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**Alameda County
Environmental Health**

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

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

I have reviewed the attached report dated June 29, 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 SAMPLING REPORT AND WORK PLAN FOR SUB-SLAB VAPOR PROBES

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

Prepared For:

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

JUNE 29, 2009

REF. NO. 060057 (5)

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**Prepared by:
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SOIL VAPOR SAMPLING REPORT AND WORK PLAN FOR SUB-SLAB VAPOR PROBES

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

Charlotte Evans



Brandon S. Wilken PG #7564

JUNE 29, 2009

REF. NO. 060057 (5)

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1.0 INTRODUCTION

1.1 GENERAL

Conestoga-Rovers and Associates (CRA) is submitting this report, on behalf of Chevron Environmental Management Company (Chevron), to document the second round of soil vapor probe sampling at the site referenced. CRA had installed and sampled the probes at the request of Alameda County Environmental Health (ACEH) to evaluate the potential for a vapor intrusion pathway onsite from soil gas to indoor air.

On May 14, 2009, CRA re-sampled soil vapor probes VP1, VP2, VP4 and V5 to confirm elevated concentrations of hydrocarbons and methane in soil vapor within specified areas onsite. The site description, background, soil vapor probe sampling results, and recommendations are presented below.

As a result of the re-sampling of the vapor probes, CRA is also including a work plan for installation of sub-slab vapor probes in the onsite building to further evaluate the potential for a vapor intrusion pathway onsite from soil gas to indoor air.

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 in Appendix A.

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 SAMPLING

Samples from the vapor points VP1, VP2, VP4 and VP5 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 Department of Toxic Substance Control (DTSC) *Advisory-Active Soil Gas Investigations* guidance document, dated January 28, 2003, 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 not detected in any of the soil vapor samples.

3.0 LABORATORY ANALYSES

Laboratory Analyses of Vapor Samples: Vapor samples were 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
- TPHg, BTEX, MTBE, naphthalene and a full scan of constituents by EPA Method TO-15 (GC/MS)
- O₂, CO₂, CH₄, N₂ and Helium by ASTM D-1946 (GC/TCD)
- Mercaptans by ASTM D-5504 (VP1 and VP5 only)

Table 1 summarizes the cumulative soil vapor analytical data. Appendix B presents the laboratory analytical reports for soil vapor.

4.0 HYDROCARBON DISTRIBUTION IN SOIL VAPOR

Probe VP1 had hydrocarbon concentrations above ESLs¹ with maximum concentrations of 200,000,000 micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) TPHg, 1,500,000 $\mu\text{g}/\text{m}^3$ benzene, and 66,000 $\mu\text{g}/\text{m}^3$ xylenes. No toluene, ethylbenzene, or MTBE was detected above shallow soil vapor ESLs. These concentrations were confirmed by both a duplicate sample, and a second sample collected from probe VP1. Hydrocarbon concentrations remain elevated in both probes VP1 and VP5. The soil and groundwater data collected to date does not correspond to the elevated petroleum hydrocarbon concentrations detected in soil vapor.

Elevated methane concentrations were again detected in samples from probes VP1 and VP5, with concentrations ranging up to 26 percent. Methane concentrations have decreased in probe VP1, but remained stable in probe VP5. Both probes 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. We are still evaluating what other constituents may be present in the sewer lines and if those compounds could be contributing to the elevated petroleum hydrocarbon detections.

Hydrogen sulfide was detected in probes VP1 and VP5 at a maximum concentration of 1,400 parts-per-billion-by-volume. Hydrogen sulfide is a gas that can be derived in sewers from the decay of organic matter. Therefore, it appears that the sewer lines may be contributing to the compounds detected in the soil vapor samples.

¹ 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

5.0 RECOMMENDATIONS

Based on the chromatograms reviewed for probe VP1 by Air Toxics, LTD., 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 probe VP1 TPHg pattern to the gasoline standard, the compounds detected in probe VP1 are lighter than gasoline. From this analysis, it appears that the elevated vapor concentrations may be from a non-gasoline source.

We have continued contact with Chevron Environmental Technology Company to discuss the vapor results for probe 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.

At this time, we are still evaluating the source of the elevated hydrocarbon concentrations in soil vapor in probes VP1 and VP5. However, due to the elevated concentrations of benzene near the station building and the potential for a complete pathway from soil gas to indoor air, we recommend the installation of sub-slab vapor points inside the building to determine if vapor intrusion is a potential risk to onsite workers. Presented below is a work plan to assess potential vapor intrusion into the onsite building.

6.0 WORK PLAN FOR SUB-SLAB PROBE INSTALLATION

CRA proposes to install two sub-slab vapor probes inside the station building to determine if a complete pathway exists for the migration of soil vapor into indoor air. Samples will be collected from the sub-slab probes located inside the station building, in the breathing zone above the probes, and from outside ambient air. Results of the sub-slab samples will be compared to the indoor air and ambient air results to determine if a complete pathway exists for vapor intrusion into the onsite building.

Sub-slab Probe Locations: CRA proposes to install sub-slab vapor probes SSVP1 and SSVP2. All work will be conducted according to the DTSC's December 2004 *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Revised February 2005)*. Prior to drilling, utilities entering the building will be identified and marked, and any internal locations where utilities penetrate the slab (e.g. furnace, water heater, circuit breaker box, and water or sewer lines) will be determined. Locations where utilities penetrate the slab will be avoided. At least one of the sub-slab probes will be installed near the center of the building's foundation. Proposed vapor probe locations are illustrated on Figure 3.

Sub-slab Probe Installation: Installation of the probes are based on the U.S. Environmental Protection Agency's *Standard Operating Procedure (SOP) for Installation of Sub-Slab Vapor Probes and Sampling Using EPA Method TO-15 to Support Vapor Intrusion Investigations (Draft)*. A rotary hammer drill will be used to create a 2-inch diameter and 1-inch deep "outer" hole that partially penetrates the slab. A small portable vacuum cleaner will be used to remove cuttings from the hole. Removal of cuttings in this manner in a non-penetrated slab will not compromise soil vapor samples because of lack of pneumatic communication between sub-slab material and the vacuum cleaner.

The rotary hammer drill will then be used to create a smaller diameter "inner" hole through the remainder of the slab into sub-slab material. Drilling into sub-slab material will create an open cavity for the probes, which will prevent obstructions by small pieces of gravel.

Once the thickness of the slab is known, stainless steel or brass tubing will be cut to ensure that the probe tubing does not reach the bottom of the hole to avoid obstruction of the probe with sub-slab material. Sub-slab vapor probes will be constructed using stainless steel or brass tubing and stainless-steel or brass compression fittings. Stainless-steel or brass materials will be used to ensure that construction materials are not a source of VOCs.

The sub-slab vapor probe will be set in the hole. The top of the probe will be completed flush with the slab and have recessed stainless steel or brass plugs to prevent interference with day-to-day use of the building. A quick-drying Portland cement slurry will be pushed into the annular space between the probe and outside of the “outer” hole. The cement will be allowed to cure for at least 72 hours prior to sampling.

Sub-slab Probe Sampling: Vapor samples will be collected at least 72 hours after the placement of the probes using 1-liter Summa™ canisters in a manifold system, connected to each sub-slab probe. While sampling, the vacuum of the Summa™ canister will be used to draw the soil vapor through the flow controller until a negative pressure of approximately 5-inches of mercury is observed on the vacuum gauge. In accordance with the DTSC *Advisory-Active Soil Gas Investigations* guidance document, dated January 28, 2003, leak testing using laboratory grade helium will be performed during sampling of the sub-slab probes only. Additional samples will be taken in the breathing zone above the sub-slab probes (indoor air samples) and outside ambient air samples. After sampling, the Summa™ canisters will be packaged and sent to the Air Toxics laboratory under chain-of-custody for analysis.

Vapor Chemical Analysis: Vapor samples will be analyzed for the following:

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

Reporting: Upon completion of field activities and review of the analytical results, CRA will prepare an investigation report that, at a minimum, will contain:

- Descriptions of the installation and sampling methods
- Tabulated vapor analytical results
- Analytical reports and chain-of-custody forms
- Comparison of sub-slab vapor results with those of indoor air and outside ambient air results
- Conclusions and recommendations

TABLES

TABLE 1

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

Sample ID	Date	Depth (fbg)	TPHg (by	TPHg (by	Benzene	Toluene	Ethyl-	Total	MTBE	Napthalene	Helium	Oxygen	Methane	CO ₂	N ₂	Hydorgen Sulfide ³	Carbonyl Sulfide	Thiophene	
			TO-3)	TO-15)			benzene	Xylenes ¹											Concentrations reported in micrograms per cubic meter (µg/m ³)
ESL ²	--	--	29,000	29,000	280	180,000	580,000	58,000	31,000	240	--	--	--	--	--	--	--	--	
2009 Soil Vapor Probe Installation																			
VP1	02/02/09	6 - 6.5	120,000,000	--	960,000	5,400	470,000	84,000	<4,500	<26,000	0.35	5.0	34	5.9	--	--	--	--	
VP1	05/14/09	6 - 6.5	190,000,000	140,000,000	1,500,000	<13,000	98,000	55,000	<12,000	<70,000	<0.34	1.4	26	12	57	6.1	15	8.0	
VP1 DUPLICATE	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 DUPLICATE	05/14/09	6 - 6.5	200,000,000	160,000,000	1,500,000	<12,000	95,000	59,000	<12,000	<69,000	<0.33	0.96	26	12	58	--	--	--	
VP1 RESAMPLE	02/02/09	6 - 6.5	200,000,000	--	840,000	<4,600	400,000	87,000	<4,400	<26,000	<0.12	2.9	57	6.7	--	--	--	--	
VP1 RESAMPLE	05/14/09	6 - 6.5	120,000,000	110,000,000	980,000	<8,400	180,000	66,000	<8,000	<47,000	<0.22	11	23	7.5	56	--	--	--	
VP2	02/02/09	6 - 6.5	36,000	--	280	89	150	254	<6.8	<40	<0.44	6.5	0.012	6.3	--	--	--	--	
VP2	LAB DUPLICATE		36,000	--	280	91	160	265	<14	<79	--	--	--	--	--	--	--	--	
VP2	05/14/09	6 - 6.5	17,000	13,000	150	400	54	490	23	82J	<0.22	1.4	0.0051	20	78	--	--	--	
VP4	02/02/09	5 - 5.5	4,700	--	26	24	120	122	<4.2	<24	<0.12	9.3	0.00030	8.1	--	--	--	--	
VP4	05/14/09	5 - 5.5	1,800	1,100	9	<4.5	<5.2	10	<4.3	<25UJ	<0.12	5.9	0.00037	11	83	--	--	--	
VP5	02/02/09	5 - 5.5	890,000	--	230	350	<50	110	<41	<240	<0.12	1.7	5.2	2.2	--	--	--	--	
VP5	LAB DUPLICATE		--	--	--	--	--	--	--	--	<0.12	1.7	5.2	2.2	--	--	--	--	
VP5	05/14/09	5 - 5.5	1,100,000	1,200,000	1,400	<530	<610	<610	<510	<3,000	<0.11	1.4	6.0	4.7	88	1,300	<40	<40	

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

Hydoren sulfide, Carbonyl sulfide and thiophene by ASTM D-5504

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 in commercial/industrial land 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

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

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

J = Estimated value due to bias in the CCV

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

FIGURES

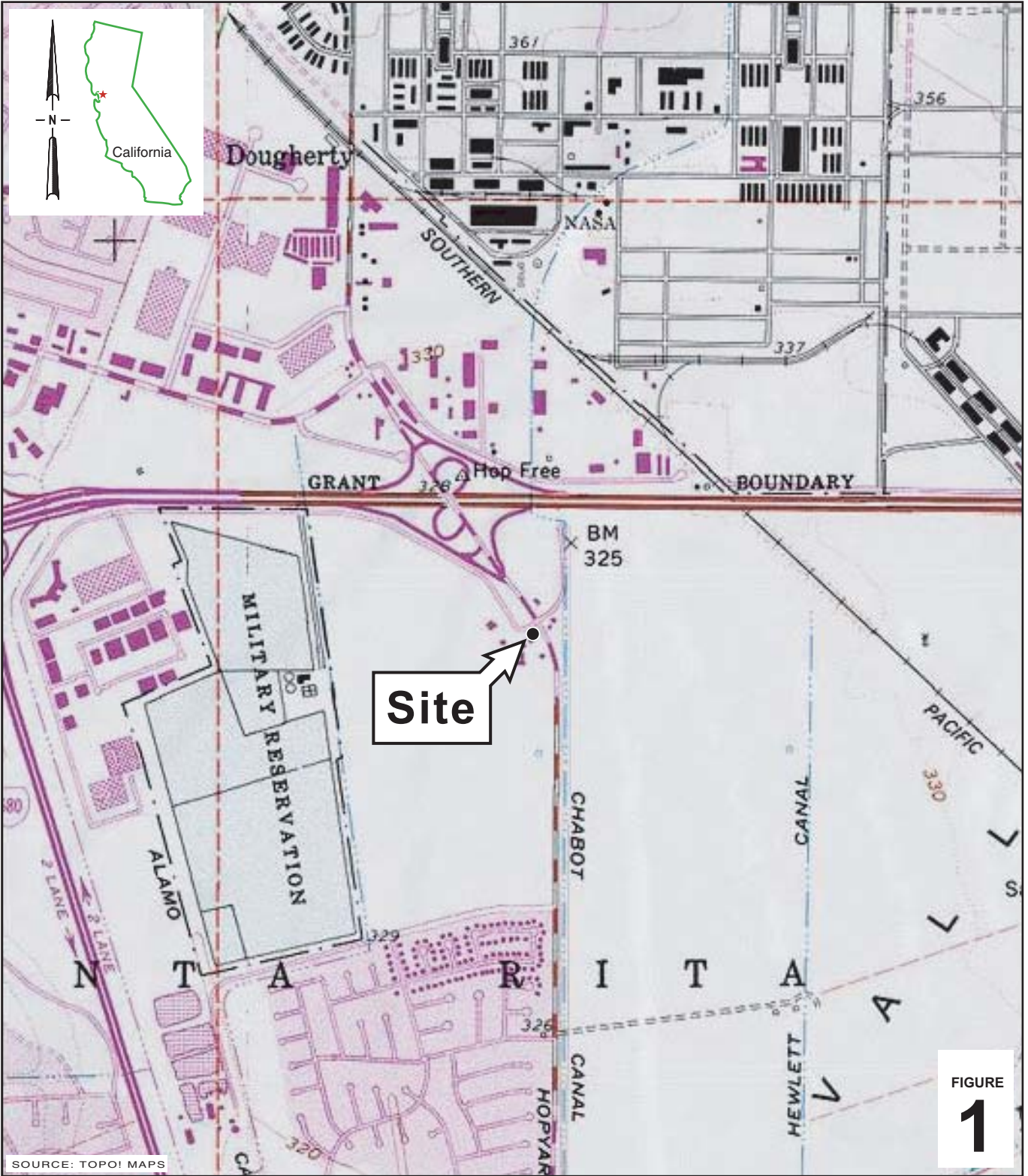


FIGURE
1

I:\Chevron\0600--\060057_9-0917_Pleasanton\060057-FIGURES\060057_VICINITY-MAP.AI

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

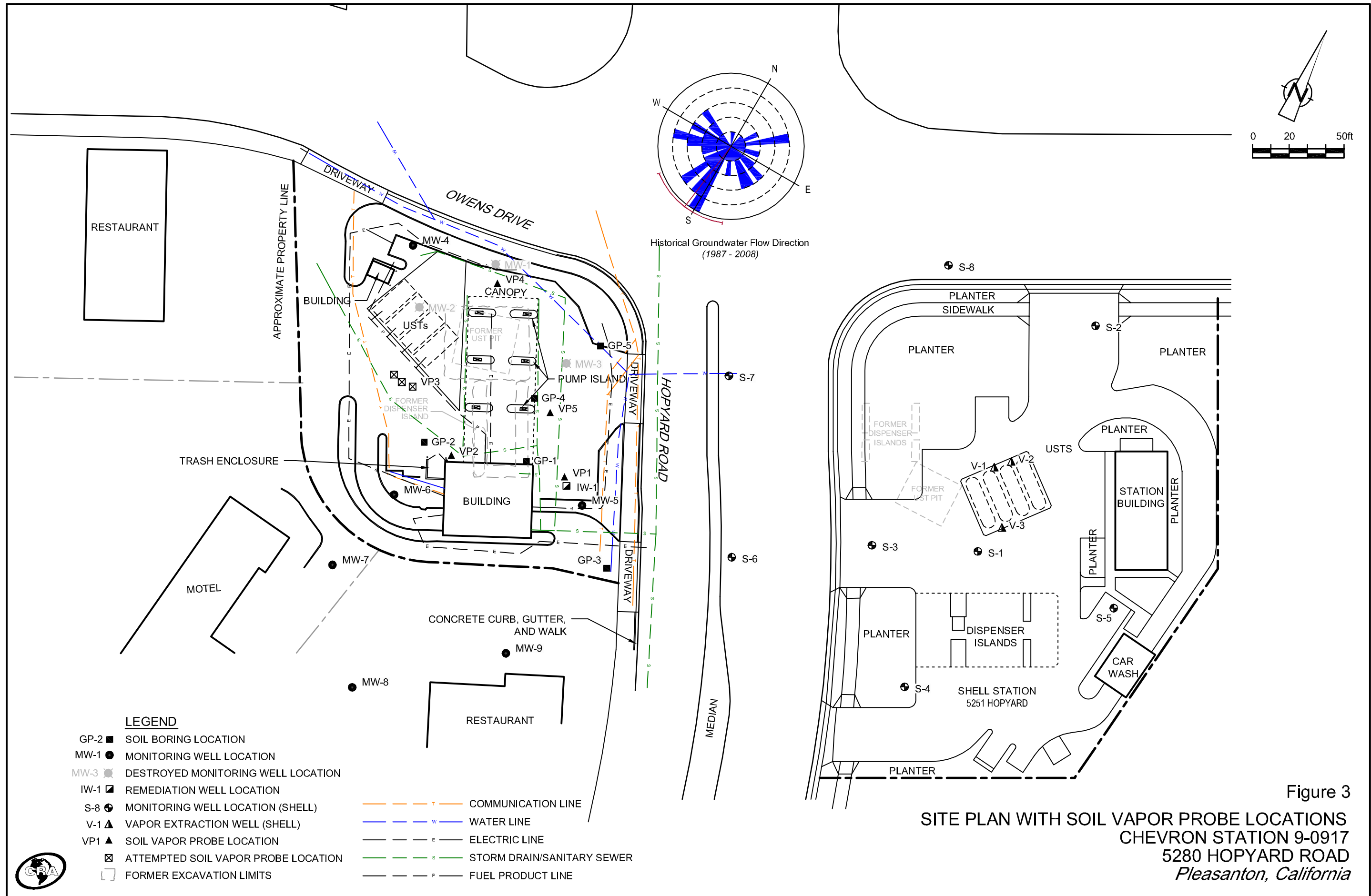
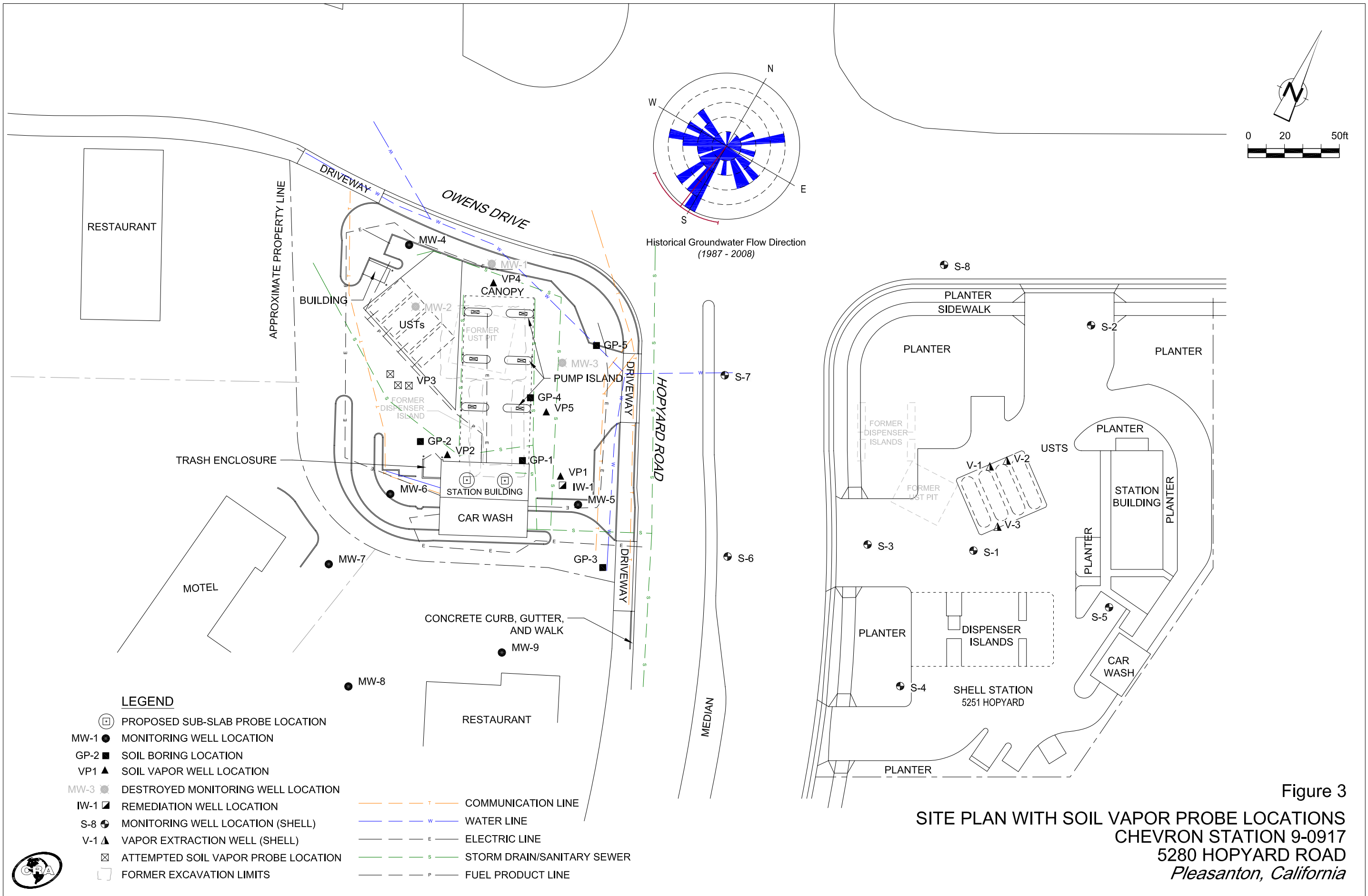


Figure 3
 SITE PLAN WITH SOIL VAPOR PROBE LOCATIONS
 CHEVRON STATION 9-0917
 5280 HOPYARD ROAD
 Pleasanton, California



APPENDIX A

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 ($\mu\text{g/L}$) 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 well 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 well MW-5 at 12,000 micrograms per liter ($\mu\text{g/L}$) and 4,000 $\mu\text{g/L}$, 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 $\mu\text{g/L}$ TPHg and 1,000 $\mu\text{g/L}$ 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 methyl tertiary-butyl ether (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: On March 26, 1999, G-R installed oxygen releasing compound (ORC) socks in wells MW-5 and MW-6 to increase the dissolved oxygen concentrations in groundwater to enhance biodegradation of the hydrocarbon plume. ORC in this application had an estimated time release of approximately six months. A significant decrease in dissolved hydrocarbon concentrations was observed in wells MW-5 and MW-6 after installation of the ORC. 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. During the next five quarters DO concentrations stabilized around 3.6 milligrams per liter (mg/L) and 4.3 mg/L in wells MW-5 and MW-6, respectively. 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*.

2009 Soil Vapor Probe Installations: Conestoga-Rovers & Associates (CRA) installed four soil vapor probes onsite to evaluate the potential for a vapor intrusion pathway onsite from soil gas to indoor air. TPHg in soil was only detected in VP1 at 100 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. 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 shallow soil vapor ESLs. Elevated methane concentrations were detected in samples from VP1 and VP5, with a maximum concentration of 57 percent. Both VP1 and VP5 are adjacent to sewer lines that exit the station building. Details of this investigation can be found in CRA's *Soil Vapor Probe Installation and Sampling Report*, dated April 19, 2009.

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

APPENDIX B

LABORATORY ANALYTICAL REPORTS - SOIL VAPOR

5/26/2009

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

Project Name: Chevron 9-0917
Project #: 060057
Workorder #: 0905442B

Dear Ms. Charlotte Evans

The following report includes the data for the above referenced project for sample(s) received on 5/19/2009 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,



Kyle Vagadori
Project Manager

WORK ORDER #: 0905442B

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. #	40-4021781
FAX:	510-420-9170	PROJECT #	060057 Chevron 9-0917
DATE RECEIVED:	05/19/2009	CONTACT:	Kyle Vagadori
DATE COMPLETED:	05/26/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-1-6	Modified TO-3	21.0 "Hg	15 psi
02A	VP-1-6 DUP	Modified TO-3	20.8 "Hg	15 psi
03A	VP-1-6 Second	Modified TO-3	16.4 "Hg	15 psi
04A	VP-2-6	Modified TO-3	16.4 "Hg	15 psi
05A	VP-4-5	Modified TO-3	4.8 "Hg	15 psi
06A	VP-5-5	Modified TO-3	3.2 "Hg	15 psi
07A	Trip Blank	Modified TO-3	28.4 "Hg	15 psi
08A	Lab Blank	Modified TO-3	NA	NA
09A	LCS	Modified TO-3	NA	NA

CERTIFIED BY: 

DATE: 05/26/09

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# 0905442B

Seven 1 Liter Summa Canister (100% Certified) samples were received on May 19, 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) ppbv result to ug/m³.

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 <=/= 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

The Chain of Custody (COC) information for sample VP-4-5 did not match the entry on the sample tag with regard to sample identification. The information on the COC was used to process and report the sample.

Samples VP-1-6, VP-1-6 DUP, VP-1-6 Second and VP-2-6 were received with significant vacuum remaining in the canister. The residual canister vacuum resulted in elevated reporting limits.

Analytical Notes

The recovery of surrogate Fluorobenzene in samples VP-1-6, VP-1-6 DUP and VP-1-6 Second 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

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

Client Sample ID: VP-1-6

Lab ID#: 0905442B-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	67000	48000000	280000	190000000

Client Sample ID: VP-1-6 DUP

Lab ID#: 0905442B-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	66000	49000000	270000	200000000

Client Sample ID: VP-1-6 Second

Lab ID#: 0905442B-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	44000	30000000	180000	120000000

Client Sample ID: VP-2-6

Lab ID#: 0905442B-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	110	4200	460	17000

Client Sample ID: VP-4-5

Lab ID#: 0905442B-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	60	440	240	1800

Client Sample ID: VP-5-5

Lab ID#: 0905442B-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	560	270000	2300	1100000



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

Client Sample ID: Trip Blank

Lab ID#: 0905442B-07A

No Detections Were Found.



Client Sample ID: VP-1-6

Lab ID#: 0905442B-01A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6052216	Date of Collection: 5/14/09 11:08:00 AM
Dil. Factor:	2690	Date of Analysis: 5/22/09 05:00 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	67000	48000000	280000	190000000

Q = Exceeds Quality Control limits, possibly due to matrix effects.

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	204 Q	75-150



Client Sample ID: VP-1-6 DUP

Lab ID#: 0905442B-02A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6052217	Date of Collection: 5/14/09 11:08:00 AM
Dil. Factor:	2640	Date of Analysis: 5/22/09 05:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	66000	49000000	270000	200000000

Q = Exceeds Quality Control limits, possibly due to matrix effects.

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	210 Q	75-150



Client Sample ID: VP-1-6 Second

Lab ID#: 0905442B-03A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6052218	Date of Collection: 5/14/09 12:02:00 PM
Dil. Factor:	1780	Date of Analysis: 5/22/09 06:31 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	44000	30000000	180000	120000000

Q = Exceeds Quality Control limits, possibly due to matrix effects.

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	196 Q	75-150

Client Sample ID: VP-2-6

Lab ID#: 0905442B-04A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6052219	Date of Collection: 5/14/09 12:41:00 PM
Dil. Factor:	4.46	Date of Analysis: 5/22/09 07:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	110	4200	460	17000

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	90	75-150

Client Sample ID: VP-4-5

Lab ID#: 0905442B-05A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6052220	Date of Collection: 5/14/09 1:28:00 PM
Dil. Factor:	2.40	Date of Analysis: 5/22/09 07:47 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	60	440	240	1800

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	84	75-150



Client Sample ID: VP-5-5

Lab ID#: 0905442B-06A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6052223	Date of Collection: 5/14/09 2:17:00 PM
Dil. Factor:	22.6	Date of Analysis: 5/22/09 09:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	560	270000	2300	1100000

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	88	75-150

Client Sample ID: Trip Blank

Lab ID#: 0905442B-07A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6052222	Date of Collection: 5/14/09 3:30:00 PM
Dil. Factor:	1.00	Date of Analysis: 5/22/09 09:01 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)	84	75-150



Client Sample ID: Lab Blank

Lab ID#: 0905442B-08A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6052206	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/22/09 10:06 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)	85	75-150

Client Sample ID: LCS

Lab ID#: 0905442B-09A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6052205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/22/09 09:32 AM

Compound	%Recovery
TPH (Gasoline Range)	81

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	95	75-150

6/2/2009

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

Project Name: Chevron 9-0917
Project #: 060057
Workorder #: 0905442A

Dear Ms. Charlotte Evans

The following report includes the data for the above referenced project for sample(s) received on 5/19/2009 at Air Toxics Ltd.

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

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

Regards,




Kyle Vagadori
Project Manager

WORK ORDER #: 0905442A

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. #	40-4021781
FAX:	510-420-9170	PROJECT #	060057 Chevron 9-0917
DATE RECEIVED:	05/19/2009	CONTACT:	Kyle Vagadori
DATE COMPLETED:	05/29/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-1-6	Modified TO-15/TICs	21.0 "Hg	15 psi
02A	VP-1-6 DUP	Modified TO-15/TICs	20.8 "Hg	15 psi
03A	VP-1-6 Second	Modified TO-15/TICs	16.4 "Hg	15 psi
04A	VP-2-6	Modified TO-15/TICs	16.4 "Hg	15 psi
05A	VP-4-5	Modified TO-15/TICs	4.8 "Hg	15 psi
06A	VP-5-5	Modified TO-15/TICs	3.2 "Hg	15 psi
07A	Trip Blank	Modified TO-15/TICs	28.4 "Hg	15 psi
08A	Lab Blank	Modified TO-15/TICs	NA	NA
08B	Lab Blank	Modified TO-15/TICs	NA	NA
09A	CCV	Modified TO-15/TICs	NA	NA
09B	CCV	Modified TO-15/TICs	NA	NA
10A	LCS	Modified TO-15/TICs	NA	NA
10B	LCS	Modified TO-15/TICs	NA	NA

CERTIFIED BY: 

DATE: 06/02/09

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-15
Conestoga-Rovers Associates (CRA)
Workorder# 0905442A**

Seven 1 Liter Summa Canister (100% Certified) samples were received on May 19, 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

The Chain of Custody (COC) information for sample VP-4-5 did not match the entry on the sample tag with regard to sample identification. The information on the COC was used to process and report the sample.

Samples VP-1-6, VP-1-6 DUP, VP-1-6 Second and VP-2-6 were received with significant vacuum remaining in the canister. The residual canister vacuum resulted in elevated reporting limits.

Analytical Notes

The reported result for 4-Ethyltoluene in sample VP-2-6 may be biased high due to co-elution with a non target compound with similar characteristic ions. Both the primary and secondary ions for 4-Ethyltoluene exhibited potential interference.

The result for TPH gasoline was reported as not-detected in sample Trip Blank since the chromatographic profile was not consistent with a gasoline pattern.

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

The TIC result at retention time of 5.168 minutes for sample VP-2-6 may be biased low due to incomplete integration of the peak at the beginning of the analytical run.

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

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

Client Sample ID: VP-1-6

Lab ID#: 0905442A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	3400	870000	12000	3000000
Cyclohexane	3400	430000	12000	1500000
Benzene	3400	460000	11000	1500000
Heptane	3400	410000	14000	1700000
Ethyl Benzene	3400	22000	15000	98000
m,p-Xylene	3400	13000	15000	55000
4-Ethyltoluene	3400	14000	16000	68000
1,2,4-Trimethylbenzene	3400	3800	16000	19000
TPH ref. to Gasoline (MW=100)	67000	3500000	280000	14000000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	50%	480000 N J
Butane, 2-methyl-	78-78-4	91%	10000000 N J
Pentane	109-66-0	90%	6100000 N J
2-Butene, 2-methyl-	513-35-9	72%	480000 N J
Butane, 2,2-dimethyl-	75-83-2	83%	760000 N J
Pentane, 2-methyl-	107-83-5	91%	12000000 N J
Pentane, 2,2,3-trimethyl-	564-02-3	56%	6100000 N J
2-Pentene, 4-methyl-, (E)-	674-76-0	90%	420000 N J
Pentane, 2,2-dimethyl-	590-35-2	72%	370000 N J
Pentane, 2,4-dimethyl-	108-08-7	91%	1700000 N J
Cyclopentane, methyl-	96-37-7	83%	5400000 N J
Hexane, 2-methyl-	591-76-4	94%	3600000 N J
Pentane, 2,3-dimethyl-	565-59-3	78%	3400000 N J
Hexane, 3-methyl-	589-34-4	87%	4300000 N J
2-Heptene, (E)-	14686-13-6	53%	550000 N J
Cyclohexane, methyl-	108-87-2	95%	1600000 N J
Pentane, 2,3,4-trimethyl-	565-75-3	83%	640000 N J
Pentane, 2,3,3-trimethyl-	560-21-4	90%	740000 N J
Hexane, 2,5-dimethyl-	592-13-2	40%	390000 N J
Hexane, 2,2,4-trimethyl-	16747-26-5	72%	390000 N J

Client Sample ID: VP-1-6 DUP

Lab ID#: 0905442A-02A

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

Client Sample ID: VP-1-6 DUP

Lab ID#: 0905442A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	3300	890000	12000	3200000
Cyclohexane	3300	450000	11000	1500000
Benzene	3300	480000	10000	1500000
Heptane	3300	420000	14000	1700000
Ethyl Benzene	3300	22000	14000	95000
m,p-Xylene	3300	14000	14000	59000
4-Ethyltoluene	3300	14000	16000	68000
1,2,4-Trimethylbenzene	3300	4100	16000	20000
TPH ref. to Gasoline (MW=100)	66000	38000000	270000	160000000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	53%	470000 N J
Butane, 2-methyl-	78-78-4	91%	10000000 N J
Pentane	109-66-0	90%	5700000 N J
Cyclopropane, 1,1-dimethyl-	1630-94-0	87%	450000 N J
Butane, 2,2-dimethyl-	75-83-2	78%	730000 N J
Pentane, 2-methyl-	107-83-5	91%	12000000 N J
Pentane, 3-methyl-	96-14-0	86%	5900000 N J
2-Pentene, 3-methyl-, (E)-	616-12-6	90%	410000 N J
Pentane, 2,4-dimethyl-	108-08-7	91%	1600000 N J
Cyclopentane, methyl-	96-37-7	90%	5200000 N J
Hexane, 2-methyl-	591-76-4	93%	3700000 N J
Pentane, 2,3-dimethyl-	565-59-3	56%	3400000 N J
Hexane, 3-methyl-	589-34-4	87%	4400000 N J
Cyclopentane, 1,2-dimethyl-	2452-99-5	43%	540000 N J
Cyclohexane, methyl-	108-87-2	95%	1500000 N J
Pentane, 2,3,4-trimethyl-	565-75-3	83%	640000 N J
Pentane, 2,3,3-trimethyl-	560-21-4	90%	850000 N J
Hexane, 2,5-dimethyl-	592-13-2	43%	460000 N J
Heptane, 3-methyl-	589-81-1	72%	410000 N J
Hexane, 2,2,4-trimethyl-	16747-26-5	78%	410000 N J

Client Sample ID: VP-1-6 Second

Lab ID#: 0905442A-03A

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

Client Sample ID: VP-1-6 Second

Lab ID#: 0905442A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	2200	690000	7800	2400000
Cyclohexane	2200	300000	7700	1000000
2,2,4-Trimethylpentane	2200	820000	10000	3800000
Benzene	2200	310000	7100	980000
Heptane	2200	310000	9100	1300000
Ethyl Benzene	2200	41000	9700	180000
m,p-Xylene	2200	15000	9700	66000
Propylbenzene	2200	2900	11000	14000
4-Ethyltoluene	2200	12000	11000	59000
1,2,4-Trimethylbenzene	2200	4600	11000	23000
TPH ref. to Gasoline (MW=100)	45000	26000000	180000	110000000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	64%	170000 N J
Butane, 2-methyl-	78-78-4	91%	3300000 N J
Pentane	109-66-0	90%	1700000 N J
Cyclopropane, 1,1-dimethyl-	1630-94-0	72%	130000 N J
Butane, 2,2-dimethyl-	75-83-2	83%	190000 N J
Pentane, 2-methyl-	107-83-5	91%	3700000 N J
Pentane, 3-methyl-	96-14-0	86%	1800000 N J
Pentane, 2,4-dimethyl-	108-08-7	91%	490000 N J
Cyclopentane, methyl-	96-37-7	90%	1500000 N J
Hexane, 2-methyl-	591-76-4	93%	1000000 N J
Pentane, 2,3-dimethyl-	565-59-3	39%	1100000 N J
Hexane, 3-methyl-	589-34-4	87%	1300000 N J
Heptane, 2,2,4,6,6-pentamethyl-	13475-82-6	59%	2300000 N J
2-Heptene, (E)-	14686-13-6	42%	410000 N J
2-Hexene, 3-methyl-, (Z)-	10574-36-4	49%	100000 N J
Cyclohexane, methyl-	108-87-2	95%	1200000 N J
Cyclopentane, 1,2,4-trimethyl-, (1.alpha)	16883-48-0	78%	120000 N J
Pentane, 2,3,4-trimethyl-	565-75-3	83%	450000 N J
Heptane, 3-methyl-	589-81-1	53%	300000 N J
Hexane, 2,2,4-trimethyl-	16747-26-5	78%	290000 N J

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

Client Sample ID: VP-2-6

Lab ID#: 0905442A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	2.2	47	7.1	150
Toluene	2.2	100	8.4	400
Ethyl Benzene	2.2	12	9.7	54
m,p-Xylene	2.2	110	9.7	490
o-Xylene	2.2	42	9.7	180
1,3,5-Trimethylbenzene	2.2	8.4	11	41
1,2,4-Trimethylbenzene	2.2	23	11	110
Hexane	2.2	46	7.8	160
Cyclohexane	2.2	55	7.7	190
Heptane	2.2	64	9.1	260
Acetone	8.9	24	21	57
Carbon Disulfide	2.2	6.0	6.9	18
2-Butanone (Methyl Ethyl Ketone)	2.2	4.3	6.6	13
4-Ethyltoluene	2.2	15	11	74
Methyl tert-butyl ether	2.2	6.4	8.0	23
2,2,4-Trimethylpentane	2.2	61	10	290
Naphthalene	8.9	16 J	47	82 J
TPH ref. to Gasoline (MW=100)	45	3100	180	13000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
1-Propene, 1,1,2,3,3,3-hexafluoro-	116-15-4	43%	9100 N J
Butane	106-97-8	45%	110 N J
Propane, 2,2-dimethyl-	463-82-1	9.0%	440 N J
Butane, 2-methyl-	78-78-4	80%	210 N J
Pentane	109-66-0	90%	69 N J
Butane, 2,2-dimethyl-	75-83-2	83%	230 N J
Pentane, 2-methyl-	107-83-5	87%	260 N J
Pentane, 3-methyl-	96-14-0	50%	130 N J
Cyclobutane, ethyl-	4806-61-5	72%	170 N J
Hexane, 2-methyl-	591-76-4	90%	92 N J
Pentane, 3-ethyl-	617-78-7	78%	140 N J
Cyclohexane, methyl-	108-87-2	97%	330 N J
Cyclopentane, ethyl-	1640-89-7	56%	63 N J
1-Butanol, 3-methyl-, carbonate (2:1)	2050-95-5	64%	78 N J
Heptane, 3,4-dimethyl-	922-28-1	59%	180 N J
Heptane, 3-methyl-	589-81-1	58%	77 N J

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

Client Sample ID: VP-2-6

Lab ID#: 0905442A-04A

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Cyclohexane, 1,3-dimethyl-, cis-	638-04-0	94%	100 N J
Decane, 2,2,5-trimethyl-	62237-96-1	50%	58 N J
Decane, 2,3,5-trimethyl-	62238-11-3	64%	82 N J
Hexane, 2,2,3-trimethyl-	16747-25-4	64%	110 N J

Client Sample ID: VP-4-5

Lab ID#: 0905442A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.2	2.7	3.8	8.7
m,p-Xylene	1.2	2.3	5.2	10
1,2,4-Trimethylbenzene	1.2	1.4	5.9	7.0
Hexane	1.2	6.0	4.2	21
Cyclohexane	1.2	3.1	4.1	11
Heptane	1.2	3.1	4.9	13
2,2,4-Trimethylpentane	1.2	17	5.6	80
TPH ref. to Gasoline (MW=100)	24	280	98	1100

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane, 2-methyl-	78-78-4	80%	74 N J
Pentane	109-66-0	90%	19 N J
Pentane, 2-methyl-	107-83-5	91%	63 N J
Pentane, 3-methyl-	96-14-0	86%	30 N J
Pentane, 2,4-dimethyl-	108-08-7	83%	8.3 N J
Cyclobutane, ethyl-	4806-61-5	64%	26 N J
Hexane, 2-methyl-	591-76-4	91%	13 N J
Pentane, 2,3-dimethyl-	565-59-3	38%	16 N J
Hexane, 3-methyl-	589-34-4	9.0%	19 N J
Cyclohexane, methyl-	108-87-2	94%	22 N J
Pentane, 2,3,4-trimethyl-	565-75-3	72%	15 N J
Pentane, 2,3,3-trimethyl-	560-21-4	78%	20 N J
Hexane, 2,2,4-trimethyl-	16747-26-5	78%	6.7 N J
Nonane	111-84-2	38%	7.0 N J
Heptane, 2,2,3,4,6,6-hexamethyl-	62108-32-1	38%	7.3 N J

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

Client Sample ID: VP-4-5

Lab ID#: 0905442A-05A

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Decane, 2-methyl-	6975-98-0	64%	6.5 N J
Ethanone, 1-phenyl-	98-86-2	97%	10 N J
Ethanone, 1-(methylphenyl)-	26444-19-9	64%	6.3 N J

Client Sample ID: VP-5-5

Lab ID#: 0905442A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	140	870	500	3100
Cyclohexane	140	420	480	1400
2,2,4-Trimethylpentane	140	75000	660	350000
Benzene	140	440	450	1400
Heptane	140	300	580	1200
TPH ref. to Gasoline (MW=100)	2800	300000	12000	1200000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Propane, 2,2-dimethyl-	463-82-1	9.0%	1400 N J
Pentane	109-66-0	90%	2200 N J
Butane, 2,2-dimethyl-	75-83-2	90%	26000 N J
Butane, 2,3-dimethyl-	79-29-8	78%	15000 N J
Pentane, 3-methyl-	96-14-0	37%	3400 N J
Pentane, 2,2-dimethyl-	590-35-2	83%	3200 N J
Pentane, 2,4-dimethyl-	108-08-7	91%	32000 N J
Butane, 2,2,3-trimethyl-	464-06-2	64%	12000 N J
Pentane, 3,3-dimethyl-	562-49-2	90%	8000 N J
Hexane, 3-methyl-	589-34-4	43%	2300 N J
Hexane, 2,5-dimethyl-	592-13-2	58%	4700 N J
Heptane, 2,2,4,6,6-pentamethyl-	13475-82-6	36%	5200 N J
Pentane, 2,3,4-trimethyl-	565-75-3	91%	6500 N J
Pentane, 2,3,3-trimethyl-	560-21-4	90%	42000 N J
Hexane, 2,2,4-trimethyl-	16747-26-5	90%	7100 N J

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

Client Sample ID: Trip Blank

Lab ID#: 0905442A-07A

No Detections Were Found.

Client Sample ID: VP-1-6

Lab ID#: 0905442A-01A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052810	Date of Collection: 5/14/09 11:08:00 AM
Dil. Factor:	673	Date of Analysis: 5/28/09 03:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3400	Not Detected	17000	Not Detected
Freon 114	3400	Not Detected	24000	Not Detected
Chloromethane	13000	Not Detected	28000	Not Detected
Vinyl Chloride	3400	Not Detected	8600	Not Detected
1,3-Butadiene	3400	Not Detected	7400	Not Detected
Bromomethane	3400	Not Detected	13000	Not Detected
Chloroethane	3400	Not Detected	8900	Not Detected
Freon 11	3400	Not Detected	19000	Not Detected
Ethanol	13000	Not Detected	25000	Not Detected
Freon 113	3400	Not Detected	26000	Not Detected
1,1-Dichloroethene	3400	Not Detected	13000	Not Detected
Acetone	13000	Not Detected	32000	Not Detected
2-Propanol	13000	Not Detected	33000	Not Detected
Carbon Disulfide	3400	Not Detected	10000	Not Detected
3-Chloropropene	13000	Not Detected	42000	Not Detected
Methylene Chloride	3400	Not Detected	12000	Not Detected
Methyl tert-butyl ether	3400	Not Detected	12000	Not Detected
trans-1,2-Dichloroethene	3400	Not Detected	13000	Not Detected
Hexane	3400	870000	12000	3000000
1,1-Dichloroethane	3400	Not Detected	14000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3400	Not Detected	9900	Not Detected
cis-1,2-Dichloroethene	3400	Not Detected	13000	Not Detected
Tetrahydrofuran	3400	Not Detected	9900	Not Detected
Chloroform	3400	Not Detected	16000	Not Detected
1,1,1-Trichloroethane	3400	Not Detected	18000	Not Detected
Cyclohexane	3400	430000	12000	1500000
Carbon Tetrachloride	3400	Not Detected	21000	Not Detected
2,2,4-Trimethylpentane	3400	Not Detected	16000	Not Detected
Benzene	3400	460000	11000	1500000
1,2-Dichloroethane	3400	Not Detected	14000	Not Detected
Heptane	3400	410000	14000	1700000
Trichloroethene	3400	Not Detected	18000	Not Detected
1,2-Dichloropropane	3400	Not Detected	16000	Not Detected
1,4-Dioxane	13000	Not Detected	48000	Not Detected
Bromodichloromethane	3400	Not Detected	22000	Not Detected
cis-1,3-Dichloropropene	3400	Not Detected	15000	Not Detected
4-Methyl-2-pentanone	3400	Not Detected	14000	Not Detected
Toluene	3400	Not Detected	13000	Not Detected
trans-1,3-Dichloropropene	3400	Not Detected	15000	Not Detected

Client Sample ID: VP-1-6

Lab ID#: 0905442A-01A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052810	Date of Collection: 5/14/09 11:08:00 AM
Dil. Factor:	673	Date of Analysis: 5/28/09 03:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	3400	Not Detected	18000	Not Detected
Tetrachloroethene	3400	Not Detected	23000	Not Detected
2-Hexanone	13000	Not Detected	55000	Not Detected
Dibromochloromethane	3400	Not Detected	29000	Not Detected
1,2-Dibromoethane (EDB)	3400	Not Detected	26000	Not Detected
Chlorobenzene	3400	Not Detected	15000	Not Detected
Ethyl Benzene	3400	22000	15000	98000
m,p-Xylene	3400	13000	15000	55000
o-Xylene	3400	Not Detected	15000	Not Detected
Styrene	3400	Not Detected	14000	Not Detected
Bromoform	3400	Not Detected	35000	Not Detected
Cumene	3400	Not Detected	16000	Not Detected
1,1,2,2-Tetrachloroethane	3400	Not Detected	23000	Not Detected
Propylbenzene	3400	Not Detected	16000	Not Detected
4-Ethyltoluene	3400	14000	16000	68000
1,3,5-Trimethylbenzene	3400	Not Detected	16000	Not Detected
1,2,4-Trimethylbenzene	3400	3800	16000	19000
1,3-Dichlorobenzene	3400	Not Detected	20000	Not Detected
1,4-Dichlorobenzene	3400	Not Detected	20000	Not Detected
alpha-Chlorotoluene	3400	Not Detected	17000	Not Detected
1,2-Dichlorobenzene	3400	Not Detected	20000	Not Detected
1,2,4-Trichlorobenzene	13000	Not Detected	100000	Not Detected
Hexachlorobutadiene	13000	Not Detected	140000	Not Detected
Naphthalene	13000	Not Detected	70000	Not Detected
TPH ref. to Gasoline (MW=100)	67000	35000000	280000	140000000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Butane	106-97-8	50%	480000 N J
Butane, 2-methyl-	78-78-4	91%	10000000 N J
Pentane	109-66-0	90%	6100000 N J
2-Butene, 2-methyl-	513-35-9	72%	480000 N J
Butane, 2,2-dimethyl-	75-83-2	83%	760000 N J
Pentane, 2-methyl-	107-83-5	91%	12000000 N J
Pentane, 2,2,3-trimethyl-	564-02-3	56%	6100000 N J
2-Pentene, 4-methyl-, (E)-	674-76-0	90%	420000 N J
Pentane, 2,2-dimethyl-	590-35-2	72%	370000 N J
Pentane, 2,4-dimethyl-	108-08-7	91%	1700000 N J

Client Sample ID: VP-1-6

Lab ID#: 0905442A-01A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052810	Date of Collection: 5/14/09 11:08:00 AM
Dil. Factor:	673	Date of Analysis: 5/28/09 03:20 PM

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Cyclopentane, methyl-	96-37-7	83%	5400000 N J
Hexane, 2-methyl-	591-76-4	94%	3600000 N J
Pentane, 2,3-dimethyl-	565-59-3	78%	3400000 N J
Hexane, 3-methyl-	589-34-4	87%	4300000 N J
2-Heptene, (E)-	14686-13-6	53%	550000 N J
Cyclohexane, methyl-	108-87-2	95%	1600000 N J
Pentane, 2,3,4-trimethyl-	565-75-3	83%	640000 N J
Pentane, 2,3,3-trimethyl-	560-21-4	90%	740000 N J
Hexane, 2,5-dimethyl-	592-13-2	40%	390000 N J
Hexane, 2,2,4-trimethyl-	16747-26-5	72%	390000 N J

%Aromatic: 0.40%

%Aliphatic: 99.6%

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130



Client Sample ID: VP-1-6 DUP

Lab ID#: 0905442A-02A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052811	Date of Collection: 5/14/09 11:08:00 AM
Dil. Factor:	659	Date of Analysis: 5/28/09 03:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3300	Not Detected	16000	Not Detected
Freon 114	3300	Not Detected	23000	Not Detected
Chloromethane	13000	Not Detected	27000	Not Detected
Vinyl Chloride	3300	Not Detected	8400	Not Detected
1,3-Butadiene	3300	Not Detected	7300	Not Detected
Bromomethane	3300	Not Detected	13000	Not Detected
Chloroethane	3300	Not Detected	8700	Not Detected
Freon 11	3300	Not Detected	18000	Not Detected
Ethanol	13000	Not Detected	25000	Not Detected
Freon 113	3300	Not Detected	25000	Not Detected
1,1-Dichloroethene	3300	Not Detected	13000	Not Detected
Acetone	13000	Not Detected	31000	Not Detected
2-Propanol	13000	Not Detected	32000	Not Detected
Carbon Disulfide	3300	Not Detected	10000	Not Detected
3-Chloropropene	13000	Not Detected	41000	Not Detected
Methylene Chloride	3300	Not Detected	11000	Not Detected
Methyl tert-butyl ether	3300	Not Detected	12000	Not Detected
trans-1,2-Dichloroethene	3300	Not Detected	13000	Not Detected
Hexane	3300	890000	12000	3200000
1,1-Dichloroethane	3300	Not Detected	13000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3300	Not Detected	9700	Not Detected
cis-1,2-Dichloroethene	3300	Not Detected	13000	Not Detected
Tetrahydrofuran	3300	Not Detected	9700	Not Detected
Chloroform	3300	Not Detected	16000	Not Detected
1,1,1-Trichloroethane	3300	Not Detected	18000	Not Detected
Cyclohexane	3300	450000	11000	1500000
Carbon Tetrachloride	3300	Not Detected	21000	Not Detected
2,2,4-Trimethylpentane	3300	Not Detected	15000	Not Detected
Benzene	3300	480000	10000	1500000
1,2-Dichloroethane	3300	Not Detected	13000	Not Detected
Heptane	3300	420000	14000	1700000
Trichloroethene	3300	Not Detected	18000	Not Detected
1,2-Dichloropropane	3300	Not Detected	15000	Not Detected
1,4-Dioxane	13000	Not Detected	47000	Not Detected
Bromodichloromethane	3300	Not Detected	22000	Not Detected
cis-1,3-Dichloropropene	3300	Not Detected	15000	Not Detected
4-Methyl-2-pentanone	3300	Not Detected	13000	Not Detected
Toluene	3300	Not Detected	12000	Not Detected
trans-1,3-Dichloropropene	3300	Not Detected	15000	Not Detected

Client Sample ID: VP-1-6 DUP

Lab ID#: 0905442A-02A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052811	Date of Collection: 5/14/09 11:08:00 AM
Dil. Factor:	659	Date of Analysis: 5/28/09 03:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	3300	Not Detected	18000	Not Detected
Tetrachloroethene	3300	Not Detected	22000	Not Detected
2-Hexanone	13000	Not Detected	54000	Not Detected
Dibromochloromethane	3300	Not Detected	28000	Not Detected
1,2-Dibromoethane (EDB)	3300	Not Detected	25000	Not Detected
Chlorobenzene	3300	Not Detected	15000	Not Detected
Ethyl Benzene	3300	22000	14000	95000
m,p-Xylene	3300	14000	14000	59000
o-Xylene	3300	Not Detected	14000	Not Detected
Styrene	3300	Not Detected	14000	Not Detected
Bromoform	3300	Not Detected	34000	Not Detected
Cumene	3300	Not Detected	16000	Not Detected
1,1,2,2-Tetrachloroethane	3300	Not Detected	23000	Not Detected
Propylbenzene	3300	Not Detected	16000	Not Detected
4-Ethyltoluene	3300	14000	16000	68000
1,3,5-Trimethylbenzene	3300	Not Detected	16000	Not Detected
1,2,4-Trimethylbenzene	3300	4100	16000	20000
1,3-Dichlorobenzene	3300	Not Detected	20000	Not Detected
1,4-Dichlorobenzene	3300	Not Detected	20000	Not Detected
alpha-Chlorotoluene	3300	Not Detected	17000	Not Detected
1,2-Dichlorobenzene	3300	Not Detected	20000	Not Detected
1,2,4-Trichlorobenzene	13000	Not Detected	98000	Not Detected
Hexachlorobutadiene	13000	Not Detected	140000	Not Detected
Naphthalene	13000	Not Detected	69000	Not Detected
TPH ref. to Gasoline (MW=100)	66000	38000000	270000	160000000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Butane	106-97-8	53%	470000 N J
Butane, 2-methyl-	78-78-4	91%	10000000 N J
Pentane	109-66-0	90%	5700000 N J
Cyclopropane, 1,1-dimethyl-	1630-94-0	87%	450000 N J
Butane, 2,2-dimethyl-	75-83-2	78%	730000 N J
Pentane, 2-methyl-	107-83-5	91%	12000000 N J
Pentane, 3-methyl-	96-14-0	86%	5900000 N J
2-Pentene, 3-methyl-, (E)-	616-12-6	90%	410000 N J
Pentane, 2,4-dimethyl-	108-08-7	91%	1600000 N J
Cyclopentane, methyl-	96-37-7	90%	5200000 N J

Client Sample ID: VP-1-6 DUP

Lab ID#: 0905442A-02A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052811	Date of Collection: 5/14/09 11:08:00 AM
Dil. Factor:	659	Date of Analysis: 5/28/09 03:49 PM

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Hexane, 2-methyl-	591-76-4	93%	3700000 N J
Pentane, 2,3-dimethyl-	565-59-3	56%	3400000 N J
Hexane, 3-methyl-	589-34-4	87%	4400000 N J
Cyclopentane, 1,2-dimethyl-	2452-99-5	43%	540000 N J
Cyclohexane, methyl-	108-87-2	95%	1500000 N J
Pentane, 2,3,4-trimethyl-	565-75-3	83%	640000 N J
Pentane, 2,3,3-trimethyl-	560-21-4	90%	850000 N J
Hexane, 2,5-dimethyl-	592-13-2	43%	460000 N J
Heptane, 3-methyl-	589-81-1	72%	410000 N J
Hexane, 2,2,4-trimethyl-	16747-26-5	78%	410000 N J

%Aromatic: 0.40%

%Aliphatic: 99.6%

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: VP-1-6 Second

Lab ID#: 0905442A-03A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052812	Date of Collection: 5/14/09 12:02:00 PM
Dil. Factor:	446	Date of Analysis: 5/28/09 04:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	2200	Not Detected	11000	Not Detected
Freon 114	2200	Not Detected	16000	Not Detected
Chloromethane	8900	Not Detected	18000	Not Detected
Vinyl Chloride	2200	Not Detected	5700	Not Detected
1,3-Butadiene	2200	Not Detected	4900	Not Detected
Bromomethane	2200	Not Detected	8700	Not Detected
Chloroethane	2200	Not Detected	5900	Not Detected
Freon 11	2200	Not Detected	12000	Not Detected
Ethanol	8900	Not Detected	17000	Not Detected
Freon 113	2200	Not Detected	17000	Not Detected
1,1-Dichloroethene	2200	Not Detected	8800	Not Detected
Acetone	8900	Not Detected	21000	Not Detected
2-Propanol	8900	Not Detected	22000	Not Detected
Carbon Disulfide	2200	Not Detected	6900	Not Detected
3-Chloropropene	8900	Not Detected	28000	Not Detected
Methylene Chloride	2200	Not Detected	7700	Not Detected
Methyl tert-butyl ether	2200	Not Detected	8000	Not Detected
trans-1,2-Dichloroethene	2200	Not Detected	8800	Not Detected
Hexane	2200	690000	7800	2400000
1,1-Dichloroethane	2200	Not Detected	9000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2200	Not Detected	6600	Not Detected
cis-1,2-Dichloroethene	2200	Not Detected	8800	Not Detected
Tetrahydrofuran	2200	Not Detected	6600	Not Detected
Chloroform	2200	Not Detected	11000	Not Detected
1,1,1-Trichloroethane	2200	Not Detected	12000	Not Detected
Cyclohexane	2200	300000	7700	1000000
Carbon Tetrachloride	2200	Not Detected	14000	Not Detected
2,2,4-Trimethylpentane	2200	820000	10000	3800000
Benzene	2200	310000	7100	980000
1,2-Dichloroethane	2200	Not Detected	9000	Not Detected
Heptane	2200	310000	9100	1300000
Trichloroethene	2200	Not Detected	12000	Not Detected
1,2-Dichloropropane	2200	Not Detected	10000	Not Detected
1,4-Dioxane	8900	Not Detected	32000	Not Detected
Bromodichloromethane	2200	Not Detected	15000	Not Detected
cis-1,3-Dichloropropene	2200	Not Detected	10000	Not Detected
4-Methyl-2-pentanone	2200	Not Detected	9100	Not Detected
Toluene	2200	Not Detected	8400	Not Detected
trans-1,3-Dichloropropene	2200	Not Detected	10000	Not Detected

Client Sample ID: VP-1-6 Second

Lab ID#: 0905442A-03A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052812	Date of Collection: 5/14/09 12:02:00 PM
Dil. Factor:	446	Date of Analysis: 5/28/09 04:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	2200	Not Detected	12000	Not Detected
Tetrachloroethene	2200	Not Detected	15000	Not Detected
2-Hexanone	8900	Not Detected	36000	Not Detected
Dibromochloromethane	2200	Not Detected	19000	Not Detected
1,2-Dibromoethane (EDB)	2200	Not Detected	17000	Not Detected
Chlorobenzene	2200	Not Detected	10000	Not Detected
Ethyl Benzene	2200	41000	9700	180000
m,p-Xylene	2200	15000	9700	66000
o-Xylene	2200	Not Detected	9700	Not Detected
Styrene	2200	Not Detected	9500	Not Detected
Bromoform	2200	Not Detected	23000	Not Detected
Cumene	2200	Not Detected	11000	Not Detected
1,1,2,2-Tetrachloroethane	2200	Not Detected	15000	Not Detected
Propylbenzene	2200	2900	11000	14000
4-Ethyltoluene	2200	12000	11000	59000
1,3,5-Trimethylbenzene	2200	Not Detected	11000	Not Detected
1,2,4-Trimethylbenzene	2200	4600	11000	23000
1,3-Dichlorobenzene	2200	Not Detected	13000	Not Detected
1,4-Dichlorobenzene	2200	Not Detected	13000	Not Detected
alpha-Chlorotoluene	2200	Not Detected	12000	Not Detected
1,2-Dichlorobenzene	2200	Not Detected	13000	Not Detected
1,2,4-Trichlorobenzene	8900	Not Detected	66000	Not Detected
Hexachlorobutadiene	8900	Not Detected	95000	Not Detected
Naphthalene	8900	Not Detected	47000	Not Detected
TPH ref. to Gasoline (MW=100)	45000	26000000	180000	110000000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Butane	106-97-8	64%	170000 N J
Butane, 2-methyl-	78-78-4	91%	3300000 N J
Pentane	109-66-0	90%	1700000 N J
Cyclopropane, 1,1-dimethyl-	1630-94-0	72%	130000 N J
Butane, 2,2-dimethyl-	75-83-2	83%	190000 N J
Pentane, 2-methyl-	107-83-5	91%	3700000 N J
Pentane, 3-methyl-	96-14-0	86%	1800000 N J
Pentane, 2,4-dimethyl-	108-08-7	91%	490000 N J
Cyclopentane, methyl-	96-37-7	90%	1500000 N J
Hexane, 2-methyl-	591-76-4	93%	1000000 N J

Client Sample ID: VP-1-6 Second

Lab ID#: 0905442A-03A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052812	Date of Collection: 5/14/09 12:02:00 PM
Dil. Factor:	446	Date of Analysis: 5/28/09 04:13 PM

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Pentane, 2,3-dimethyl-	565-59-3	39%	1100000 N J
Hexane, 3-methyl-	589-34-4	87%	1300000 N J
Heptane, 2,2,4,6,6-pentamethyl-	13475-82-6	59%	2300000 N J
2-Heptene, (E)-	14686-13-6	42%	410000 N J
2-Hexene, 3-methyl-, (Z)-	10574-36-4	49%	100000 N J
Cyclohexane, methyl-	108-87-2	95%	1200000 N J
Cyclopentane, 1,2,4-trimethyl-, (1.alpha	16883-48-0	78%	120000 N J
Pentane, 2,3,4-trimethyl-	565-75-3	83%	450000 N J
Heptane, 3-methyl-	589-81-1	53%	300000 N J
Hexane, 2,2,4-trimethyl-	16747-26-5	78%	290000 N J

%Aromatic: 0.7%

%Aliphatic: 99.3%

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: VP-2-6

Lab ID#: 0905442A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052713	Date of Collection: 5/14/09 12:41:00 PM
Dil. Factor:	4.46	Date of Analysis: 5/27/09 02:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	2.2	Not Detected	11	Not Detected
Freon 114	2.2	Not Detected	16	Not Detected
Vinyl Chloride	2.2	Not Detected	5.7	Not Detected
Bromomethane	2.2	Not Detected	8.7	Not Detected
Chloroethane	2.2	Not Detected	5.9	Not Detected
Freon 11	2.2	Not Detected	12	Not Detected
1,1-Dichloroethene	2.2	Not Detected	8.8	Not Detected
Freon 113	2.2	Not Detected	17	Not Detected
Methylene Chloride	2.2	Not Detected	7.7	Not Detected
1,1-Dichloroethane	2.2	Not Detected	9.0	Not Detected
cis-1,2-Dichloroethene	2.2	Not Detected	8.8	Not Detected
Chloroform	2.2	Not Detected	11	Not Detected
1,1,1-Trichloroethane	2.2	Not Detected	12	Not Detected
Carbon Tetrachloride	2.2	Not Detected	14	Not Detected
Benzene	2.2	47	7.1	150
1,2-Dichloroethane	2.2	Not Detected	9.0	Not Detected
Trichloroethene	2.2	Not Detected	12	Not Detected
1,2-Dichloropropane	2.2	Not Detected	10	Not Detected
cis-1,3-Dichloropropene	2.2	Not Detected	10	Not Detected
Toluene	2.2	100	8.4	400
trans-1,3-Dichloropropene	2.2	Not Detected	10	Not Detected
1,1,2-Trichloroethane	2.2	Not Detected	12	Not Detected
Tetrachloroethene	2.2	Not Detected	15	Not Detected
1,2-Dibromoethane (EDB)	2.2	Not Detected	17	Not Detected
Chlorobenzene	2.2	Not Detected	10	Not Detected
Ethyl Benzene	2.2	12	9.7	54
m,p-Xylene	2.2	110	9.7	490
o-Xylene	2.2	42	9.7	180
Styrene	2.2	Not Detected	9.5	Not Detected
1,1,2,2-Tetrachloroethane	2.2	Not Detected	15	Not Detected
1,3,5-Trimethylbenzene	2.2	8.4	11	41
1,2,4-Trimethylbenzene	2.2	23	11	110
1,3-Dichlorobenzene	2.2	Not Detected	13	Not Detected
1,4-Dichlorobenzene	2.2	Not Detected	13	Not Detected
alpha-Chlorotoluene	2.2	Not Detected	12	Not Detected
1,2-Dichlorobenzene	2.2	Not Detected	13	Not Detected
1,3-Butadiene	2.2	Not Detected	4.9	Not Detected
Hexane	2.2	46	7.8	160
Cyclohexane	2.2	55	7.7	190

Client Sample ID: VP-2-6

Lab ID#: 0905442A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052713	Date of Collection: 5/14/09 12:41:00 PM
Dil. Factor:	4.46	Date of Analysis: 5/27/09 02:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Heptane	2.2	64	9.1	260
Bromodichloromethane	2.2	Not Detected	15	Not Detected
Dibromochloromethane	2.2	Not Detected	19	Not Detected
Cumene	2.2	Not Detected	11	Not Detected
Propylbenzene	2.2	Not Detected	11	Not Detected
Chloromethane	8.9	Not Detected	18	Not Detected
1,2,4-Trichlorobenzene	8.9	Not Detected	66	Not Detected
Hexachlorobutadiene	8.9	Not Detected	95	Not Detected
Acetone	8.9	24	21	57
Carbon Disulfide	2.2	6.0	6.9	18
2-Propanol	8.9	Not Detected	22	Not Detected
trans-1,2-Dichloroethene	2.2	Not Detected	8.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.2	4.3	6.6	13
Tetrahydrofuran	2.2	Not Detected	6.6	Not Detected
1,4-Dioxane	8.9	Not Detected	32	Not Detected
4-Methyl-2-pentanone	2.2	Not Detected	9.1	Not Detected
2-Hexanone	8.9	Not Detected	36	Not Detected
Bromoform	2.2	Not Detected	23	Not Detected
4-Ethyltoluene	2.2	15	11	74
Ethanol	8.9	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.2	6.4	8.0	23
3-Chloropropene	8.9	Not Detected	28	Not Detected
2,2,4-Trimethylpentane	2.2	61	10	290
Naphthalene	8.9	16 J	47	82 J
TPH ref. to Gasoline (MW=100)	45	3100	180	13000

J = Estimated value due to bias in the CCV.

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
1-Propene, 1,1,2,3,3,3-hexafluoro-	116-15-4	43%	9100 N J
Butane	106-97-8	45%	110 N J
Propane, 2,2-dimethyl-	463-82-1	9.0%	440 N J
Butane, 2-methyl-	78-78-4	80%	210 N J
Pentane	109-66-0	90%	69 N J
Butane, 2,2-dimethyl-	75-83-2	83%	230 N J
Pentane, 2-methyl-	107-83-5	87%	260 N J
Pentane, 3-methyl-	96-14-0	50%	130 N J
Cyclobutane, ethyl-	4806-61-5	72%	170 N J

Client Sample ID: VP-2-6

Lab ID#: 0905442A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052713	Date of Collection: 5/14/09 12:41:00 PM
Dil. Factor:	4.46	Date of Analysis: 5/27/09 02:40 PM

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Hexane, 2-methyl-	591-76-4	90%	92 N J
Pentane, 3-ethyl-	617-78-7	78%	140 N J
Cyclohexane, methyl-	108-87-2	97%	330 N J
Cyclopentane, ethyl-	1640-89-7	56%	63 N J
1-Butanol, 3-methyl-, carbonate (2:1)	2050-95-5	64%	78 N J
Heptane, 3,4-dimethyl-	922-28-1	59%	180 N J
Heptane, 3-methyl-	589-81-1	58%	77 N J
Cyclohexane, 1,3-dimethyl-, cis-	638-04-0	94%	100 N J
Decane, 2,2,5-trimethyl-	62237-96-1	50%	58 N J
Decane, 2,3,5-trimethyl-	62238-11-3	64%	82 N J
Hexane, 2,2,3-trimethyl-	16747-25-4	64%	110 N J

%Aromatic: 22%

%Aliphatic: 78%

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

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: VP-4-5

Lab ID#: 0905442A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052712	Date of Collection: 5/14/09 1:28:00 PM
Dil. Factor:	2.41	Date of Analysis: 5/27/09 02:01 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Freon 114	1.2	Not Detected	8.4	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
Bromomethane	1.2	Not Detected	4.7	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.8	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Freon 113	1.2	Not Detected	9.2	Not Detected
Methylene Chloride	1.2	Not Detected	4.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
Benzene	1.2	2.7	3.8	8.7
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.6	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
Toluene	1.2	Not Detected	4.5	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	Not Detected	8.2	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.2	Not Detected
Chlorobenzene	1.2	Not Detected	5.5	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	2.3	5.2	10
o-Xylene	1.2	Not Detected	5.2	Not Detected
Styrene	1.2	Not Detected	5.1	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.3	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,2,4-Trimethylbenzene	1.2	1.4	5.9	7.0
1,3-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Hexane	1.2	6.0	4.2	21
Cyclohexane	1.2	3.1	4.1	11

Client Sample ID: VP-4-5

Lab ID#: 0905442A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052712	Date of Collection: 5/14/09 1:28:00 PM
Dil. Factor:	2.41	Date of Analysis: 5/27/09 02:01 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Heptane	1.2	3.1	4.9	13
Bromodichloromethane	1.2	Not Detected	8.1	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
Cumene	1.2	Not Detected	5.9	Not Detected
Propylbenzene	1.2	Not Detected	5.9	Not Detected
Chloromethane	4.8	Not Detected	10	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected	36	Not Detected
Hexachlorobutadiene	4.8	Not Detected	51	Not Detected
Acetone	4.8	Not Detected	11	Not Detected
Carbon Disulfide	1.2	Not Detected	3.8	Not Detected
2-Propanol	4.8	Not Detected	12	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	Not Detected	3.6	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.9	Not Detected
2-Hexanone	4.8	Not Detected	20	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.9	Not Detected
Ethanol	4.8	Not Detected	9.1	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.3	Not Detected
3-Chloropropene	4.8	Not Detected	15	Not Detected
2,2,4-Trimethylpentane	1.2	17	5.6	80
Naphthalene	4.8	Not Detected U J	25	Not Detected U J
TPH ref. to Gasoline (MW=100)	24	280	98	1100

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

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Butane, 2-methyl-	78-78-4	80%	74 N J
Pentane	109-66-0	90%	19 N J
Pentane, 2-methyl-	107-83-5	91%	63 N J
Pentane, 3-methyl-	96-14-0	86%	30 N J
Pentane, 2,4-dimethyl-	108-08-7	83%	8.3 N J
Cyclobutane, ethyl-	4806-61-5	64%	26 N J
Hexane, 2-methyl-	591-76-4	91%	13 N J
Pentane, 2,3-dimethyl-	565-59-3	38%	16 N J
Hexane, 3-methyl-	589-34-4	9.0%	19 N J

Client Sample ID: VP-4-5

Lab ID#: 0905442A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052712	Date of Collection: 5/14/09 1:28:00 PM
Dil. Factor:	2.41	Date of Analysis: 5/27/09 02:01 PM

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Cyclohexane, methyl-	108-87-2	94%	22 N J
Pentane, 2,3,4-trimethyl-	565-75-3	72%	15 N J
Pentane, 2,3,3-trimethyl-	560-21-4	78%	20 N J
Hexane, 2,2,4-trimethyl-	16747-26-5	78%	6.7 N J
Nonane	111-84-2	38%	7.0 N J
Heptane, 2,2,3,4,6,6-hexamethyl-	62108-32-1	38%	7.3 N J
Decane, 2-methyl-	6975-98-0	64%	6.5 N J
Ethanone, 1-phenyl-	98-86-2	97%	10 N J
Ethanone, 1-(methylphenyl)-	26444-19-9	64%	6.3 N J

%Aromatic: 12%

%Aliphatic: 88%

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

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

Client Sample ID: VP-5-5

Lab ID#: 0905442A-06A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052813	Date of Collection: 5/14/09 2:17:00 PM
Dil. Factor:	28.2	Date of Analysis: 5/28/09 04:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	140	Not Detected	700	Not Detected
Freon 114	140	Not Detected	980	Not Detected
Chloromethane	560	Not Detected	1200	Not Detected
Vinyl Chloride	140	Not Detected	360	Not Detected
1,3-Butadiene	140	Not Detected	310	Not Detected
Bromomethane	140	Not Detected	550	Not Detected
Chloroethane	140	Not Detected	370	Not Detected
Freon 11	140	Not Detected	790	Not Detected
Ethanol	560	Not Detected	1100	Not Detected
Freon 113	140	Not Detected	1100	Not Detected
1,1-Dichloroethene	140	Not Detected	560	Not Detected
Acetone	560	Not Detected	1300	Not Detected
2-Propanol	560	Not Detected	1400	Not Detected
Carbon Disulfide	140	Not Detected	440	Not Detected
3-Chloropropene	560	Not Detected	1800	Not Detected
Methylene Chloride	140	Not Detected	490	Not Detected
Methyl tert-butyl ether	140	Not Detected	510	Not Detected
trans-1,2-Dichloroethene	140	Not Detected	560	Not Detected
Hexane	140	870	500	3100
1,1-Dichloroethane	140	Not Detected	570	Not Detected
2-Butanone (Methyl Ethyl Ketone)	140	Not Detected	420	Not Detected
cis-1,2-Dichloroethene	140	Not Detected	560	Not Detected
Tetrahydrofuran	140	Not Detected	420	Not Detected
Chloroform	140	Not Detected	690	Not Detected
1,1,1-Trichloroethane	140	Not Detected	770	Not Detected
Cyclohexane	140	420	480	1400
Carbon Tetrachloride	140	Not Detected	890	Not Detected
2,2,4-Trimethylpentane	140	75000	660	350000
Benzene	140	440	450	1400
1,2-Dichloroethane	140	Not Detected	570	Not Detected
Heptane	140	300	580	1200
Trichloroethene	140	Not Detected	760	Not Detected
1,2-Dichloropropane	140	Not Detected	650	Not Detected
1,4-Dioxane	560	Not Detected	2000	Not Detected
Bromodichloromethane	140	Not Detected	940	Not Detected
cis-1,3-Dichloropropene	140	Not Detected	640	Not Detected
4-Methyl-2-pentanone	140	Not Detected	580	Not Detected
Toluene	140	Not Detected	530	Not Detected
trans-1,3-Dichloropropene	140	Not Detected	640	Not Detected

Client Sample ID: VP-5-5

Lab ID#: 0905442A-06A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052813	Date of Collection: 5/14/09 2:17:00 PM
Dil. Factor:	28.2	Date of Analysis: 5/28/09 04:40 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	140	Not Detected	770	Not Detected
Tetrachloroethene	140	Not Detected	960	Not Detected
2-Hexanone	560	Not Detected	2300	Not Detected
Dibromochloromethane	140	Not Detected	1200	Not Detected
1,2-Dibromoethane (EDB)	140	Not Detected	1100	Not Detected
Chlorobenzene	140	Not Detected	650	Not Detected
Ethyl Benzene	140	Not Detected	610	Not Detected
m,p-Xylene	140	Not Detected	610	Not Detected
o-Xylene	140	Not Detected	610	Not Detected
Styrene	140	Not Detected	600	Not Detected
Bromoform	140	Not Detected	1400	Not Detected
Cumene	140	Not Detected	690	Not Detected
1,1,2,2-Tetrachloroethane	140	Not Detected	970	Not Detected
Propylbenzene	140	Not Detected	690	Not Detected
4-Ethyltoluene	140	Not Detected	690	Not Detected
1,3,5-Trimethylbenzene	140	Not Detected	690	Not Detected
1,2,4-Trimethylbenzene	140	Not Detected	690	Not Detected
1,3-Dichlorobenzene	140	Not Detected	850	Not Detected
1,4-Dichlorobenzene	140	Not Detected	850	Not Detected
alpha-Chlorotoluene	140	Not Detected	730	Not Detected
1,2-Dichlorobenzene	140	Not Detected	850	Not Detected
1,2,4-Trichlorobenzene	560	Not Detected	4200	Not Detected
Hexachlorobutadiene	560	Not Detected	6000	Not Detected
Naphthalene	560	Not Detected	3000	Not Detected
TPH ref. to Gasoline (MW=100)	2800	300000	12000	1200000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Propane, 2,2-dimethyl-	463-82-1	9.0%	1400 N J
Pentane	109-66-0	90%	2200 N J
Butane, 2,2-dimethyl-	75-83-2	90%	26000 N J
Butane, 2,3-dimethyl-	79-29-8	78%	15000 N J
Pentane, 3-methyl-	96-14-0	37%	3400 N J
Pentane, 2,2-dimethyl-	590-35-2	83%	3200 N J
Pentane, 2,4-dimethyl-	108-08-7	91%	32000 N J
Butane, 2,2,3-trimethyl-	464-06-2	64%	12000 N J
Pentane, 3,3-dimethyl-	562-49-2	90%	8000 N J
Hexane, 3-methyl-	589-34-4	43%	2300 N J

Client Sample ID: VP-5-5

Lab ID#: 0905442A-06A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052813	Date of Collection: 5/14/09 2:17:00 PM
Dil. Factor:	28.2	Date of Analysis: 5/28/09 04:40 PM

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Hexane, 2,5-dimethyl-	592-13-2	58%	4700 N J
Heptane, 2,2,4,6,6-pentamethyl-	13475-82-6	36%	5200 N J
Pentane, 2,3,4-trimethyl-	565-75-3	91%	6500 N J
Pentane, 2,3,3-trimethyl-	560-21-4	90%	42000 N J
Hexane, 2,2,4-trimethyl-	16747-26-5	90%	7100 N J

%Aromatic: 0%

%Aliphatic: 100%

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: Trip Blank

Lab ID#: 0905442A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052714	Date of Collection:	5/14/09 3:30:00 PM
Dil. Factor:	1.00	Date of Analysis:	5/27/09 03:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected

Client Sample ID: Trip Blank

Lab ID#: 0905442A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052714	Date of Collection: 5/14/09 3:30:00 PM
Dil. Factor:	1.00	Date of Analysis: 5/27/09 03:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Heptane	0.50	Not Detected	2.0	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Naphthalene	2.0	Not Detected U J	10	Not Detected U J
TPH ref. to Gasoline (MW=100)	10	Not Detected	41	Not Detected

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

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
None Identified			

%Aromatic: ND

%Aliphatic: ND

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

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	101	70-130

Client Sample ID: Trip Blank

Lab ID#: 0905442A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052714	Date of Collection: 5/14/09 3:30:00 PM
Dil. Factor:	1.00	Date of Analysis: 5/27/09 03:22 PM

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	99	70-130

Client Sample ID: Lab Blank

Lab ID#: 0905442A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/27/09 07:19 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 0905442A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/27/09 07:19 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Heptane	0.50	Not Detected	2.0	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Naphthalene	2.0	Not Detected U J	10	Not Detected U J
TPH ref. to Gasoline (MW=100)	10	Not Detected	41	Not Detected

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

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
None Identified			

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	93	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: Lab Blank

Lab ID#: 0905442A-08B

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052809	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/28/09 02:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	5.0	Not Detected	25	Not Detected
Freon 114	5.0	Not Detected	35	Not Detected
Chloromethane	20	Not Detected	41	Not Detected
Vinyl Chloride	5.0	Not Detected	13	Not Detected
1,3-Butadiene	5.0	Not Detected	11	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	5.0	Not Detected	13	Not Detected
Freon 11	5.0	Not Detected	28	Not Detected
Ethanol	20	Not Detected	38	Not Detected
Freon 113	5.0	Not Detected	38	Not Detected
1,1-Dichloroethene	5.0	Not Detected	20	Not Detected
Acetone	20	Not Detected	48	Not Detected
2-Propanol	20	Not Detected	49	Not Detected
Carbon Disulfide	5.0	Not Detected	16	Not Detected
3-Chloropropene	20	Not Detected	63	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Hexane	5.0	Not Detected	18	Not Detected
1,1-Dichloroethane	5.0	Not Detected	20	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.0	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Tetrahydrofuran	5.0	Not Detected	15	Not Detected
Chloroform	5.0	Not Detected	24	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected	27	Not Detected
Cyclohexane	5.0	Not Detected	17	Not Detected
Carbon Tetrachloride	5.0	Not Detected	31	Not Detected
2,2,4-Trimethylpentane	5.0	Not Detected	23	Not Detected
Benzene	5.0	Not Detected	16	Not Detected
1,2-Dichloroethane	5.0	Not Detected	20	Not Detected
Heptane	5.0	Not Detected	20	Not Detected
Trichloroethene	5.0	Not Detected	27	Not Detected
1,2-Dichloropropane	5.0	Not Detected	23	Not Detected
1,4-Dioxane	20	Not Detected	72	Not Detected
Bromodichloromethane	5.0	Not Detected	34	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
4-Methyl-2-pentanone	5.0	Not Detected	20	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 0905442A-08B

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052809	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/28/09 02:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	5.0	Not Detected	27	Not Detected
Tetrachloroethene	5.0	Not Detected	34	Not Detected
2-Hexanone	20	Not Detected	82	Not Detected
Dibromochloromethane	5.0	Not Detected	42	Not Detected
1,2-Dibromoethane (EDB)	5.0	Not Detected	38	Not Detected
Chlorobenzene	5.0	Not Detected	23	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
Styrene	5.0	Not Detected	21	Not Detected
Bromoform	5.0	Not Detected	52	Not Detected
Cumene	5.0	Not Detected	24	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected	34	Not Detected
Propylbenzene	5.0	Not Detected	24	Not Detected
4-Ethyltoluene	5.0	Not Detected	24	Not Detected
1,3,5-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,2,4-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,3-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,4-Dichlorobenzene	5.0	Not Detected	30	Not Detected
alpha-Chlorotoluene	5.0	Not Detected	26	Not Detected
1,2-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,2,4-Trichlorobenzene	20	Not Detected	150	Not Detected
Hexachlorobutadiene	20	Not Detected	210	Not Detected
Naphthalene	20	Not Detected	100	Not Detected
TPH ref. to Gasoline (MW=100)	100	Not Detected	410	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
None Identified			

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: CCV

Lab ID#: 0905442A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/27/09 05:38 AM

Compound	%Recovery
Freon 12	95
Freon 114	104
Vinyl Chloride	98
Bromomethane	105
Chloroethane	101
Freon 11	97
1,1-Dichloroethene	102
Freon 113	106
Methylene Chloride	100
1,1-Dichloroethane	99
cis-1,2-Dichloroethene	102
Chloroform	96
1,1,1-Trichloroethane	100
Carbon Tetrachloride	99
Benzene	96
1,2-Dichloroethane	92
Trichloroethene	102
1,2-Dichloropropane	100
cis-1,3-Dichloropropene	108
Toluene	102
trans-1,3-Dichloropropene	101
1,1,2-Trichloroethane	98
Tetrachloroethene	103
1,2-Dibromoethane (EDB)	102
Chlorobenzene	96
Ethyl Benzene	103
m,p-Xylene	107
o-Xylene	109
Styrene	115
1,1,1,2-Tetrachloroethane	91
1,3,5-Trimethylbenzene	98
1,2,4-Trimethylbenzene	105
1,3-Dichlorobenzene	94
1,4-Dichlorobenzene	95
alpha-Chlorotoluene	105
1,2-Dichlorobenzene	90
1,3-Butadiene	102
Hexane	112
Cyclohexane	111

Client Sample ID: CCV

Lab ID#: 0905442A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/27/09 05:38 AM

Compound	%Recovery
Heptane	104
Bromodichloromethane	95
Dibromochloromethane	100
Cumene	112
Propylbenzene	103
Chloromethane	97
1,2,4-Trichlorobenzene	77
Hexachlorobutadiene	74
Acetone	104
Carbon Disulfide	102
2-Propanol	110
trans-1,2-Dichloroethene	107
2-Butanone (Methyl Ethyl Ketone)	113
Tetrahydrofuran	111
1,4-Dioxane	101
4-Methyl-2-pentanone	115
2-Hexanone	102
Bromoform	102
4-Ethyltoluene	106
Ethanol	113
Methyl tert-butyl ether	112
3-Chloropropene	106
2,2,4-Trimethylpentane	113
Naphthalene	69 Q
TPH ref. to Gasoline (MW=100)	Not Spiked

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: CCV

Lab ID#: 0905442A-09B

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/28/09 10:40 AM

Compound	%Recovery
Freon 12	119
Freon 114	121
Chloromethane	115
Vinyl Chloride	98
1,3-Butadiene	100
Bromomethane	85
Chloroethane	113
Freon 11	126
Ethanol	139 Q
Freon 113	120
1,1-Dichloroethene	107
Acetone	110
2-Propanol	112
Carbon Disulfide	109
3-Chloropropene	104
Methylene Chloride	114
Methyl tert-butyl ether	104
trans-1,2-Dichloroethene	106
Hexane	110
1,1-Dichloroethane	108
2-Butanone (Methyl Ethyl Ketone)	107
cis-1,2-Dichloroethene	110
Tetrahydrofuran	113
Chloroform	109
1,1,1-Trichloroethane	114
Cyclohexane	103
Carbon Tetrachloride	120
2,2,4-Trimethylpentane	108
Benzene	105
1,2-Dichloroethane	112
Heptane	110
Trichloroethene	108
1,2-Dichloropropane	104
1,4-Dioxane	108
Bromodichloromethane	111
cis-1,3-Dichloropropene	104
4-Methyl-2-pentanone	97
Toluene	107
trans-1,3-Dichloropropene	109

Client Sample ID: CCV

Lab ID#: 0905442A-09B

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/28/09 10:40 AM

Compound	%Recovery
1,1,2-Trichloroethane	113
Tetrachloroethene	122
2-Hexanone	104
Dibromochloromethane	119
1,2-Dibromoethane (EDB)	114
Chlorobenzene	114
Ethyl Benzene	114
m,p-Xylene	112
o-Xylene	114
Styrene	111
Bromoform	124
Cumene	114
1,1,2,2-Tetrachloroethane	109
Propylbenzene	110
4-Ethyltoluene	115
1,3,5-Trimethylbenzene	116
1,2,4-Trimethylbenzene	113
1,3-Dichlorobenzene	119
1,4-Dichlorobenzene	122
alpha-Chlorotoluene	112
1,2-Dichlorobenzene	120
1,2,4-Trichlorobenzene	119
Hexachlorobutadiene	115
Naphthalene	105
TPH ref. to Gasoline (MW=100)	Not Spiked

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: LCS

Lab ID#: 0905442A-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/27/09 06:39 AM

Compound	%Recovery
Freon 12	91
Freon 114	103
Vinyl Chloride	100
Bromomethane	90
Chloroethane	103
Freon 11	100
1,1-Dichloroethene	118
Freon 113	119
Methylene Chloride	112
1,1-Dichloroethane	108
cis-1,2-Dichloroethene	117
Chloroform	104
1,1,1-Trichloroethane	106
Carbon Tetrachloride	103
Benzene	101
1,2-Dichloroethane	98
Trichloroethene	107
1,2-Dichloropropane	103
cis-1,3-Dichloropropene	112
Toluene	111
trans-1,3-Dichloropropene	104
1,1,2-Trichloroethane	100
Tetrachloroethene	104
1,2-Dibromoethane (EDB)	101
Chlorobenzene	97
Ethyl Benzene	102
m,p-Xylene	107
o-Xylene	110
Styrene	113
1,1,2,2-Tetrachloroethane	91
1,3,5-Trimethylbenzene	98
1,2,4-Trimethylbenzene	106
1,3-Dichlorobenzene	96
1,4-Dichlorobenzene	96
alpha-Chlorotoluene	109
1,2-Dichlorobenzene	92
1,3-Butadiene	102
Hexane	116
Cyclohexane	115

Client Sample ID: LCS

Lab ID#: 0905442A-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7052703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/27/09 06:39 AM

Compound	%Recovery
Heptane	108
Bromodichloromethane	101
Dibromochloromethane	103
Cumene	116
Propylbenzene	107
Chloromethane	104
1,2,4-Trichlorobenzene	89
Hexachlorobutadiene	82
Acetone	111
Carbon Disulfide	106
2-Propanol	117
trans-1,2-Dichloroethene	111
2-Butanone (Methyl Ethyl Ketone)	120
Tetrahydrofuran	117
1,4-Dioxane	106
4-Methyl-2-pentanone	122
2-Hexanone	108
Bromoform	105
4-Ethyltoluene	108
Ethanol	81
Methyl tert-butyl ether	119
3-Chloropropene	111
2,2,4-Trimethylpentane	116
Naphthalene	95
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: LCS

Lab ID#: 0905442A-10B

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/28/09 11:52 AM

Compound	%Recovery
Freon 12	117
Freon 114	124
Chloromethane	114
Vinyl Chloride	109
1,3-Butadiene	113
Bromomethane	110
Chloroethane	112
Freon 11	128
Ethanol	89
Freon 113	124
1,1-Dichloroethene	111
Acetone	106
2-Propanol	120
Carbon Disulfide	103
3-Chloropropene	96
Methylene Chloride	116
Methyl tert-butyl ether	106
trans-1,2-Dichloroethene	102
Hexane	100
1,1-Dichloroethane	110
2-Butanone (Methyl Ethyl Ketone)	99
cis-1,2-Dichloroethene	99
Tetrahydrofuran	103
Chloroform	115
1,1,1-Trichloroethane	120
Cyclohexane	97
Carbon Tetrachloride	122
2,2,4-Trimethylpentane	100
Benzene	110
1,2-Dichloroethane	118
Heptane	100
Trichloroethene	115
1,2-Dichloropropane	109
1,4-Dioxane	99
Bromodichloromethane	108
cis-1,3-Dichloropropene	114
4-Methyl-2-pentanone	95
Toluene	114
trans-1,3-Dichloropropene	115

Client Sample ID: LCS

Lab ID#: 0905442A-10B

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	w052804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/28/09 11:52 AM

Compound	%Recovery
1,1,2-Trichloroethane	114
Tetrachloroethene	126
2-Hexanone	99
Dibromochloromethane	112
1,2-Dibromoethane (EDB)	119
Chlorobenzene	117
Ethyl Benzene	118
m,p-Xylene	118
o-Xylene	120
Styrene	122
Bromoform	118
Cumene	120
1,1,2,2-Tetrachloroethane	114
Propylbenzene	106
4-Ethyltoluene	111
1,3,5-Trimethylbenzene	120
1,2,4-Trimethylbenzene	121
1,3-Dichlorobenzene	126
1,4-Dichlorobenzene	129
alpha-Chlorotoluene	128
1,2-Dichlorobenzene	127
1,2,4-Trichlorobenzene	113
Hexachlorobutadiene	107
Naphthalene	111
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	106	70-130

5/27/2009

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

Project Name: Chevron 9-0917
Project #: 060057
Workorder #: 0905442C

Dear Ms. Charlotte Evans

The following report includes the data for the above referenced project for sample(s) received on 5/19/2009 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,




Kyle Vagadori
Project Manager

WORK ORDER #: 0905442C

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. #	40-4021781
FAX:	510-420-9170	PROJECT #	060057 Chevron 9-0917
DATE RECEIVED:	05/19/2009	CONTACT:	Kyle Vagadori
DATE COMPLETED:	05/27/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-1-6	Modified ASTM D-1946	21.0 "Hg	15 psi
02A	VP-1-6 DUP	Modified ASTM D-1946	20.8 "Hg	15 psi
03A	VP-1-6 Second	Modified ASTM D-1946	16.4 "Hg	15 psi
04A	VP-2-6	Modified ASTM D-1946	16.4 "Hg	15 psi
05A	VP-4-5	Modified ASTM D-1946	4.8 "Hg	15 psi
06A	VP-5-5	Modified ASTM D-1946	3.2 "Hg	15 psi
07A	Trip Blank	Modified ASTM D-1946	28.4 "Hg	15 psi
08A	Lab Blank	Modified ASTM D-1946	NA	NA
08B	Lab Blank	Modified ASTM D-1946	NA	NA
09A	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY: 

DATE: 05/27/09

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# 0905442C

Seven 1 Liter Summa Canister (100% Certified) samples were received on May 19, 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.

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

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

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a >= 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

The Chain of Custody (COC) information for sample VP-4-5 did not match the entry on the sample tag with regard to sample identification. The information on the COC was used to process and report the sample.

Samples VP-1-6, VP-1-6 DUP, VP-1-6 Second and VP-2-6 were received with significant vacuum remaining in the canister. The residual canister vacuum resulted in elevated reporting limits.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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

Client Sample ID: VP-1-6

Lab ID#: 0905442C-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.67	1.4
Nitrogen	0.67	57
Carbon Dioxide	0.067	12
Methane	0.00067	26

Client Sample ID: VP-1-6 DUP

Lab ID#: 0905442C-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.66	0.96
Nitrogen	0.66	58
Carbon Dioxide	0.066	12
Methane	0.00066	26

Client Sample ID: VP-1-6 Second

Lab ID#: 0905442C-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.45	11
Nitrogen	0.45	56
Carbon Dioxide	0.045	7.5
Methane	0.00045	23

Client Sample ID: VP-2-6

Lab ID#: 0905442C-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.45	1.4
Nitrogen	0.45	78
Carbon Dioxide	0.045	20
Methane	0.00045	0.0051

Client Sample ID: VP-4-5

Lab ID#: 0905442C-05A

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

Client Sample ID: VP-4-5

Lab ID#: 0905442C-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	5.9
Nitrogen	0.24	83
Carbon Dioxide	0.024	11
Methane	0.00024	0.00037

Client Sample ID: VP-5-5

Lab ID#: 0905442C-06A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.4
Nitrogen	0.23	88
Carbon Dioxide	0.023	4.7
Methane	0.00023	6.0

Client Sample ID: Trip Blank

Lab ID#: 0905442C-07A

No Detections Were Found.



Client Sample ID: VP-1-6

Lab ID#: 0905442C-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9052216	Date of Collection:	5/14/09 11:08:00 AM
Dil. Factor:	6.73	Date of Analysis:	5/22/09 05:59 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.67	1.4
Nitrogen	0.67	57
Carbon Dioxide	0.067	12
Methane	0.00067	26
Helium	0.34	Not Detected

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



Client Sample ID: VP-1-6 DUP

Lab ID#: 0905442C-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9052217	Date of Collection:	5/14/09 11:08:00 AM
Dil. Factor:	6.59	Date of Analysis:	5/22/09 06:32 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.66	0.96
Nitrogen	0.66	58
Carbon Dioxide	0.066	12
Methane	0.00066	26
Helium	0.33	Not Detected

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



Client Sample ID: VP-1-6 Second

Lab ID#: 0905442C-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9052218	Date of Collection:	5/14/09 12:02:00 PM
Dil. Factor:	4.46	Date of Analysis:	5/22/09 06:56 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.45	11
Nitrogen	0.45	56
Carbon Dioxide	0.045	7.5
Methane	0.00045	23
Helium	0.22	Not Detected

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



Client Sample ID: VP-2-6

Lab ID#: 0905442C-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9052220	Date of Collection: 5/14/09 12:41:00 PM
Dil. Factor:	4.46	Date of Analysis: 5/22/09 07:42 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.45	1.4
Nitrogen	0.45	78
Carbon Dioxide	0.045	20
Methane	0.00045	0.0051
Helium	0.22	Not Detected

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



Client Sample ID: VP-4-5

Lab ID#: 0905442C-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9052221	Date of Collection:	5/14/09 1:28:00 PM
Dil. Factor:	2.40	Date of Analysis:	5/22/09 08:15 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	5.9
Nitrogen	0.24	83
Carbon Dioxide	0.024	11
Methane	0.00024	0.00037
Helium	0.12	Not Detected

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



Client Sample ID: VP-5-5

Lab ID#: 0905442C-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9052223	Date of Collection:	5/14/09 2:17:00 PM
Dil. Factor:	2.26	Date of Analysis:	5/22/09 09:03 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	1.4
Nitrogen	0.23	88
Carbon Dioxide	0.023	4.7
Methane	0.00023	6.0
Helium	0.11	Not Detected

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

Client Sample ID: Trip Blank

Lab ID#: 0905442C-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9052222	Date of Collection: 5/14/09 3:30:00 PM
Dil. Factor:	1.00	Date of Analysis: 5/22/09 08:40 PM

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

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

Client Sample ID: Lab Blank

Lab ID#: 0905442C-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9052204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/22/09 09:45 AM

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

Container Type: NA - Not Applicable



Client Sample ID: Lab Blank

Lab ID#: 0905442C-08B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9052203b	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/22/09 09:13 AM

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

Container Type: NA - Not Applicable



Client Sample ID: LCS

Lab ID#: 0905442C-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9052224	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/22/09 09:30 PM

Compound	%Recovery
Oxygen	100
Nitrogen	100
Carbon Dioxide	100
Methane	101
Helium	103

Container Type: NA - Not Applicable

5/19/2009

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

Project Name: Chevron 9-0917
Project #: 060057
Workorder #: 0905363

Dear Ms. Charlotte Evans

The following report includes the data for the above referenced project for sample(s) received on 5/15/2009 at Air Toxics Ltd.

The data and associated QC analyzed by ASTM D-5504 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

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

Regards,



Kyle Vagadori
Project Manager

WORK ORDER #: 0905363

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. #	
FAX:	510-420-9170	PROJECT #	060057 Chevron 9-0917
DATE RECEIVED:	05/15/2009	CONTACT:	Kyle Vagadori
DATE COMPLETED:	05/19/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A(on hold)	VP-5-5 Dup	ASTM D-5504	Tedlar Bag	Tedlar Bag
02A	VP-1-6	ASTM D-5504	Tedlar Bag	Tedlar Bag
03A	VP-5-5	ASTM D-5504	Tedlar Bag	Tedlar Bag
04A	Lab Blank	ASTM D-5504	NA	NA
05A	LCS	ASTM D-5504	NA	NA

CERTIFIED BY: 

DATE: 05/19/09

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

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

**LABORATORY NARRATIVE
ASTM D-5504
Conestoga-Rovers Associates (CRA)
Workorder# 0905363**

Three 1 Liter Tedlar Bag samples was received on May 15, 2009. The laboratory performed the analysis of sulfur compounds via ASTM D-5504 using GC/SCD. The method involves direct injection of the air sample into the GC via a fixed 2.0 mL sampling loop. See the data sheets for the reporting limits for each compound.

Receiving Notes

The Chain of Custody (COC) information for sample VP-5-5 did not match the entry on the sample tag with regard to sample identification. The information on the sample tag was used to process and report the sample.

Sample VP-5-5 was placed on hold per the client's request.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B - Compound present in laboratory blank greater than reporting limit.
- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the detection limit.
- M - Reported value may be biased due to apparent matrix interferences.

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

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

Summary of Detected Compounds
SULFUR GASES BY ASTM D-5504 GC/SCD

Client Sample ID: VP-1-6

Lab ID#: 0905363-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Hydrogen Sulfide	4.0	6.1
Carbonyl Sulfide	4.0	15
Thiophene	4.0	8.0

Client Sample ID: VP-5-5

Lab ID#: 0905363-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Hydrogen Sulfide	40	1300



Client Sample ID: VP-1-6

Lab ID#: 0905363-02A

SULFUR GASES BY ASTM D-5504 GC/SCD

File Name:	b051521	Date of Collection: 5/14/09 3:10:00 PM
Dil. Factor:	1.00	Date of Analysis: 5/15/09 01:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Hydrogen Sulfide	4.0	6.1
Carbonyl Sulfide	4.0	15
Methyl Mercaptan	4.0	Not Detected
Ethyl Mercaptan	4.0	Not Detected
Dimethyl Sulfide	4.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Isopropyl Mercaptan	4.0	Not Detected
tert-Butyl Mercaptan	4.0	Not Detected
n-Propyl Mercaptan	4.0	Not Detected
Ethyl Methyl Sulfide	4.0	Not Detected
Thiophene	4.0	8.0
Isobutyl Mercaptan	4.0	Not Detected
Diethyl Sulfide	4.0	Not Detected
n-Butyl Mercaptan	4.0	Not Detected
Dimethyl Disulfide	4.0	Not Detected
3-Methylthiophene	4.0	Not Detected
Tetrahydrothiophene	4.0	Not Detected
2-Ethylthiophene	4.0	Not Detected
2,5-Dimethylthiophene	4.0	Not Detected
Diethyl Disulfide	4.0	Not Detected

Container Type: 1 Liter Tedlar Bag

Client Sample ID: VP-5-5

Lab ID#: 0905363-03A

SULFUR GASES BY ASTM D-5504 GC/SCD

File Name:	b051524	Date of Collection: 5/14/09 4:20:00 PM
Dil. Factor:	10.0	Date of Analysis: 5/15/09 02:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Hydrogen Sulfide	40	1300
Carbonyl Sulfide	40	Not Detected
Methyl Mercaptan	40	Not Detected
Ethyl Mercaptan	40	Not Detected
Dimethyl Sulfide	40	Not Detected
Carbon Disulfide	50	Not Detected
Isopropyl Mercaptan	40	Not Detected
tert-Butyl Mercaptan	40	Not Detected
n-Propyl Mercaptan	40	Not Detected
Ethyl Methyl Sulfide	40	Not Detected
Thiophene	40	Not Detected
Isobutyl Mercaptan	40	Not Detected
Diethyl Sulfide	40	Not Detected
n-Butyl Mercaptan	40	Not Detected
Dimethyl Disulfide	40	Not Detected
3-Methylthiophene	40	Not Detected
Tetrahydrothiophene	40	Not Detected
2-Ethylthiophene	40	Not Detected
2,5-Dimethylthiophene	40	Not Detected
Diethyl Disulfide	40	Not Detected

Container Type: 1 Liter Tedlar Bag

Client Sample ID: Lab Blank

Lab ID#: 0905363-04A

SULFUR GASES BY ASTM D-5504 GC/SCD

File Name:	b051505	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/15/09 08:31 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Hydrogen Sulfide	4.0	Not Detected
Carbonyl Sulfide	4.0	Not Detected
Methyl Mercaptan	4.0	Not Detected
Ethyl Mercaptan	4.0	Not Detected
Dimethyl Sulfide	4.0	Not Detected
Carbon Disulfide	5.0	Not Detected
Isopropyl Mercaptan	4.0	Not Detected
tert-Butyl Mercaptan	4.0	Not Detected
n-Propyl Mercaptan	4.0	Not Detected
Ethyl Methyl Sulfide	4.0	Not Detected
Thiophene	4.0	Not Detected
Isobutyl Mercaptan	4.0	Not Detected
Diethyl Sulfide	4.0	Not Detected
n-Butyl Mercaptan	4.0	Not Detected
Dimethyl Disulfide	4.0	Not Detected
3-Methylthiophene	4.0	Not Detected
Tetrahydrothiophene	4.0	Not Detected
2-Ethylthiophene	4.0	Not Detected
2,5-Dimethylthiophene	4.0	Not Detected
Diethyl Disulfide	4.0	Not Detected

Container Type: NA - Not Applicable

Client Sample ID: LCS

Lab ID#: 0905363-05A

SULFUR GASES BY ASTM D-5504 GC/SCD

File Name:	b051504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/15/09 08:07 AM

Compound	%Recovery
Hydrogen Sulfide	99
Carbonyl Sulfide	113
Methyl Mercaptan	104
Ethyl Mercaptan	113
Dimethyl Sulfide	113
Carbon Disulfide	106
Isopropyl Mercaptan	116
tert-Butyl Mercaptan	126
n-Propyl Mercaptan	116
Ethyl Methyl Sulfide	124
Thiophene	119
Isobutyl Mercaptan	117
Diethyl Sulfide	120
n-Butyl Mercaptan	107
Dimethyl Disulfide	120
3-Methylthiophene	116
Tetrahydrothiophene	120
2-Ethylthiophene	116
2,5-Dimethylthiophene	112
Diethyl Disulfide	120

Container Type: NA - Not Applicable

Lab #: 162613 Job #: 11429
 Sample Name/Number: VP-1-6
 Company: ChevronTexaco
 Date Sampled: 5/14/2009
 Container: Cali-5-Bond Bag
 Field/Site Name: Chevron Station 9-0917
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 5/19/2009 Date Reported: 6/04/2009

Component	Chemical mol. %	Delta C-13 per mil	Delta D per mil	C-14 conc. pMC	Tritium TU
Carbon Monoxide -----	nd				
Hydrogen Sulfide -----	nd				
Helium -----	nd				
Hydrogen -----	nd				
Argon -----	0.885				
Oxygen -----	19.83				
Nitrogen -----	77.56				
Carbon Dioxide -----	0.44	-16.58			
Methane -----	1.23	-51.98	-321.8	14.9 ± 0.2	
Ethane -----	nd				
Ethylene -----	nd				
Propane -----	nd				
Iso-butane -----	nd				
N-butane -----	0.0015				
Iso-pentane -----	0.0217				
N-pentane -----	0.0064				
Hexanes + -----	0.0280				

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 15
 Specific gravity, calculated: 0.997

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %
 Chemical analysis based on standards accurate to within 2%

Lab #: 162614 Job #: 11429
 Sample Name/Number: VP-2-6
 Company: ChevronTexaco
 Date Sampled: 5/14/2009
 Container: Cali-5-Bond Bag
 Field/Site Name: Chevron Station 9-0917
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 5/19/2009 Date Reported: 6/04/2009

Component	Chemical mol. %	Delta C-13 per mil	Delta D per mil	C-14 conc. pMC	Tritium TU
Carbon Monoxide -----	nd				
Hydrogen Sulfide -----	nd				
Helium -----	nd				
Hydrogen -----	nd				
Argon -----	0.898				
Oxygen -----	20.23				
Nitrogen -----	78.79				
Carbon Dioxide -----	0.082				
Methane -----	nd				
Ethane -----	nd				
Ethylene -----	nd				
Propane -----	nd				
Iso-butane -----	nd				
N-butane -----	nd				
Iso-pentane -----	nd				
N-pentane -----	nd				
Hexanes + -----	nd				

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 0
 Specific gravity, calculated: 0.999

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %
 Chemical analysis based on standards accurate to within 2%

Lab #: 162615 Job #: 11429
 Sample Name/Number: VP-4-5
 Company: ChevronTexaco
 Date Sampled: 5/14/2009
 Container: Cali-5-Bond Bag
 Field/Site Name: Chevron Station 9-0917
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 5/19/2009 Date Reported: 6/04/2009

Component	Chemical mol. %	Delta C-13 per mil	Delta D per mil	C-14 conc. pMC	Tritium TU
Carbon Monoxide -----	nd				
Hydrogen Sulfide -----	nd				
Helium -----	nd				
Hydrogen -----	nd				
Argon -----	0.941				
Oxygen -----	6.77				
Nitrogen -----	82.27				
Carbon Dioxide -----	10.02	-25.66		100.5 ± 0.4	
Methane -----	nd				
Ethane -----	nd				
Ethylene -----	nd				
Propane -----	nd				
Iso-butane -----	nd				
N-butane -----	nd				
Iso-pentane -----	nd				
N-pentane -----	nd				
Hexanes + -----	nd				

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 0
 Specific gravity, calculated: 1.036

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %
 Chemical analysis based on standards accurate to within 2%

Lab #: 162616 Job #: 11429
 Sample Name/Number: VP-5-5
 Company: ChevronTexaco
 Date Sampled: 5/14/2009
 Container: Cali-5-Bond Bag
 Field/Site Name: Chevron Station 9-0917
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 5/19/2009 Date Reported: 6/04/2009

Component	Chemical mol. %	Delta C-13 per mil	Delta D per mil	C-14 conc. pMC	Tritium TU
Carbon Monoxide -----	nd				
Hydrogen Sulfide -----	nd				
Helium -----	nd				
Hydrogen -----	nd				
Argon -----	0.999				
Oxygen -----	0.446				
Nitrogen -----	87.06				
Carbon Dioxide -----	4.86	-30.94		83.6 ± 0.4	
Methane -----	6.63	-48.60	-283.0	34.8 ± 0.2	
Ethane -----	nd				
Ethylene -----	nd				
Propane -----	nd				
Iso-butane -----	nd				
N-butane -----	nd				
Iso-pentane -----	nd				
N-pentane -----	nd				
Hexanes + -----	0.0045				

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 67
 Specific gravity, calculated: 0.972

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %
 Chemical analysis based on standards accurate to within 2%



CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
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 (916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager CHALOTTE EVANS

Collected by: (print and sign) EVAN MULL

Company CRA Email CEVANS@CRAWORLD.COM

Address 5400 HOLDS ST. CITY EMERYVILLE State CA Zip 94608

Phone SUITE A SID-420-3351 Fax SIO-420-4170

Project Info:

PO. # 40-4021781

Project # 060057

Project Name CHEVROEN 9-0917

Turn Around Time: Normal Rush

Lab Use Only Pressurized by: _____ Date: _____

Pressurization Gas: _____ N₂ He

Canister Pressure/Vacuum Initial Final Receipt Final (gpd)

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum
01A	VP-1-G	25655	05/14/09	1108	TO-3: TPH _g	<-30 -21
02A	VP-1-G DUP	12373		1108	TO-15: FULL	<-30 -22
03A	VP-1-G SECOND	25641		1202	SCAN W/ TOP 20 TICS	<-30 -16
04A	VP-2-G	33300		1241	TOP 20 TICS	<-30 -18
05A	VP-4-S	33714		1328	ASTM D-1946:	<-30 -5
06A	VP-5-S	20833		1417	O ₂ , CO ₂ , CH ₄	<-30 -3.5
07A	TRIP BLANK	25663		1530	N ₂ , HELIUM	- -

Relinquished by: (signature) _____ Date/Time 05/15/2009 1130

Received by: (signature) FEDBY Date/Time _____

Relinquished by: (signature) _____ Date/Time _____

Received by: (signature) Monica Hansen Date/Time _____

Relinquished by: (signature) _____ Date/Time _____

Received by: (signature) _____ Date/Time _____

Shipper Name: _____

Air Bill # _____

Temp. (C) _____

Condition _____

Custody Seals Intact? Yes No None

Work Order # _____

Lab Use Only

Shipper Name: Fed by

Air Bill # _____

Temp. (C) NA

Condition Good

Custody Seals Intact? Yes No None

Work Order # 0905448

Notes: PLEASE EMAIL RESULTS TO CEVANS@CRAWORLD.COM

MONICA HANSEN ALL SLIPBOARDS OF DATA TO ADDRESS@CRAWORLD.COM
 QDS RESULTS IN PAPER, PALM?