CONESTOGA-ROVERS
& ASSOCIATES

5900 Hollis Street, Suite A, Emeryville, California 94608
Telephone: 510-420-0700 Facsimile: 510-420-9170
www.CRAworld.com

January 23, 2008

Ms. Donna Drogos
Alameda County Environmental Health Services (ACEHS)
1131 Harbor Bay Parkway
Alameda, California 94502

Re: **Feasibility Study/Corrective Action Plan Addendum**
Former Signal Oil Service Station (Chevron Site No. 206145)
800 Center Street
Oakland, California
ACEHS RO #0454

Dear Ms. Drogos:

Conestoga-Rovers & Associates (CRA) is submitting this *Feasibility Study/Corrective Action Plan Addendum* on behalf of Chevron Environmental Management Company (Chevron). On November 1, 2007, CRA submitted a feasibility study/corrective action plan (FS/CAP) to ACEHS to determine a remedial action that would establish cleanup goals for soil and groundwater and move the site towards case closure (Attachment A). The lack of soil vapor data was a data gap recognized in the FS/CAP and a vapor survey was proposed for the site. This report documents that survey and the data obtained from it. An evaluation of potential for vapor intrusion risk for the planned residential housing units will result from the acquired data. A description of the vapor probe installation and sampling results are presented below.

INVESTIGATION RESULTS

The objective of this investigation was to obtain current soil vapor data to evaluate potential for vapor intrusion risks to the proposed residential housing units. To meet this objective, CRA installed six vapor probes on the property. The probes were installed near current monitoring wells and beneath the proposed housing footprints (Figure 2).

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

Permits: CRA conducted work under Alameda County Public Works Agency well permit W2007-1091. A copy of the permit is included as Attachment B.

Drilling Dates: CRA completed vapor probe installation on October 25, 2007 and conducted vapor sampling on November 6, 2007.

Personnel: CRA personnel Jeremy Gekov and Bruce Campbell installed the soil vapor probes and Charlotte Evans and Greti Wolf performed the soil vapor sampling under the supervision of California Professional Geologist Robert C. Foss (P.G. #7445).

Underground Utility Location: Prior to drilling, CRA contacted Underground Service Alert (USA) to notify utility providers of the proposed work and to identify the locations of any onsite subsurface utilities.

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

Soil Borings: Vironex advanced six borings, under supervision of CRA personnel, using a hand-auger to a depth of 6.5 feet below grade (fbg). Vapor points VP-1 through VP-6 were installed at a depth of 5-5.5 fbg in these borings. CRA personnel continuously logged the soil lithology and collected disturbed soil samples for laboratory analysis at 6.0 fbg. One undisturbed sample was collected with a slide hammer to analyze for physical parameters. Each samples was covered with Teflon™ tape, capped with a polyethylene lid, labeled, entered onto a chain of custody form and place on ice. Boring logs showing sediment descriptions, sample depths and vapor probe installation details are presented as Attachment C.

Subsurface Sediments: Fill from the former excavation was encountered to total boring depths of 6.5 fbg in borings VP-1, VP-2 and VP-4. Fill with native sand or sand with silt in the bottom 1–2 feet was encountered in borings VP-3 and VP-6. Native sand with silt was encountered to the total depth of 6.5 fbg in boring VP-5.

Vapor Probe Construction: Soil vapor probes were installed according to the Department of Toxic Substances Control (DTSC) *Advisory-Active Soil Gas Investigations* guidance document, dated January 28, 2003. The probes were constructed with ½-inch diameter, 6-inch long stainless steel mesh screen attached to ¼-inch Teflon tubing. Each probe was placed at the desired depth and surrounded by a 12-inch sand pack. Vapor points were finished at the surface with a traditional well vault.

Vapor Sampling: Samples from the vapor points were collected using flow meters set at 100 ml/min and 1-liter Summa™ canisters connected to the sampling tubing at each vapor point. A closed circuit system was created by attaching the sample Summa™ canister in series with the purge Summa™ canister prior to connecting to the vapor

probe. Before sampling, an appropriate volume of stagnant air in the sampling tubes was purged so the sample was representative of actual soil concentrations. Purging was performed for each point by opening the purge canister for a estimated period of time. 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 5-inches of Hg was observed on the vacuum gauge.

In accordance with the DTSC *Advisory-Active Soil Gas Investigations* guidance document, dated January 28, 2003, leak testing was performed during sampling. Shaving cream was used as a leak detector to determine if ambient air was entering the Summa™ canisters during sampling. This is done by analysis for the specific leak check compound. Isobutane (2-methyl-propane), butane and propane were identified by modified EPA method TO-15 as the most abundant compounds of the specific shaving cream used for this test and indicated by distinctive peaks on the petroleum hydrocarbon chromatograph separate from TPH in the gasoline range. The standard compound of the leak test, based on analysis of the shaving cream, is isobutane at 150,000 parts per billion by volume (ppbv). Isobutane was reported in two of the samples, at 6.6 ppbv and 13,000 ppbv. The amount reported in VP-1 at 6.6 ppbv is considered negligible, being less than one percent of the standard. The amount reported in VP-5, 13,000 ppbv, is most likely due to interference from the high TPHg detection and is likely not be indicative of ambient air entering the sample. If that had been the case, we would expect to see lower concentrations of the constituents and higher oxygen concentrations, approximately 20% oxygen or atmospheric conditions. The reported oxygen concentration in VP-5 is 16%.

After sampling, the Summa™ canisters were packaged and sent to Air Toxics analytical laboratory under chain-of-custody for analysis. Standard Field Procedures for Soil Vapor Probe Installation and Sampling are presented as Attachment D.

Laboratory Analyses of Soil Samples: Soil samples were stored on ice where they were maintained at 4° C and transported under chain of custody to Lancaster Laboratories of Lancaster, Pennsylvania and analyzed for the following constituents:

- Total Petroleum Hydrocarbons as diesel (TPHd) by EPA Method 8015 modified with a silica gel cleanup,
- Benzene, toluene, ethyl benzene, and xylenes (BTEX) and methyl tert-butyl ether (MTBE) by EPA Method 8260B and

- One undisturbed sample was collected and analyzed for physical parameters including moisture content, bulk density, total porosity, air- and water-filled porosity, organic carbon and effective permeability in undisturbed soil samples.

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

- Total Petroleum Hydrocarbons as gasoline (TPHg) by EPA Method TO-3,
- Benzene, toluene, ethyl benzene, and xylenes (BTEX), ethanol, methyl tert-butyl ether (MTBE), naphthalene, and isobutane, butane and propane as leak detectors by EPA Method TO-15 and
- O_2 and CO_2 by ASTM 1946 (GC/TCD).

Table 1 summarizes the soil analytic data and table 2 summarizes the soil vapor analytic data. The laboratory analytic reports are included as Attachment E.

Soil Disposal: Soil cuttings were placed in drums and labeled appropriately. These wastes were transported to the appropriate Chevron-approved disposal facility following receipt of profiling analytic results. These results are included as Attachment F.

Hydrocarbon Distribution in Vapor

Soil vapor results were compared to the San Francisco – Regional Quality Water Control Board (SF-RWQCB) environmental screening levels (ESLs) for shallow soil gas for residential exposure in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater – Interim Final,* dated November 2007. These ESLs are for shallow soil gas samples collected within 5 feet of the foundation of a building or ground surface and intended for evaluation of potential intrusion to indoor air.

TPHg was detected above reporting limits in VP-1, VP-4 and VP-5. Only the results from VP-5 at 2,100,000 micrograms per cubic meter ($\mu g/m^3$) were above the TPHg ESL of 10,000 $\mu g/m^3$. Benzene was not detected above reporting limits in any of the samples. However, the reporting limit for benzene was elevated above the ESL in VP-5, resulting from sample dilution due to the presence of high level non-target species (specifically TPHg, which is analyzed by a different method than BTEX). Toluene was detected in VP-1 at 16 $\mu g/m^3$. No other constituents

were detected in any sample. Due to the lack of carcinogenic constituents detected in any of the vapor samples, it is not necessary to remediate any area based solely on the soil vapor results.

GROUNDWATER CLEANUP LEVELS SUMMARY

Due to new ESLs from SF-RWQCB, issued in November, 2007, we are resubmitting Table A with the current ESLs. All ESLs for the constituents of concern (COC), with the exception of TPHg in soil, have changed.

Table A Soil and Groundwater ESLs

COC	Soil		Groundwater	
	Concentration (a)	ESLs (b)	Concentration (c)	ESLs (b)
	mg/kg	mg/kg	µg/L	µg/L
TPHg	**7,300**	100	**30,000**	5,000*
Benzene	**7.2**	0.12*	**610**	540*
Toluene	**330**	29*	**1,100**	400*
Ethylbenzene	**150**	33*	**4,100**	300*
Xylenes	**650**	31*	2,800	5,300*

Notes:

(a) Gasoline constituent concentrations based on highest April 2007 concentrations in soil samples collected at the site.
(b) Applicable ESLs are Table B, Shallow Soil ESLs where groundwater is **NOT** a current or potential source of drinking water, residential land use, as documented in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater – Interim Final,* dated November 2007.
(c) Gasoline constituent concentrations in groundwater are based on highest detected Fourth Quarter 2007 sample analysis.

Bold designates exceedances to the respective ESLs.
* = Changes in ESL values from February 2005 ESLs to November 2007 ESLs.

CONCLUSIONS

Based on these results, the recommendations made in the FS/CAP submitted on November 1, 2007, remain the same and CRA awaits a response from ACEHS.

CLOSING

We appreciate this opportunity to work with your organization toward redevelopment of this property. Please contact Charlotte Evans at (510) 420-3351 or Ian Robb of Chevron at (925) 842-9496 if you have any questions or comments.

Sincerely,
Conestoga-Rovers & Associates

Charlotte Evans

Robert C. Foss, P.G. #7445

PROFESSIONAL GEOLOGIST
ROBERT C. FOSS
No. 7445
exp 08/08
STATE OF CALIFORNIA

Figures: 1 – Vicinity Map
2 – Site Map with Well and Vapor Probe Locations

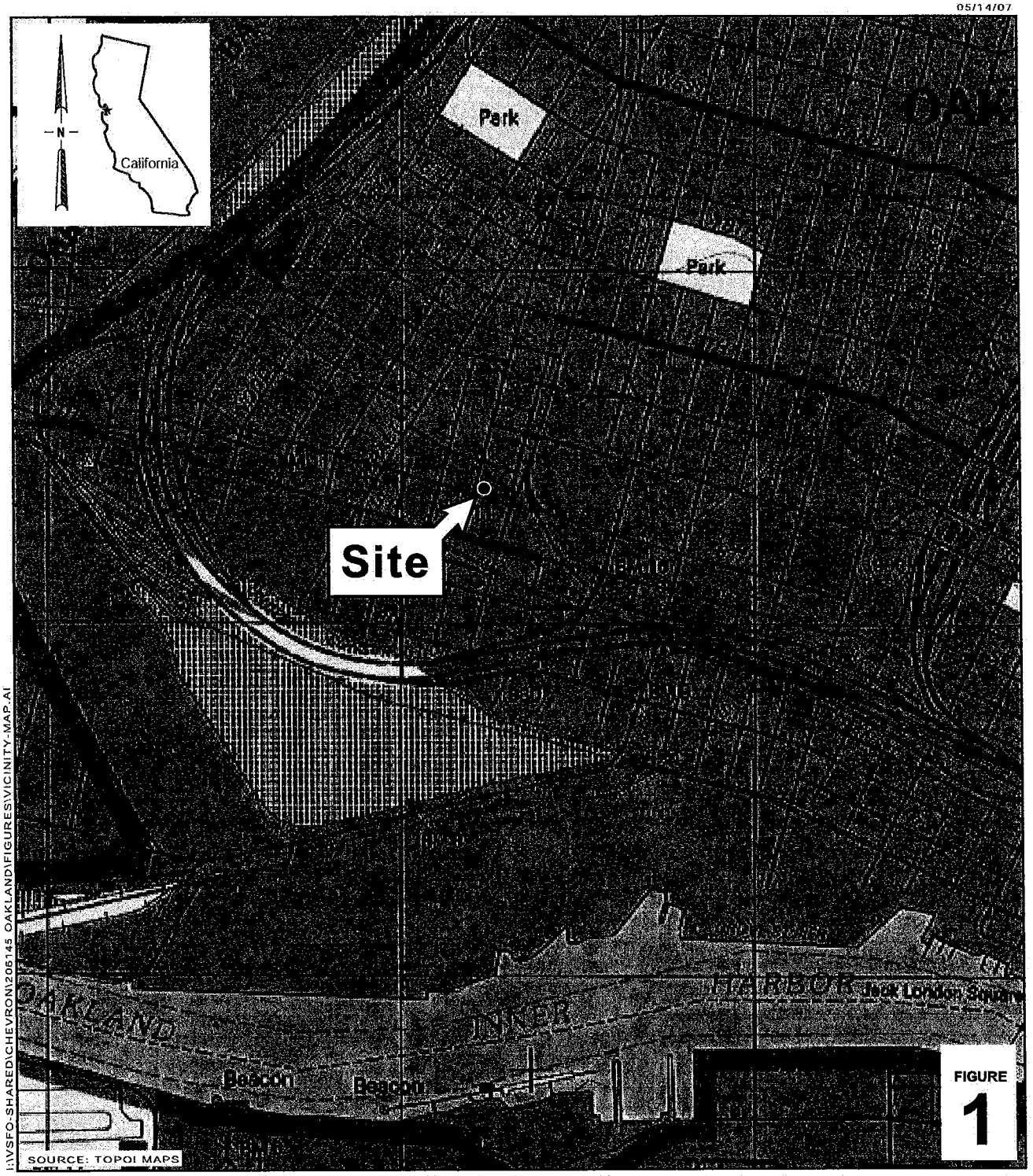
Tables: 1 – Soil Analytic Data
2 – Soil Vapor Analytic Data Compared to ESLs

Attachments: A – Regulatory Correspondence dated
B – Alameda County Permits
C – Boring Logs
D – Standard Field Procedures for Soil Vapor Probe Installation and Sampling
E – Soil and Soil Vapor Analytic Laboratory Reports
F – Waste Profile Analytic Laboratory Reports

cc: Mr. Ian Robb, Chevron Environmental Management Company, P.O. Box 6012, San Ramon, CA 94583
Mr. Rene Boisvert. 800 Center LLC, 484 Lake Park Avenue #246, Oakland, CA 94610

I:\Chevron\206145 Oakland\2007 Vapor Survey\206145 Vapor Probe Survey.01.08.doc

05/14/07



I:\VSFO-SHARED\CHEVRON\206145 OAKLAND\FIGURES\VICINITY-MAP.AI

FIGURE
1

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Chevron Station No. 206145

800 Center Street

Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map

01/11/08

Site Plan with Well and Vapor Probe Locations

MW-8

MW-6

MW-5

CENTER STREET

CONC. SIDEWALK

RAMP

RAMP

LANDSCAPE

CONC. SIDEWALK

DWY

DWY

3.5" PIPE VERT O

MW-1A

VP-1

VP-2

MW-3

VP-3

MW-13

MW-14

MW-10

MW-9

ADJACENT STRUCTURE

MW-4

DWY

DWY

LANDSCAPE

VP-4

MW-12

MW-11

VP-5

MW-16

MW-17

MW-15

VP-6

MW-2

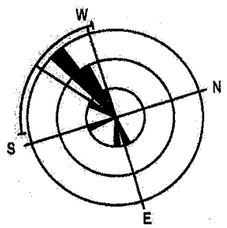
ORIGINAL PROPERTY LINE

CONC. SLAB

MW-7

CURRENT PROPERTY LINE

8TH STREET



Groundwater Flow Direction
(11/03 through 11/06)

EXPLANATION

VP-1 ⊕ Vapor probe location

MW-1 ⊕ Monitoring well location

N

0 10 20 40

Scale (ft)

I:\SFO-SIS\SHARED\CHEVRON\206145 OAKLAND\FIGURES\20-6145 Wells and Vapor Probe Locations 10.25.07.DWG

FIGURE

2

Former Chevron Station No. 20-6145

800 Center Street

Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

Table 1. Analytic Results for Soil - Former Chevron Service Station (Chevron Site #20-6145), 800 Center Street, Oakland, California

Sample ID	Sample Date	Depth fbg	TPHd	B	T	E	X	MTBE
			Concentrations reported in milligrams per kilograms (µg/kg)					
VP-1	10/25/07	6	**4.9**	<0.5	<1.0	<1.0	<1.0	<0.5
VP-2	10/25/07	6	**300**	<0.5	<1.0	<1.0	<1.0	<0.5
VP-3	10/25/07	6	**6.4**	<0.5	<1.0	<1.0	<1.0	<0.5
VP-4	10/25/07	6	**44**	<0.5	<1.0	<1.0	<1.0	<0.5
VP-5	10/25/07	6	<4.0	<0.5	<1.0	<1.0	<1.0	<0.5
VP-6	10/25/07	6	<4.0	<0.5	<1.0	<1.0	<1.0	<0.5

Abbreviations/Notes:

Total petroleum hydrocarbons as diesel (TPHd) by modified EPA Method 8015M with silica gel cleanup

Benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tertiary butyl ether (MTBE), by EPA Method 8260B

fbg = feet below grade

<x.xxx = Not detected above the method detection limit

Table 2. Analytic Results for Vapor - Former Chevron Station 206145, 800 Center Street, Oakland, California

Sample ID	Sample Date	Probe Depth Interval (fbg)	TPHG	B	T	E	X[2]	MTBE	Naphthalene	Isobutane[3]	Oxygen	Carbon Dioxide	Methane
			<--------Concentrations reported in micrograms per cubic meter - µg/m^3-------->							ppbv	<----------(% volume)---------->		
VP-1	11/06/07	5.0-5.5	1,400	<3.8	16	<5.2	<5.2	<17	<25	6.6	10	<0.024	<0.00024
VP-1	LAB DUPLICATE		--	<3.8	14	<5.2	<5.2	<17	<25	6.5	--	--	--
VP-2	11/06/07	5.0-5.5	<250	<3.9	<4.6	<5.2	<5.2	<17	<25	ND	10	0.88	<0.00024
VP-2	LAB DUPLICATE		<250	--	--	--	--	--	--	--	10	0.88	<0.00024
VP-3	11/06/07	5.0-5.5	<240	<3.7	<4.4	<5.0	<5.0	<17	<24	ND	16	2.0	<0.00023
VP-4	11/06/07	5.0-5.5	280	<3.9	<4.6	<5.2	<5.2	<17	<25	ND	9.7	4.0	<0.00024
VP-5	11/06/07	5.0-5.5	**2,100,000**	<760	<900	<1000	<1000	<3400	<5000	13,000	16	4.4	<0.00024
VP-6	11/06/07	5.0-5.5	<260	<4.0	<4.8	<5.5	<5.5	<18	<26	ND	20	1.0	<0.00025
VP-6 DUPLICATE	11/06/07	5.0-5.5	<250	<3.9	<4.6	<5.4	<5.4	<18	<26	ND	20	1.0	<0.00025
ESL			10,000	84	63,000	210,000	21,000	9,400	72				

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015M

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

2 = Values for highest value of Xylenes detected

3 = Constituent used as leak detector determined as a Tentatively Identified Compound (TICs) by Modified EPA Method TO-15. Match quality was below 50%.

fbg = Feet below grade

-- = Not Analyzed

ppbv = parts per billion by volume

<X = Not detected above method detection limit

Table 3. Analytic Results for Soil Physical Parameters - Former Chevron Station 206145, 800 Center Street, Oakland, California

Sample ID	Sample Date	Sample Depth (fbg)	Bulk Density (g/cc)	Moisture Content (% wt)	Total Porosity (% Vb)	Air Filled Porosity (% Vb)	Total Organic Carbon (mg/kg)	Effective Permeability (md)
Physical Parameters	10/25/07	4.0	1.77	13.5	34.1	10.1	4800	26

Abbreviations/Notes:

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

Moisture content by ASTM D2216

Total organic carbon by Walkley-Black Method

Mean and median grain size by ASTM D422/D4464M

fbg = Feet below grade

g/cc = grams per cubic centimeter

% wt = percent weight

% Vb = percent bulk volume

mg/kg = milligrams per kilogram

md = millidarcy

CONESTOGA-ROVERS
& ASSOCIATES

ATTACHMENT A

Regulatory Correspondence

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

May 29, 2007

Mr. Satya Sinha
Chevron Environmental Management
6001 Bollinger Canyon Rd., Room K2256
San Ramon, CA 94583

Mr. Rene Boisvert
Boulevard Equity Group
484 Lakepark Ave. #246
Oakland, CA 94610

Dear Messrs. Sinha and Boisvert:

Subject: Fuel Leak Case No. RO0000454, Chevron #20-6145 / SIGNAL SS,
800 Center St., Oakland CA 94607

Alameda County Environmental Health (ACEH) staff has recently reviewed the case file for the subject site including the May 14, 2007 Well Installation Report by CRA. The report describes the installation of clustered wells at the site and soil and groundwater sampling results. The results of the investigation appear to confirm the prior results from the CPT sampling done in 2004. Residual shallow soil contamination was found in some of the locations and groundwater contamination was detected in the deeper screened wells. After completion of the second and third monitoring events, we request you incorporate this data into your site conceptual model. It appears that supplemental wells will be necessary to determine the full lateral and vertical extent of the contamination in groundwater as well as remediation to reduce the on-site source conditions. Please address these items in a work plan accompanying your FS/CAP.

TECHNICAL REPORT REQUEST

Please submit the following technical reports according to the following schedule:

- August 1, 2007- 2nd Multi-level Groundwater Monitoring Report
- October 1, 2007-3rd Multi-level Groundwater Monitoring Report
- November 1, 2007- Feasibility Study/Corrective Action Plan

ELECTRONIC SUBMITTAL OF REPORTS

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at barney.chan@acgov.org.

PERJURY STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

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

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

March 21, 2007

Mr. Satya Sinha
Chevron Environmental Management
6001 Bollinger Canyon Rd., Room K2256
San Ramon, CA 94583

Mr. Rene Boisvert
Boulevard Equity Group
484 Lakepark Ave. #246
Oakland, CA 94610

Dear Messrs. Sinha and Boisvert:

Subject: Fuel Leak Case No. RO0000454, Chevron #20-6145 / SIGNAL SS,
800 Center St., Oakland CA 94607

Alameda County Environmental Health (ACEH) staff has recently reviewed the case file for the subject site including the March 5, 2007 Workplan for Additional Subsurface Investigation by Cambria. The work plan provides a sampling method to verify the previous groundwater sampling results, which indicated petroleum contamination to depths of 72' bgs. Four nested well locations are proposed in this investigation. Two nested wells in these locations are proposed screened from 35-40' bgs and 55-60' bgs plus one additional well in the southwest portion of the site screened from 70-75' bgs. We have the following technical comments we request you address when performing this work.

TECHNICAL COMMENTS

1. Nested wells have been shown to have difficulty in installing reliable seals between the well screens by U.S. EPA. Therefore, our agency does not concur with your proposal of these wells. We recommend the installation of well clusters or Continuous Mutichannel Tubing (CMT) in order to sample groundwater at different depths. Please confirm that an alternative monitoring method will be done as requested below.
2. In an effort to expedite this evaluation, we request that groundwater sampling from the newly installed wells be performed on two-month intervals. We feel that a decision can be made after three sampling events ie four months after installation. Please submit a new Feasibility Study/Corrective Action Plan as requested below. The FS/CAP should propose cleanup levels and goals for soil and groundwater and should evaluate three alternatives besides monitored natural attenuation (MNA) and no action.

TECHNICAL REPORT REQUEST

Please submit the following technical reports according to the following schedule:

- April 6, 2007- Description of alternative monitoring method.
- May 14, 2007- Well Construction and Multi-level Groundwater Monitoring Report

- August 1, 2007- 2nd Multi-level Groundwater Monitoring Report
- October 1, 2007-3rd Multi-level Groundwater Monitoring Report
- November 1, 2007- Feasibility Study/Corrective Action Plan

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PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the

professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

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

AGENCY OVERSIGHT

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

If you have any questions, please call me at (510) 567-6765.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

cc: files, D. Drogos
Ms. Charlotte Evans, Cambria Environmental, 5900 Hollis St., Suite A, Emeryville, CA 94608
Mr. Hollis Rodgers, 215 W. MacArthur Blvd., Apt. #434, Oakland, CA 94611
Ms. Nancy Nadel, City of Oakland, City Hall, 1 Frank Ogawa Plaza, Oakland, CA 94612

3_21_07 800Center St

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

February 6, 2007

Mr. Satya Sinha
Chevron Environmental Management
6001 Bollinger Canyon Rd., Room K2256
San Ramon, CA 94583

Mr. Rene Boisvert
Boulevard Equity Group
484 Lakepark Ave. #246
Oakland, CA 94610

Dear Messrs. Sinha and Boisvert:

Subject: Fuel Leak Case No. RO0000454, Chevron #20-6145 / SIGNAL SS,
800 Center St., Oakland CA 94607

Alameda County Environmental Health (ACEH) staff has recently reviewed the case file for the subject site and has determined that additional work is necessary to progress the site towards closure. After our 11/9/06 meeting with both of you and Brown & Caldwell, it appeared that the proposed excavation of the site was not proceeding, however, it was unclear what direction the site investigation would be moving towards. We discussed verification sampling to confirm the original vertical contaminant profile. No other specific remediation was proposed at that time. The alternative of taking soil vapor samples and installing a vapor barrier were also discussed, however, given the residual contamination at this site, this alternative is not acceptable if residential housing is proposed. Please address the following technical comments and submit the technical reports requested below.

TECHNICAL COMMENTS

1. Assuming that confirmation sampling is still intended to verify the vertical extent of contamination, please submit a work plan to take current depth discrete soil and groundwater samples. Please include a table and figure indicating the previous data and the locations of the confirmation samples.
2. If the previously approved dewatering and excavation is not going to be done, please explain specifically the reasons why. Please keep in mind that Fund reimbursement is not an acceptable reason. Please submit a new Feasibility Study/Corrective Action Plan. The FS/CAP should be able to meet clean-up goals consistent with the future property use in a timely manner.

TECHNICAL REPORT REQUEST

Please submit the following technical reports according to the following schedule:

- March 6, 2007- Work Plan for Re-sampling Site
- March 6, 2007- FS/CAP

ELECTRONIC SUBMITTAL OF REPORTS

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at barney.chan@acgov.org.

PERJURY STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

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

AGENCY OVERSIGHT

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

If you have any questions, please call me at (510) 567-6765.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

cc: files, D. Drogos
Ms. Charlotte Evans, Cambria Environmental, 5900 Hollis St., Suite A, Emeryville, CA 94608
Mr. Hollis Rodgers, 215 W. MacArthur Blvd., Apt. #434, Oakland, CA 94611
2_6_07 800Center St

CONESTOGA-ROVERS
& ASSOCIATES

ATTACHMENT B

Alameda County Permits

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 10/23/2007 By jamesy

Permit Numbers: W2007-1091
Permits Valid from 10/25/2007 to 10/26/2007

Application Id: 1193077584189
Site Location: 800 Center Street
Project Start Date: 10/25/2007

City of Project Site: Oakland

Completion Date: 10/26/2007

Applicant: Conestoga-Rovers & Associates - Jeremy Gekov
5900 Hollis St, Suite A, Emeryville, CA 94608
Phone: 510-420-3314

Property Owner: Mr. Rene Boisvert
484 Lake Park Avenue #246, Oakland, CA 94610
Phone: --

Client: Jeremy Gekov
5900 Hollis Street, Suite A, Emeryville, CA 94608
Phone: --

Total Due: $200.00
Receipt Number: WR2007-0465 **Total Amount Paid:** $200.00
Payer Name : jeremy gekov Paid By: VISA **PAID IN FULL**

Works Requesting Permits:

Remedian Well Construction-Extraction - 6 Wells
Driller: Vironex Inc. - Lic #: 705927 - Method: Hand

Work Total: $200.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2007-1091	10/23/2007	01/23/2008	VP-1	2.00 in.	0.25 in.	2.00 ft	6.00 ft
W2007-1091	10/23/2007	01/23/2008	VP-2	2.00 in.	0.25 in.	2.00 ft	6.00 ft
W2007-1091	10/23/2007	01/23/2008	VP-3	2.00 in.	0.25 in.	2.00 ft	6.00 ft
W2007-1091	10/23/2007	01/23/2008	VP-4	2.00 in.	0.25 in.	2.00 ft	6.00 ft
W2007-1091	10/23/2007	01/23/2008	VP-5	2.00 in.	0.25 in.	2.00 ft	6.00 ft
W2007-1091	10/23/2007	01/23/2008	VP-6	2.00 in.	0.25 in.	2.00 ft	6.00 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755

(Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

5. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).

7. Minimum surface seal thickness is two inches of cement grout placed by tremie

8. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

9. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

CONESTOGA-ROVERS
& ASSOCIATES

ATTACHMENT C

Boring Logs

Conestoga-Rovers & Associates
5900 Hollis Street
Emeryville CA
Telephone: 510-420-0700
Fax:

BORING/ WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	VP-1
JOB/SITE NAME	20-6145	**DRILLING STARTED**	25-Oct-07
LOCATION	800 Center Street, Oakland CA	**DRILLING COMPLETED**	25-Oct-07
PROJECT NUMBER	312002	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	2.75"	**SCREENED INTERVALS**	6 to 6.5 fbg
LOGGED BY	Jeremy Gekov	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	R. Foss, PG #7445	**DEPTH TO WATER (Static)**	NA
REMARKS			

PID (ppm)	Blow Counts	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0		VP-1-6-S		5			**FILL:** Sandy gravel fill	6.5	Portland Type I/II; Bentonite Seal; Monterey Sand #2/16 Vapor Probe Screen
							Bottom of Boring @ 6.5 fbg		

WELL LOG (PID) I:\CHEVRON\206145 OAKLAND\BORING LOGS\206145 VAPOR PROBE 10.25.06.GPJ DEFAULT.GDT 11/15/07

Conestoga-Rovers & Associates
5900 Hollis Street
Emeryville CA
Telephone: 510-420-0700
Fax:

BORING/ WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	VP-2
JOB/SITE NAME	20-6145	**DRILLING STARTED**	25-Oct-07
LOCATION	800 Center Street, Oakland CA	**DRILLING COMPLETED**	25-Oct-07
PROJECT NUMBER	312002	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	2.75"	**SCREENED INTERVALS**	6 to 6.5 fbg
LOGGED BY	Jeremy Gekov	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	R. Foss, PG #7445	**DEPTH TO WATER (Static)**	NA
REMARKS			

PID (ppm)	Blow Counts	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0		VP-2- 6-S		5			**FILL:** Sandy gravel fill	6.5	Portland Type I/II; Bentonite Seal; Monterey Sand #2/16 Vapor Probe Screen
							Bottom of Boring @ 6.5 fbg		

WELL LOG (PID) I:\CHEVRON\206145 OAKLAND\BORING LOGS\206145 VAPOR PROBE 10.25.06.GPJ DEFAULT.GDT 11/15/07

Conestoga-Rovers & Associates
5900 Hollis Street
Emeryville CA
Telephone: 510-420-0700
Fax:

BORING/ WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	VP-3
JOB/SITE NAME	20-6145	**DRILLING STARTED**	25-Oct-07
LOCATION	800 Center Street, Oakland CA	**DRILLING COMPLETED**	25-Oct-07
PROJECT NUMBER	312002	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	2.75"	**SCREENED INTERVALS**	6 to 6.5 fbg
LOGGED BY	Jeremy Gekov	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	R. Foss, PG #7445	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	Blow Counts	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							FILL: Sandy gravel fill		Portland Type I/II
				5					Bentonite Seal
								5.5	
0		VP-3-6-S			SP		**SAND with silt:** Brown; loose; 90% fine to medium sand, 10% silt; moist; non plastic; high estimated permeability.	6.5	Monterey Sand #2/16 Vapor Probe Screen
							Bottom of Boring @ 6.5 fbg		

WELL LOG (PID) I:\CHEVRON\206145 OAKLAND\BORING LOGS\206145 VAPOR PROBE 10.25.06.GPJ DEFAULT.GDT 11/15/07

Conestoga-Rovers & Associates
5900 Hollis Street
Emeryville CA
Telephone: 510-420-0700
Fax:

BORING/ WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	VP-4
JOB/SITE NAME	20-6145	**DRILLING STARTED**	25-Oct-07
LOCATION	800 Center Street, Oakland CA	**DRILLING COMPLETED**	25-Oct-07
PROJECT NUMBER	312002	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	2.75"	**SCREENED INTERVALS**	6 to 6.5 fbg
LOGGED BY	Jeremy Gekov	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	R. Foss, PG #7445	**DEPTH TO WATER (Static)**	NA
REMARKS			

PID (ppm)	Blow Counts	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0		VP-4- 6-S		5			**FILL:** Sandy gravel fill	6.5	Portland Type I/II; Bentonite Seal; Monterey Sand #2/16 Vapor Probe Screen
							Bottom of Boring @ 6.5 fbg		

WELL LOG (PID) I:\CHEVRON\206145 OAKLAND\BORING LOGS\206145 VAPOR PROBE 10.25.06.GPJ DEFAULT.GDT 11/15/07

Conestoga-Rovers & Associates
5900 Hollis Street
Emeryville CA
Telephone: 510-420-0700
Fax:

BORING/ WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	VP-5
JOB/SITE NAME	20-6145	**DRILLING STARTED**	25-Oct-07
LOCATION	800 Center Street, Oakland CA	**DRILLING COMPLETED**	25-Oct-07
PROJECT NUMBER	312002	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	2.75"	**SCREENED INTERVALS**	6 to 6.5 fbg
LOGGED BY	Jeremy Gekov	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	R. Foss, PG #7445	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	Blow Counts	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0		VP-5- 6-S		5	SP		**SAND with silt:**Dark brown; loose; 90% fine to medium sand, 10% silt; moist; non plastic; high estimated permeability. @ 4.5 fbg change in color to brown	6.5	Portland Type I/II Bentonite Seal Monterey Sand #2/16 Vapor Probe Screen
							Bottom of Boring @ 6.5 fbg		

WELL LOG (PID) I:\CHEVRON\206145 OAKLAND\BORING LOGS\206145 VAPOR PROBE 10.25.06.GPJ DEFAULT.GDT 11/15/07

Conestoga-Rovers & Associates
5900 Hollis Street
Emeryville CA
Telephone: 510-420-0700
Fax:

BORING/ WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	VP-6
JOB/SITE NAME	20-6145	**DRILLING STARTED**	25-Oct-07
LOCATION	800 Center Street, Oakland CA	**DRILLING COMPLETED**	25-Oct-07
PROJECT NUMBER	312002	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	2.75"	**SCREENED INTERVALS**	6 to 6.5 fbg
LOGGED BY	Jeremy Gekov	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	R. Foss, PG #7445	**DEPTH TO WATER (Static)**	NA
REMARKS			

PID (ppm)	Blow Counts	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							FILL: Sandy gravel fill		Portland Type I/II
				5	SP		**SAND:** Brown; loose; fine to medium sand; trace clay; moist; low plasticity; high estimated permeability.	4.5	Bentonite Seal
0		VP-6- 6-S						6.5	Monterey Sand #2/16 Vapor Probe Screen
							Bottom of Boring @ 6.5 fbg		

WELL LOG (PID) I:\CHEVRON\206145 OAKLAND\BORING LOGS\206145 VAPOR PROBE 10.25.06.GPJ DEFAULT.GDT 11/15/07

CONESTOGA-ROVERS
& ASSOCIATES

ATTACHMENT D

Standard Field Procedures for Soil Vapor Probe Installation and Sampling

STANDARD FIELD PROCEDURES FOR SOIL VAPOR PROBE INSTALLATION AND SAMPLING

DIRECT PUSH AND VAPOR POINT METHODS

This document describes Conestoga-Rovers & Associates' standard field methods for soil vapor sampling. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Objectives

Soil vapor samples are collected and analyzed to assess whether vapor-phase subsurface contaminants pose a threat to human health or the environment.

Direct Push Method for Soil Vapor Sampling

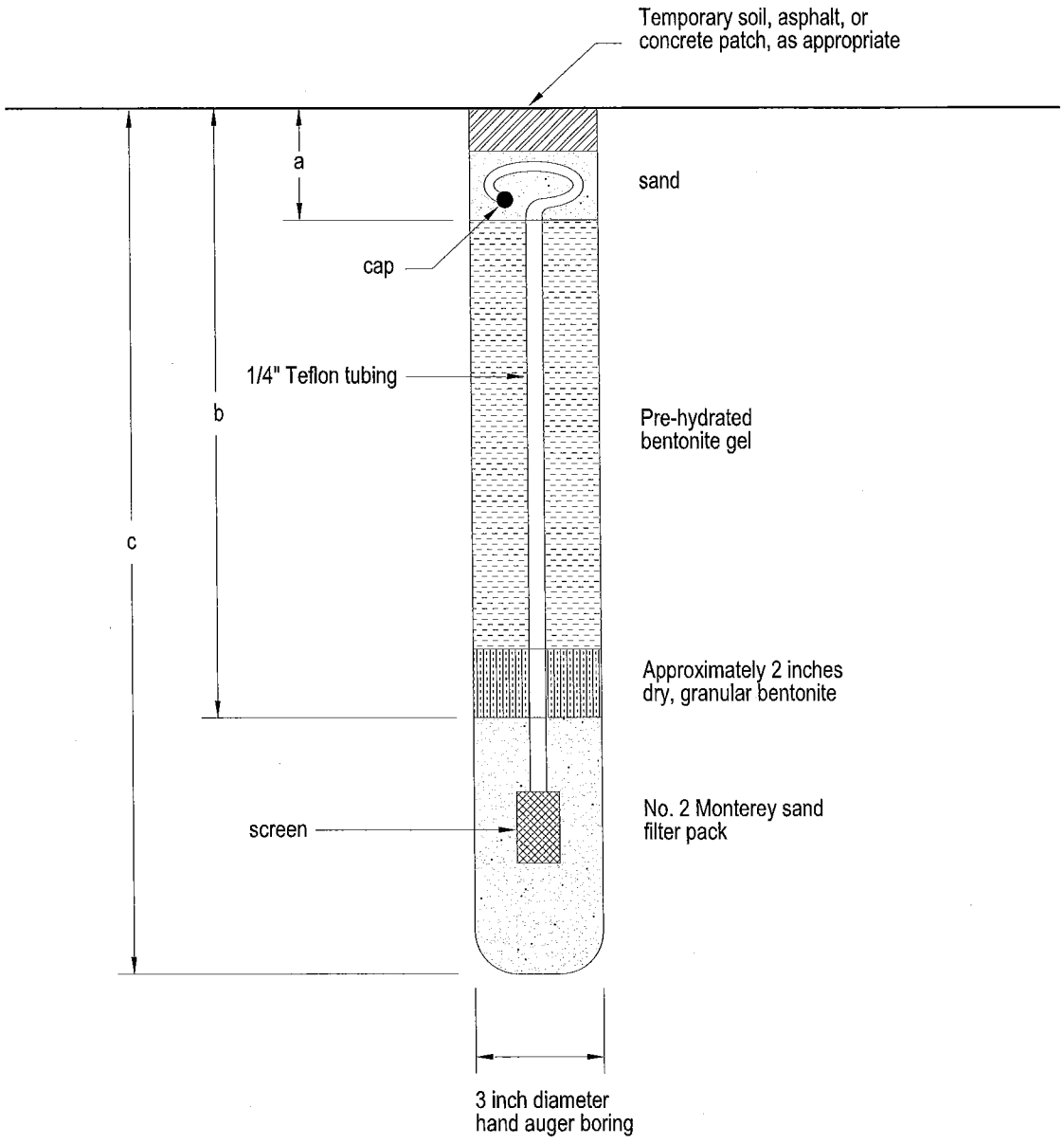
The direct push method for soil vapor sampling uses a hollow vapor probe, which is pushed into the ground, rather than augured, and the stratigraphy forms a vapor seal between the surface and subsurface environments ensuring that the surface and subsurface gases do not mix. Once the desired soil vapor sampling depth has been reached, the field technician installs disposable polyethylene tubing with a threaded adapter that screw into the bottom of the rods. The screw adapter ensures that the vapor sample comes directly from the bottom of the drill rods and does not mix with other vapor from inside the rod or from the ground surface. In addition, hydrated bentonite is placed around the sampling rod and the annulus of the boring to prevent ambient air from entering the boring. The operator then pulls up on the rods and exposes the desired stratigraphy by leaving an expendable drive point at the maximum depth. The required volume of soil vapor is then purged through the polyethylene tubing using a standard vacuum pump. The soil vapor can be sampled for direct injection into a field gas chromatograph, pumped into inert tedlar bags using a "bell jar" sampling device, or allowed to enter a Summa vacuum canister. Once collected, the vapor sample is transported under chain-of-custody to a state-certified laboratory. The ground surface immediately adjacent to the boring is used as a datum to measure sample depth. The horizontal location of each boring is measured in the field relative to a permanent on-site reference using a measuring wheel or tape measure. Drilling and sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent. Once the sampling is completed, the borings are filled to the ground surface with neat cement.

Shallow Soil Vapor Point Method for Soil Vapor Sampling

The shallow soil vapor point method for soil vapor sampling utilizes a hand auger or drill rig to advance a boring for the installation of a soil vapor sampling point. Once the boring is hand augered to the final depth, a 6-inch slotted probe, capped on either end with brass or Swagelok fittings, is placed within 12-inches of number 2/16 filter sand (Figure A). Nylon tubing of ¼-inch outer-diameter of known length is attached to the probe. A 2-inch to 12-inch layer of unhydrated bentonite chips is placed on top of the filter pack. Next pre-hydrated granular bentonite is then poured into the hole to approximately and topped with another 2-inch layer of unhydrated bentonite chips or concrete, depending if the boring will hold one probe or multiple probes. The tube is coiled and placed within a wellbox finished flush to the surface. Soil vapor samples will be collected no sooner than one week after installation of the soil vapor points to allow adequate time for representative soil vapors to accumulate. Soil vapor sample collection will not be scheduled until after a minimum of three consecutive precipitation-free days and irrigation onsite has ceased. Figure B shows the soil vapor sampling apparatus. A measured volume of air will be purged from the tubing using a different Summa purge canister. Immediately after purging, soil vapor samples will be collected using the appropriate size Summa canister with attached flow regulator and sediment filter. The soil vapor points will be preserved until they are no longer needed for risk evaluation purposes. At that time, they will be destroyed by extracting the tubing, hand augering to remove the sand and bentonite, and backfilling the boring with neat cement. The boring will be patched with asphalt or concrete, as appropriate.

Vapor Sample Storage, Handling, and Transport

Samples are stored and transported under chain-of-custody to a state-certified analytic laboratory. Samples should never be cooled due to the possibility of condensation within the canister.



Schematic Not to Scale

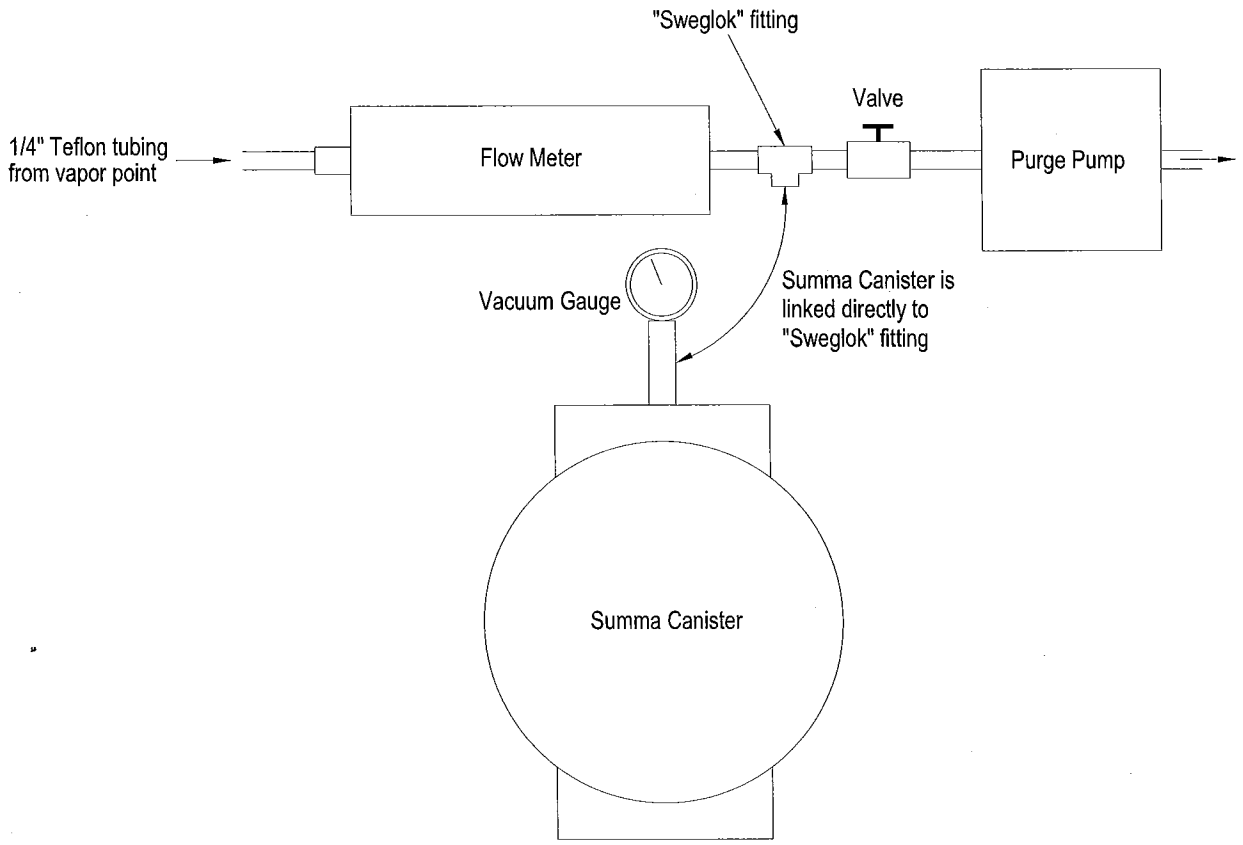
FIGURE

A

Soil Vapor Point

CONESTOGA-ROVERS
& ASSOCIATES

09/25/02



Schematic Not to Scale

FIGURE

B

CONESTOGA-ROVERS
& ASSOCIATES

Soil Vapor Sampling Apparatus Diagram

S:\0-TEXACO\TEX-SITES\211273\FIGURES\VAPOR-DIAG.DWG

CONESTOGA-ROVERS
& ASSOCIATES

ATTACHMENT E

Soil and Vapor Laboratory Reports

Lancaster Laboratories

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

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

925-842-8582

Prepared by:

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

SAMPLE GROUP

The sample group for this submittal is 1063006. Samples arrived at the laboratory on Saturday, October 27, 2007. The PO# for this group is 0015014975 and the release number is SINHA.

Client Description	Lancaster Labs Number
VP-6-S-6-071025 Grab Soil	5197217
VP-5-S-6-071025 Grab Soil	5197218
VP-4-S-6-071025 Grab Soil	5197219
VP-3-S-6-071025 Grab Soil	5197220
VP-2-S-6-071025 Grab Soil	5197221
VP-1-S-6-071025 Grab Soil	5197222

ELECTRONIC COPY TO	CRA	Attn: Charlotte Evans
ELECTRONIC COPY TO	CRA	Attn: J. Gekov

Lancaster Laboratories

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

Analysis Report

REVISED

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

Respectfully Submitted,

Maria S. Lord
Senior Specialist

Lancaster Laboratories

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

Analysis Report

REVISED

Lancaster Laboratories Sample No. SW5197217 **Group No. 1063006**

VP-6-S-6-071025 Grab Soil
Facility# 206145 CETE
800 Center St-Oakland T0600102230 VP-6
Collected:10/25/2007 09:15 by BC

Account Number: 10880

Submitted: 10/27/2007 10:10
Reported: 01/17/2008 at 15:10
Discard: 02/17/2008

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CSO06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	n.a.	N.D.	4.0	mg/kg	1
07360	BTEX+MTBE by 8260B					
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	mg/kg	1
05460	Benzene	71-43-2	N.D.	0.0005	mg/kg	1
05466	Toluene	108-88-3	N.D.	0.001	mg/kg	1
05474	Ethylbenzene	100-41-4	N.D.	0.001	mg/kg	1
06301	Xylene (Total)	1330-20-7	N.D.	0.001	mg/kg	1

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	SW-846 8015B	1	11/01/2007 03:22	Diane V Do	1
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	10/31/2007 15:50	Nicholas R Rossi	1
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	10/31/2007 09:33	Michael J Kochan	n.a.
07004	Extraction - DRO (Soils)	SW-846 3550B	1	10/29/2007 15:00	Doreen K Robles	1

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Analysis Report

REVISED

Lancaster Laboratories Sample No. SW5197218 **Group No. 1063006**

VP-5-S-6-071025 Grab Soil
Facility# 206145 CETE
800 Center St-Oakland T0600102230 VP-5
Collected:10/25/2007 09:30 by BC

Account Number: 10880

Submitted: 10/27/2007 10:10
Reported: 01/17/2008 at 15:10
Discard: 02/17/2008

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CSO05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	n.a.	N.D.	4.0	mg/kg	1
07360	BTEX+MTBE by 8260B					
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	mg/kg	1.01
05460	Benzene	71-43-2	N.D.	0.0005	mg/kg	1.01
05466	Toluene	108-88-3	N.D.	0.001	mg/kg	1.01
05474	Ethylbenzene	100-41-4	N.D.	0.001	mg/kg	1.01
06301	Xylene (Total)	1330-20-7	N.D.	0.001	mg/kg	1.01

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	SW-846 8015B	1	11/01/2007 03:44	Diane V Do	1
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	10/31/2007 16:14	Nicholas R Rossi	1.01
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	10/31/2007 09:35	Michael J Kochan	n.a.
07004	Extraction - DRO (Soils)	SW-846 3550B	1	10/29/2007 15:00	Doreen K Robles	1

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Analysis Report

Lancaster Laboratories Sample No. SW5197219 **Group No. 1063006**

VP-4-S-6-071025 Grab Soil
Facility# 206145 CETE
800 Center St-Oakland T0600102230 VP-4
Collected:10/25/2007 10:10 by BC

Account Number: 10880

Submitted: 10/27/2007 10:10
Reported: 01/17/2008 at 15:10
Discard: 02/17/2008

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CSO04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	n.a.	44.	4.0	mg/kg	1
07360	BTEX+MTBE by 8260B					
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	mg/kg	0.99
05460	Benzene	71-43-2	N.D.	0.0005	mg/kg	0.99
05466	Toluene	108-88-3	N.D.	0.001	mg/kg	0.99
05474	Ethylbenzene	100-41-4	N.D.	0.001	mg/kg	0.99
06301	Xylene (Total)	1330-20-7	N.D.	0.001	mg/kg	0.99

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	SW-846 8015B	2	11/06/2007 19:17	Diane V Do	1
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	10/31/2007 16:37	Nicholas R Rossi	0.99
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	10/31/2007 09:37	Michael J Kochan	n.a.
07004	Extraction - DRO (Soils)	SW-846 3550B	2	11/05/2007 14:00	Olivia Arosemena	1

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Analysis Report

REVISED

Lancaster Laboratories Sample No. SW5197220 **Group No. 1063006**

VP-3-S-6-071025 Grab Soil
Facility# 206145 CETE
800 Center St-Oakland T0600102230 VP-3
Collected:10/25/2007 11:45 by BC

Account Number: 10880

Submitted: 10/27/2007 10:10
Reported: 01/17/2008 at 15:10
Discard: 02/17/2008

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CSO03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	n.a.	6.4	4.0	mg/kg	1
	The LCS recovery is above the QC limits, the LCSD recovery is within limits. Reported data as per client request.					
07360	BTEX+MTBE by 8260B					
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	mg/kg	0.99
05460	Benzene	71-43-2	N.D.	0.0005	mg/kg	0.99
05466	Toluene	108-88-3	N.D.	0.001	mg/kg	0.99
05474	Ethylbenzene	100-41-4	N.D.	0.001	mg/kg	0.99
06301	Xylene (Total)	1330-20-7	N.D.	0.001	mg/kg	0.99

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	SW-846 8015B	2	11/03/2007 12:23	Diane V Do	1
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	10/31/2007 17:00	Nicholas R Rossi	0.99
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	10/31/2007 09:40	Michael J Kochan	n.a.
07004	Extraction - DRO (Soils)	SW-846 3550B	1	10/29/2007 15:00	Doreen K Robles	1

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Analysis Report

Lancaster Laboratories Sample No. SW5197221 **Group No. 1063006**

VP-2-S-6-071025 Grab Soil
Facility# 206145 CETE
800 Center St-Oakland T0600102230 VP-2
Collected:10/25/2007 12:55 by BC

Account Number: 10880

Submitted: 10/27/2007 10:10
Reported: 01/17/2008 at 15:10
Discard: 02/17/2008

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CSO02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	n.a.	300.	100.	mg/kg	25
07360	BTEX+MTBE by 8260B					
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	mg/kg	0.99
05460	Benzene	71-43-2	N.D.	0.0005	mg/kg	0.99
05466	Toluene	108-88-3	N.D.	0.001	mg/kg	0.99
05474	Ethylbenzene	100-41-4	N.D.	0.001	mg/kg	0.99
06301	Xylene (Total)	1330-20-7	0.001	0.001	mg/kg	0.99

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	SW-846 8015B	2	11/06/2007 19:38	Diane V Do	25
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	10/31/2007 17:24	Nicholas R Rossi	0.99
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	10/31/2007 09:42	Michael J Kochan	n.a.
07004	Extraction - DRO (Soils)	SW-846 3550B	2	11/05/2007 14:00	Olivia Arosemena	1

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Analysis Report

Lancaster Laboratories Sample No. SW5197222 **Group No. 1063006**

VP-1-S-6-071025 Grab Soil
Facility# 206145 CETE
800 Center St-Oakland T0600102230 VP-1
Collected:10/25/2007 13:40 by BC

Account Number: 10880

Submitted: 10/27/2007 10:10
Reported: 01/17/2008 at 15:10
Discard: 02/17/2008

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CSO01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	n.a.	4.9	4.0	mg/kg	1
07360	BTEX+MTBE by 8260B					
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	mg/kg	1
05460	Benzene	71-43-2	N.D.	0.0005	mg/kg	1
05466	Toluene	108-88-3	N.D.	0.001	mg/kg	1
05474	Ethylbenzene	100-41-4	N.D.	0.001	mg/kg	1
06301	Xylene (Total)	1330-20-7	N.D.	0.001	mg/kg	1

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	SW-846 8015B	1	11/01/2007 18:02	Diane V Do	1
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	10/31/2007 17:48	Nicholas R Rossi	1
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	10/31/2007 09:45	Michael J Kochan	n.a.
07004	Extraction - DRO (Soils)	SW-846 3550B	1	10/30/2007 09:15	Denise L Trimby	1

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Analysis Report

Quality Control Summary

Client Name: ChevronTexaco
Reported: 01/17/08 at 03:10 PM

Group Number: 1063006

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

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 073020005A	Sample number(s): 5197217-5197218,5197220							
TPH-DRO by 8015B w/Silica Gel	N.D.	4.0	mg/kg	114*	107	71-109	6	20
Batch number: 073030007A	Sample number(s): 5197222							
TPH-DRO by 8015B w/Silica Gel	N.D.	4.0	mg/kg	98	102	71-109	4	20
Batch number: 073070020A	Sample number(s): 5197219,5197221							
TPH-DRO by 8015B w/Silica Gel	N.D.	4.0	mg/kg	90	93	71-109	3	20
Batch number: B073041AA	Sample number(s): 5197217-5197222							
Methyl Tertiary Butyl Ether	N.D.	0.0005	mg/kg	93		72-117		
Benzene	N.D.	0.0005	mg/kg	96		84-115		
Toluene	N.D.	0.001	mg/kg	93		81-116		
Ethylbenzene	N.D.	0.001	mg/kg	89		82-115		
Xylene (Total)	N.D.	0.001	mg/kg	87		82-117		

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: B073041AA	Sample number(s): 5197217-5197222 UNSPK: P197153								
Methyl Tertiary Butyl Ether	85	83	59-119	2	30				
Benzene	94	92	66-112	2	30				
Toluene	94	91	50-121	3	30				
Ethylbenzene	93	90	54-116	3	30				
Xylene (Total)	91	89	52-117	2	30				

Surrogate Quality Control

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

Analysis Name: TPH-DRO by 8015B w/Silica Gel
Batch number: 073020005A

	Orthoterphenyl
5197217	122
5197218	96
5197220	96

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

Quality Control Summary

Client Name: ChevronTexaco
Reported: 01/17/08 at 03:10 PM

Group Number: 1063006

Surrogate Quality Control

Blank	109
LCS	141*
LCSD	132*
Limits:	59-129

Analysis Name: TPH-DRO by 8015B w/Silica Gel
Batch number: 073030007A

	Orthoterphenyl
5197222	96
Blank	98
LCS	124
LCSD	126
Limits:	59-129

Analysis Name: TPH-DRO by 8015B w/Silica Gel
Batch number: 073070020A

	Orthoterphenyl
5197219	102
5197221	75
Blank	105
LCS	114
LCSD	115
Limits:	59-129

Analysis Name: BTEX+MTBE by 8260B
Batch number: B073041AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5197217	97	96	96	88
5197218	96	91	93	87
5197219	98	95	98	84
5197220	96	95	98	86
5197221	99	96	102	78
5197222	97	97	96	87
Blank	98	99	95	88
LCS	98	98	96	92
MS	96	93	97	90
MSD	96	94	97	91
Limits:	71-114	70-109	70-123	70-111

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

Chevron California Region Analysis Request/Chain of Custody

242838

Lancaster Laboratories
Where quality is a science.

10260Z-12

For Lancaster Laboratories use only
Acct. #: 10880 Sample #: 5197217-22 SCR#:

C# 10630006

Facility #: 20-6145 A1L
Site Address: 800 Center St, Oakland CA
Chevron PM: Satya Sinha Lead Consultant: CRA
Consultant/Office: Emeryville
Consultant Prj. Mgr.: Charlotte Evans
Consultant Phone #: 510-420-3351 Fax #: 510-420-9170
Sampler: Bruce Campbell
Service Order #: ☐ Non SAR:

Analyses Requested

Preservation Codes

Field Point Name	Matrix	Repeat Sample	Top Depth	Year Month Day	Time Collected	New Field Pt.	Grab	Composite	Total Number of Containers	BTEX + MTBE 8260 ☐ 8021 ☒	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☒ Silica Gel Cleanup	8260 full scan	Oxygenates ___	Lead 7420 ☐ 7421 ☐
VP-6-6'-S	Soil		6'	07-10-25	9:15	X	X		1	X		X			
VP-5-6'-S					9:30	X	X		1	X		X			
VP-4-6'-S					10:10	X	X		1	X		X			
VP-3-6'-S					11:45	X	X		1	X		X			
VP-2-6'-S					12:55	X	X		1	X		X			
VP-1-6'-S					13:40	X	X		1	X		X			

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

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

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

Comments / Remarks
email edf to:
dohare@craworld.com
results to:
cevans@craworld.com
jgakov@craworld.com

Turnaround Time Requested (TAT) (please circle)
STD. TAT (circled) 72 hour 48 hour
24 hour 4 day 5 day

Data Package Options (please circle if required)
QC Summary Type I – Full
Type VI (Raw Data) ☐ Coelt Deliverable not needed
WIP (RWQCB)
Disk

	Date	Time		Date	Time
Relinquished by:	10/26/07	0910	Received by:	10/26/07	0910
Relinquished by:	10-26-07	1530	Received by:	10-26-07	
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by Commercial Carrier: UPS FedEx Other Hdc			Received by:	Date	Time
Temperature Upon Receipt 1.6-3.5 C°			Custody Seals Intact? Yes No		

3460 Rev. 10/04/01

Lancaster Laboratories
Explanation of Symbols and Abbreviations

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

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

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

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

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

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

Air Toxics LTD.
AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0711159C

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. #**	312002
FAX:	510-420-9170	**PROJECT #**	206145 206145 Oakland
DATE RECEIVED:	11/08/2007	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	11/15/2007		

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

CERTIFIED BY: Linda D. Fruman DATE: 11/15/07

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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

LABORATORY NARRATIVE
Modified ASTM D-1946
Conestoga-Rovers Associates (CRA)
Workorder# 0711159C

Seven 1 Liter Summa Canister (100% Certified) samples were received on November 08, 2007. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

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

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

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

Receiving Notes

The Chain of Custody (COC) information for sample VP-3 did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: VP-1

Lab ID#: 0711159C-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	10

Client Sample ID: VP-3

Lab ID#: 0711159C-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	16
Carbon Dioxide	0.023	2.0

Client Sample ID: VP-5

Lab ID#: 0711159C-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	16
Carbon Dioxide	0.024	4.4

Client Sample ID: VP-4

Lab ID#: 0711159C-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	9.7
Carbon Dioxide	0.024	4.0

Client Sample ID: VP-6

Lab ID#: 0711159C-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	20
Carbon Dioxide	0.025	1.0

Client Sample ID: VP-6 Duplicate

Lab ID#: 0711159C-06A

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

Client Sample ID: VP-6 Duplicate

Lab ID#: 0711159C-06A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	20
Carbon Dioxide	0.025	1.0

Client Sample ID: VP-2

Lab ID#: 0711159C-07A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	10
Carbon Dioxide	0.024	0.88

Client Sample ID: VP-2 Lab Duplicate

Lab ID#: 0711159C-07AA

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	10
Carbon Dioxide	0.024	0.88

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-1

Lab ID#: 0711159C-01A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	9111306	Date of Collection:	11/6/07
Dil. Factor:	2.38	Date of Analysis:	11/12/07 08:08 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	10
Methane	0.00024	Not Detected
Carbon Dioxide	0.024	Not Detected

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-3

Lab ID#: 0711159C-02A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	9111308	Date of Collection:	11/6/07
Dil. Factor:	2.33	Date of Analysis:	11/12/07 08:52 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	16
Methane	0.00023	Not Detected
Carbon Dioxide	0.023	2.0

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-5

Lab ID#: 0711159C-03A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	9111309	Date of Collection:	11/6/07
Dil. Factor:	2.38	Date of Analysis:	11/12/07 09:13 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	16
Methane	0.00024	Not Detected
Carbon Dioxide	0.024	4.4

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-4

Lab ID#: 0711159C-04A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	9111310	Date of Collection:	11/6/07
Dil. Factor:	2.42	Date of Analysis:	11/12/07 09:37 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	9.7
Methane	0.00024	Not Detected
Carbon Dioxide	0.024	4.0

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-6

Lab ID#: 0711159C-05A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	9111311	Date of Collection:	11/6/07
Dil. Factor:	2.53	Date of Analysis:	11/12/07 09:59 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	20
Methane	0.00025	Not Detected
Carbon Dioxide	0.025	1.0

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

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-6 Duplicate

Lab ID#: 0711159C-06A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	**9111312**	**Date of Collection: 11/6/07**	
Dil. Factor:	**2.47**	**Date of Analysis: 11/12/07 10:20 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	20
Methane	0.00025	Not Detected
Carbon Dioxide	0.025	1.0

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-2

Lab ID#: 0711159C-07A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	9111313	Date of Collection:	11/6/07
Dil. Factor:	2.42	Date of Analysis:	11/12/07 10:46 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	10
Methane	0.00024	Not Detected
Carbon Dioxide	0.024	0.88

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

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-2 Lab Duplicate

Lab ID#: 0711159C-07AA

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	9111314	Date of Collection:	11/6/07
Dil. Factor:	2.42	Date of Analysis:	11/12/07 11:11 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	10
Methane	0.00024	Not Detected
Carbon Dioxide	0.024	0.88

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0711159C-08A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	9111305	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 11/12/07 07:42 PM	

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

Container Type: NA - Not Applicable

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0711159C-09A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	9111329b	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 11/13/07 08:32 AM	

Compound	%Recovery
Oxygen	103
Carbon Dioxide	95

Container Type: NA - Not Applicable

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0711159C-09B

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	9111328	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 11/13/07 05:54 AM	

Compound	%Recovery
Methane	97

Container Type: NA - Not Applicable

Air Toxics LTD.
AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0711159B

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. #**	312002
FAX:	510-420-9170	**PROJECT #**	206145 206145 Oakland
DATE RECEIVED:	11/08/2007	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	11/15/2007		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	VP-1	Modified TO-3	4.5 "Hg
02A	VP-3	Modified TO-3	4.0 "Hg
03A	VP-5	Modified TO-3	4.5 "Hg
04A	VP-4	Modified TO-3	5.0 "Hg
05A	VP-6	Modified TO-3	6.0 "Hg
06A	VP-6 Duplicate	Modified TO-3	5.5 "Hg
07A	VP-2	Modified TO-3	5.0 "Hg
07AA	VP-2 Lab Duplicate	Modified TO-3	5.0 "Hg
08A	Lab Blank	Modified TO-3	NA
09A	LCS	Modified TO-3	NA

CERTIFIED BY: Linda A. Freeman DATE: 11/15/07

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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

LABORATORY NARRATIVE
Modified TO-3
Conestoga-Rovers Associates (CRA)
Workorder# 0711159B

Seven 1 Liter Summa Canister (100% Certified) samples were received on November 08, 2007. 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. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	*TO-3*	*ATL Modifications*
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-3 did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

Analytical Notes

The hydrocarbon profile present in sample VP-1 was heavier than that of commercial gasoline. Results were calculated using the response factor derived from the current gasoline linear calibration.

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: VP-1

Lab ID#: 0711159B-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	60	340	240	1400

Client Sample ID: VP-3

Lab ID#: 0711159B-02A

No Detections Were Found.

Client Sample ID: VP-5

Lab ID#: 0711159B-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	2400	520000	9700	2100000

Client Sample ID: VP-4

Lab ID#: 0711159B-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	60	68	250	280

Client Sample ID: VP-6

Lab ID#: 0711159B-05A

No Detections Were Found.

Client Sample ID: VP-6 Duplicate

Lab ID#: 0711159B-06A

No Detections Were Found.

Client Sample ID: VP-2

Lab ID#: 0711159B-07A

No Detections Were Found.

Client Sample ID: VP-2 Lab Duplicate

Lab ID#: 0711159B-07AA

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: VP-2 Lab Duplicate

Lab ID#: 0711159B-07AA

No Detections Were Found.

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-1

Lab ID#: 0711159B-01A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6110904	Date of Collection:	11/6/07
Dil. Factor:	2.38	Date of Analysis:	11/9/07 01:50 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	60	340	240	1400

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

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

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-3

Lab ID#: 0711159B-02A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6110905	Date of Collection:	11/6/07
Dil. Factor:	2.33	Date of Analysis:	11/9/07 02:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	58	Not Detected	240	Not Detected

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

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

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-5

Lab ID#: 0711159B-03A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6110906	Date of Collection:	11/6/07
Dil. Factor:	95.2	Date of Analysis:	11/9/07 02:52 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	2400	520000	9700	2100000

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	108	75-150

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-4

Lab ID#: 0711159B-04A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6110907	Date of Collection:	11/6/07
Dil. Factor:	2.42	Date of Analysis:	11/9/07 03:34 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	60	68	250	280

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	89	75-150

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-6

Lab ID#: 0711159B-05A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6110908	Date of Collection:	11/6/07
Dil. Factor:	2.53	Date of Analysis:	11/9/07 04:03 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	63	Not Detected	260	Not Detected

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

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-6 Duplicate

Lab ID#: 0711159B-06A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6110909	Date of Collection:	11/6/07
Dil. Factor:	2.47	Date of Analysis:	11/9/07 04:30 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	62	Not Detected	250	Not Detected

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

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-2

Lab ID#: 0711159B-07A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6110910	Date of Collection:	11/6/07
Dil. Factor:	2.42	Date of Analysis:	11/9/07 04:57 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	60	Not Detected	250	Not Detected

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

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-2 Lab Duplicate

Lab ID#: 0711159B-07AA

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6110911	Date of Collection:	11/6/07
Dil. Factor:	2.42	Date of Analysis:	11/9/07 05:29 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	60	Not Detected	250	Not Detected

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	89	75-150

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0711159B-08A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6110903	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 11/9/07 01:14 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)	89	75-150

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0711159B-09A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	6110926	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 11/9/07 02:43 PM	

Compound	%Recovery
TPH (Gasoline Range)	86

Container Type: NA - Not Applicable

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

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager: Charlotte Evans
Collected by: (Print and Sign) CEvans CEvans
Company: CRA Email: cevans@CRAworld.com
Address: 5900 Hollis St. City: Emeryville State: CA Zip: 94608
Phone: 510-420-3351 Fax: 510-420-9170

Project Info:
P.O. #: 312002
Project #: 206145
Project Name: 206145 Oakland

Turn Around Time:
☐ Normal
☒ Rush
5-day (specify)

Lab Use Only
Pressurized by: VFR
Date: 11/8/07
Pressurization Gas: (N2) He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	VP-1	25278	11/06/07	12:33	TPHg by TO-3	-30	-5	4.5"Hg	15.0psi
02A	VP-3	55387	11/06/07	13:04	CO_2, O_2, Methane by	-30	-4.5	4.0"Hg	
03A	VP-5	35632	11/06/07	13:34	ASTM D-1946	-30	-3	4.5"Hg	
04A	VP-4	33413	11/06/07	14:02		-29	-5	5.0"Hg	
05A	VP-6	2118	11/06/07	15:12	BTEX, MTBE,	-30	-5.5	6.0"Hg	
06A	VP-6 Duplicate	33633	11/06/07	15:12	Naphthalene,	-30	-5.5	5.5"Hg	
07A	VP-2	34602	11/06/07	15:38	isobutane, butane,	-30	-4	5.0"Hg	
					propane by				
					TO-15				

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
CEvans	11/07/07 11:25am	Monica Brosen AIL	11/8/07 (8:30)
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:
EDF Data needed for Geotracker
units: ppbv and ug/m3

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	DHL	2435812835	NA	Good	Yes No None	0711159

Form 1293 rev.11

Air Toxics LTD.
AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0711159A

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. #**	312002
FAX:	510-420-9170	**PROJECT #**	206145 206145 Oakland
DATE RECEIVED:	11/08/2007	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	11/15/2007		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	VP-1	Modified TO-15/TICs	4.5 "Hg
01AA	VP-1 Lab Duplicate	Modified TO-15/TICs	4.5 "Hg
02A	VP-3	Modified TO-15/TICs	4.0 "Hg
03A	VP-5	Modified TO-15/TICs	4.5 "Hg
04A	VP-4	Modified TO-15/TICs	5.0 "Hg
05A	VP-6	Modified TO-15/TICs	6.0 "Hg
06A	VP-6 Duplicate	Modified TO-15/TICs	5.5 "Hg
07A	VP-2	Modified TO-15/TICs	5.0 "Hg
08A	Lab Blank	Modified TO-15/TICs	NA
08B	Lab Blank	Modified TO-15/TICs	NA
09A	CCV	Modified TO-15/TICs	NA
09B	CCV	Modified TO-15/TICs	NA
10A	LCS	Modified TO-15/TICs	NA
10B	LCS	Modified TO-15/TICs	NA

CERTIFIED BY: Linda A. Truman DATE: 11/15/07

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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

LABORATORY NARRATIVE
Modified TO-15
Conestoga-Rovers Associates (CRA)
Workorder# 0711159A

LUMEN DATA VALIDATED

Seven 1 Liter Summa Canister (100% Certified) samples were received on November 08, 2007. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.5 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.

Requirement	*TO-15*	*ATL Modifications*
Daily CCV	+- 30% Difference	</= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers
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-3 did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

Analytical Notes

Dilution was performed on sample VP-5 due to the presence of high level non-target species.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

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

Client Sample ID: VP-1

Lab ID#: 0711159A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Toluene	1.2	4.3	4.5	16

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	53%	8.0
Propane, 2-methyl-	75-28-5	50%	6.6

Client Sample ID: VP-1 Lab Duplicate

Lab ID#: 0711159A-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Toluene	1.2	3.8	4.5	14

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	42%	7.5
Propane, 2-methyl-	75-28-5	37%	6.5

Client Sample ID: VP-3

Lab ID#: 0711159A-02A

No Detections Were Found.

Client Sample ID: VP-5

Lab ID#: 0711159A-03A

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	52%	85000
Propane, 2-methyl-	75-28-5	59%	13000

Client Sample ID: VP-4

Lab ID#: 0711159A-04A

No Detections Were Found.

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

Client Sample ID: VP-6

Lab ID#: 0711159A-05A
No Detections Were Found.

Client Sample ID: VP-6 Duplicate

Lab ID#: 0711159A-06A
No Detections Were Found.

Client Sample ID: VP-2

Lab ID#: 0711159A-07A
No Detections Were Found.

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-1

Lab ID#: 0711159A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	y111413	Date of Collection:	11/6/07
Dil. Factor:	2.38	Date of Analysis:	11/14/07 06:01 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	Not Detected	3.8	Not Detected
Toluene	1.2	4.3	4.5	16
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
Methyl tert-butyl ether	4.8	Not Detected	17	Not Detected
Naphthalene	4.8	Not Detected	25	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	53%	8.0
Propane, 2-methyl-	75-28-5	50%	6.6
Propane	74-98-6	NA	Not Detected

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

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

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-1 Lab Duplicate

Lab ID#: 0711159A-01AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	y111419	Date of Collection:	11/6/07
Dil. Factor:	2.38	Date of Analysis:	11/14/07 09:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	Not Detected	3.8	Not Detected
Toluene	1.2	3.8	4.5	14
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
Methyl tert-butyl ether	4.8	Not Detected	17	Not Detected
Naphthalene	4.8	Not Detected	25	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	42%	7.5
Propane, 2-methyl-	75-28-5	37%	6.5
Propane	74-98-6	NA	Not Detected

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

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-3

Lab ID#: 0711159A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	y111414	Date of Collection:	11/6/07
Dil. Factor:	2.33	Date of Analysis:	11/14/07 06:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	Not Detected	3.7	Not Detected
Toluene	1.2	Not Detected	4.4	Not Detected
Ethyl Benzene	1.2	Not Detected	5.0	Not Detected
m,p-Xylene	1.2	Not Detected	5.0	Not Detected
o-Xylene	1.2	Not Detected	5.0	Not Detected
Methyl tert-butyl ether	4.7	Not Detected	17	Not Detected
Naphthalene	4.7	Not Detected	24	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

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

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-5

Lab ID#: 0711159A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5111416	Date of Collection:	11/6/07
Dil. Factor:	476	Date of Analysis:	11/14/07 07:42 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	240	Not Detected	760	Not Detected
Toluene	240	Not Detected	900	Not Detected
Ethyl Benzene	240	Not Detected	1000	Not Detected
m,p-Xylene	240	Not Detected	1000	Not Detected
o-Xylene	240	Not Detected	1000	Not Detected
Methyl tert-butyl ether	950	Not Detected	3400	Not Detected
Naphthalene	950	Not Detected	5000	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	52%	85000
Propane, 2-methyl-	75-28-5	59%	13000
Propane	74-98-6	NA	Not Detected

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

Surrogates	%Recovery	Method Limits
Toluene-d8	93	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-4

Lab ID#: 0711159A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	y111415	Date of Collection:	11/6/07
Dil. Factor:	2.42	Date of Analysis:	11/14/07 07:11 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
Methyl tert-butyl ether	4.8	Not Detected	17	Not Detected
Naphthalene	4.8	Not Detected	25	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

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

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-6

Lab ID#: 0711159A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	y111416	Date of Collection:	11/6/07
Dil. Factor:	2.53	Date of Analysis:	11/14/07 07:52 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.3	Not Detected	4.0	Not Detected
Toluene	1.3	Not Detected	4.8	Not Detected
Ethyl Benzene	1.3	Not Detected	5.5	Not Detected
m,p-Xylene	1.3	Not Detected	5.5	Not Detected
o-Xylene	1.3	Not Detected	5.5	Not Detected
Methyl tert-butyl ether	5.1	Not Detected	18	Not Detected
Naphthalene	5.1	Not Detected	26	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

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

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-6 Duplicate

Lab ID#: 0711159A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	y111417	Date of Collection:	11/6/07
Dil. Factor:	2.47	Date of Analysis:	11/14/07 08:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected
Methyl tert-butyl ether	4.9	Not Detected	18	Not Detected
Naphthalene	4.9	Not Detected	26	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

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

Surrogates	%Recovery	Method Limits
Toluene-d8	128	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	96	70-130

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-2

Lab ID#: 0711159A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	y111418	Date of Collection:	11/6/07
Dil. Factor:	2.42	Date of Analysis:	11/14/07 08:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	Not Detected	3.9	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
Methyl tert-butyl ether	4.8	Not Detected	17	Not Detected
Naphthalene	4.8	Not Detected	25	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

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

Surrogates	%Recovery	Method Limits
Toluene-d8	129	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	97	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0711159A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	y111405	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 11/14/07 01:01 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	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
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
Naphthalene	2.0	Not Detected	10	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: NA - Not Applicable

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

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0711159A-08B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5111408	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 11/14/07 02:35 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	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
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
Naphthalene	2.0	Not Detected	10	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	95	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0711159A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	y111402	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 11/14/07 10:52 AM	

Compound	%Recovery
Benzene	103
Toluene	107
Ethyl Benzene	111
m,p-Xylene	114
o-Xylene	115
Methyl tert-butyl ether	94
Naphthalene	114

Container Type: NA - Not Applicable

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

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0711159A-09B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5111402	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 11/14/07 11:10 AM	

Compound	%Recovery
Benzene	103
Toluene	98
Ethyl Benzene	108
m,p-Xylene	108
o-Xylene	105
Methyl tert-butyl ether	90
Naphthalene	98

Container Type: NA - Not Applicable

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

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0711159A-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	y111404	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 11/14/07 12:09 PM	

Compound	%Recovery
Benzene	110
Toluene	114
Ethyl Benzene	106
m,p-Xylene	109
o-Xylene	111
Methyl tert-butyl ether	86
Naphthalene	98

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0711159A-10B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5111407	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 11/14/07 01:46 PM	

Compound	%Recovery
Benzene	110
Toluene	110
Ethyl Benzene	109
m,p-Xylene	111
o-Xylene	111
Methyl tert-butyl ether	86
Naphthalene	104

Container Type: NA - Not Applicable

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

CONESTOGA-ROVERS
& ASSOCIATES

ATTACHMENT F

Waste Profile Laboratory Report

Lancaster Laboratories

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

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

925-842-8582

Prepared by:

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

SAMPLE GROUP

The sample group for this submittal is 1063007. Samples arrived at the laboratory on Saturday, October 27, 2007. The PO# for this group is 0015014975 and the release number is SINHA.

Client Description	Lancaster Labs Number
Waste-S-071025 Composite Soil	5197223

1 COPY TO	IWM, Inc.	Attn: Jay DeLeon
ELECTRONIC COPY TO	CRA	Attn: Charlotte Evans

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

Respectfully Submitted,

Christine Dulaney
Senior Specialist

Lancaster Laboratories

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

Analysis Report

REVISED

Lancaster Laboratories Sample No. SW 5197223

Waste-S-071025 Composite Soil
Facility# 206145 CETE
800 Center St-Oakland T0600102230 Waste
Collected:10/25/2007 14:05 by BC

Account Number: 10880

Submitted: 10/27/2007 10:10
Reported: 11/13/2007 at 16:58
Discard: 12/14/2007

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

ARCSO
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CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	n.a.	5.5	4.0	mg/kg	1
06955	Lead	7439-92-1	7.92	0.485	mg/kg	1
07360	BTEX+MTBE by 8260B					
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	mg/kg	1.01
05460	Benzene	71-43-2	N.D.	0.0005	mg/kg	1.01
05466	Toluene	108-88-3	N.D.	0.001	mg/kg	1.01
05474	Ethylbenzene	100-41-4	N.D.	0.001	mg/kg	1.01
06301	Xylene (Total)	1330-20-7	N.D.	0.001	mg/kg	1.01

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02222	TPH-DRO by 8015B w/Silica Gel	SW-846 8015B	1	11/01/2007 18:24	Diane V Do	1
06955	Lead	SW-846 6010B	2	11/01/2007 04:10	Choon Y Tian	1
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	10/31/2007 18:11	Nicholas R Rossi	1.01
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	10/31/2007 09:51	Michael J Kochan	n.a.
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/29/2007 18:30	James L Mertz	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	10/30/2007 09:15	Denise L Trimby	1

Lancaster Laboratories

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

Analysis Report

Quality Control Summary

Client Name: ChevronTexaco
Reported: 11/13/07 at 04:58 PM

Group Number: 1063007

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

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 073025708001	Sample number(s): 5197223							
Lead	N.D.	0.490	mg/kg	91		90-110		
Batch number: 073030007A	Sample number(s): 5197223							
TPH-DRO by 8015B w/Silica Gel	N.D.	4.0	mg/kg	98	102	71-109	4	20
Batch number: B073041AA	Sample number(s): 5197223							
Methyl Tertiary Butyl Ether	N.D.	0.0005	mg/kg	93		72-117		
Benzene	N.D.	0.0005	mg/kg	96		84-115		
Toluene	N.D.	0.001	mg/kg	93		81-116		
Ethylbenzene	N.D.	0.001	mg/kg	89		82-115		
Xylene (Total)	N.D.	0.001	mg/kg	87		82-117		

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 073025708001	Sample number(s): 5197223			UNSPK: P193116		BKG: P193116			
Lead	3602 (2)	2404 (2)	75-125	14	20	684.	729.	6	20
Batch number: B073041AA	Sample number(s): 5197223			UNSPK: P197153					
Methyl Tertiary Butyl Ether	85	83	59-119	2	30				
Benzene	94	92	66-112	2	30				
Toluene	94	91	50-121	3	30				
Ethylbenzene	93	90	54-116	3	30				
Xylene (Total)	91	89	52-117	2	30				

Surrogate Quality Control

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

Analysis Name: TPH-DRO by 8015B w/Silica Gel
Batch number: 073030007A

	Orthoterphenyl
5197223	98
Blank	98

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

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Analysis Report

Quality Control Summary

Client Name: ChevronTexaco
Group Number: 1063007
Reported: 11/13/07 at 04:58 PM

Surrogate Quality Control

LCS	124
LCSD	126
Limits:	59-129

Analysis Name: BTEX+MTBE by 8260B
Batch number: B073041AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5197223	97	90	97	86
Blank	98	99	95	88
LCS	98	98	96	92
MS	96	93	97	90
MSD	96	94	97	91
Limits:	71-114	70-109	70-123	70-111

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

Chevron California Region Analysis Request/Chain of Custody

242837

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102609-10

For Lancaster Laboratories use only
Acct. #: 10880 Sample #: 5197223-24 SCR#:

C# 1063007

Facility #: 20-6145 A/L
Site Address: 800 Center St. Oakland CA
Chevron PM: Satya Sinha Lead Consultant: CRA
Consultant/Office: Emeryville
Consultant Prj. Mgr.: Charlotte Evans
Consultant Phone #: 510-420-3351 Fax #: 510-420-9170
Sampler: Bruce Campbell
Service Order #: ☐ Non SAR:

Analyses Requested

Preservation Codes

Field Point Name	Matrix	Repeat Sample	Top Depth	Year Month Day	Time Collected	New Field Pt.	Grab	Composite	Total Number of Containers	BTEX + MTBE 8260 ☒ 8021 ☐	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☒ Silica Gel Cleanup	8260 full scan	Oxygenates	Lead 7420 ☐ 7421 ☐ 6010B
Waste Soil	Soil			02-10-25	1405			X	1	X		X			X

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

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

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

Comments / Remarks
email to:
cevans@craworld.com

Fax results to
Jay at IWM

Turnaround Time Requested (TAT) (please circle)
STD. TAT 72 hour 48 hour
24 hour 4 day 5 day

Data Package Options (please circle if required)
QC Summary Type I – Full
Type VI (Raw Data) ☐ Coelt Deliverable not needed
WIP (RWQCB)
Disk

	Date	Time		Date	Time
Relinquished by:	10/26/01	0910	Received by:	10/26/01	0910
Relinquished by:	10/26/01	1530	Received by:	10-26-01	
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other Dlvr			Received by:		
Temperature Upon Receipt 10-3.5°C			Custody Seals Intact? Yes No		

3460 Rev. 10/04/01

Lancaster Laboratories
Explanation of Symbols and Abbreviations

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

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

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

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

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

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