088	0.012
Carbon Dioxide	0.088	6.3
Helium	0.44	Not Detected

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP1-6 RESAMPLE

Lab ID#: 0902107CR1-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021128	Date of Collection:	2/2/09
Dil. Factor:	2.46	Date of Analysis:	2/11/09 06:18 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	2.9
Methane	0.00025	57
Carbon Dioxide	0.025	6.7
Helium	0.12	Not Detected

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: TRIP BLANK

Lab ID#: 0902107CR1-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021130	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/11/09 07:03 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	0.15
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected
Helium	0.050	Not Detected

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0902107CR1-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021104	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/10/09 09:56 PM

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

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0902107CR1-08B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021103b	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/10/09 09:17 PM

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

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0902107CR1-08C

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021805	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/18/09 08:33 AM

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

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0902107CR1-08D

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021804b	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/18/09 08:07 AM

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

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0902107CR1-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021132	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/11/09 07:47 PM

Compound	%Recovery
Oxygen	100
Methane	100
Carbon Dioxide	100
Helium	106

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0902107CR1-09B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9021832	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/18/09 09:53 PM

Compound	%Recovery
Oxygen	100
Methane	102
Carbon Dioxide	100
Helium	105

Container Type: NA - Not Applicable