Stacie H. Frerichs
Team Lead
Marketing Business Unit

Chevron Environmental Management Company
6001 Bollinger Canyon Road
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Tel (925) 842-9655
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January 31, 2011

Mr. Mark Detterman, P.G., C.E.G.
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Chevron Facility #9-1723
Address: 9757 San Leandro Street
Oakland, California
LOP Case No. RO0000412

I have reviewed the attached report titled *Soil Vapor Quality Evaluation* and dated January 31, 2011.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Conestoga-Rovers & Associates, upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

SH Frerichs

Stacie H. Frerichs
Project Manager

Enclosure: Report

CONESTOGA-ROVERS
& ASSOCIATES

10969 Trade Center Drive
Rancho Cordova, California 95670
Telephone: (916) 889-8900 Fax: (916) 889-8999
www.CRAworld.com

January 31, 2011 Reference No. 610675

Mr. Mark Detterman, P.G., C.E.G.
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Soil Vapor Quality Evaluation
Former Chevron Service Station 9-1723
9757 San Leandro Street
Oakland, California
LOP Case No. RO0000412

Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA) has prepared this *Soil Vapor Quality Evaluation* on behalf of Chevron Environmental Management Company (Chevron) presenting the results of the recent investigation at the site referenced above. In a letter dated October 23, 2008 (Attachment A), Alameda County Environmental Health (ACEH) requested that prior to consideration for case closure, further evaluation of soil vapor quality and potential vapor intrusion concerns at the site was needed due to elevated benzene concentrations previously detected in soil vapor in 1997. To evaluate shallow soil vapor quality, CRA installed and sampled soil vapor wells VP-1 through VP-5 at the site. The work was performed in general accordance with the February 13, 2009 *Work Plan for Soil Vapor Investigation* (work plan). Presented below are the site description and background, the details and results of the investigation, and our conclusions and recommendations.

SITE DESCRIPTION AND BACKGROUND

The site is a former Chevron-branded service station located on the western corner of the intersection of San Leandro Street and 98th Avenue (Figure 1), and is currently used as a secured parking area for a distribution company. The site was occupied by a service station from at least 1946 (based on historical aerial photographs) until 1978 when the station was closed and the underground storage tanks (USTs) and associated facilities were removed. Two generations of USTs were located onsite. The first generation tanks, removed prior to 1968 due to street widening activities, consisted of three fuel USTs located on the northeast side of the site; this area is now mainly beneath the San Leandro Street right-of-way. The second generation tanks consisted of a used-oil UST and three fuel USTs located in the west and

north-central portions of the site, respectively. Current and former site facilities are presented on Figure 2.

The site is located in a primarily industrial area. A Shell service station was formerly located adjacent to the northwest of the site, and a Thrifty gasoline service station (9801 San Leandro Street) was formerly located to the southeast of the site across 98th Avenue; the Thrifty facility was a former Leaking Underground Storage Tank (LUST) case. The property to the southwest, west, and northwest of the site was formerly occupied by a Gerber Products Company (Gerber) food processing plant. The subject site was purchased by Gerber in 1980; but is currently owned by a private party.

Environmental investigation has been ongoing at the site since 1987; the site has also been included as part of investigations of the Gerber facility. Prior to the current investigation, work has included the drilling of borings DH-8, SB-1 through SB-6 (1989), SB-1 through SB-23 (1996); the installation of wells MW-5 through MW-10; and a soil vapor survey (SV-1 through SV-6) in 1997. A summary of the environmental work is included as Attachment B. The approximate well, boring, and soil vapor sampling locations are presented on Figure 2.

CRA previously submitted the December 14, 2006 *Closure Request*, in which case closure was recommended for the site based on low-risk conditions. However, in the October 23, 2008 letter, ACEH requested that prior to consideration for case closure, further evaluation of soil vapor quality and potential vapor intrusion concerns at the site was needed due to elevated benzene concentrations previously detected in soil vapor in 1997. As presented in the table included with the work plan, benzene was detected in the soil vapor samples collected from SV-1 through SV-4 and SV-6 at concentrations up to approximately 10,000 micrograms per cubic meter (µg/m^3), and was detected at approximately 319,500 µg/m^3 in the sample collected at 5 feet below grade (fbg) from SV-5. Therefore, the installation and sampling of five shallow soil vapor wells was proposed.

INVESTIGATION ACTIVITIES

CRA installed and sampled vapor wells VP-1 through VP-5 to evaluate shallow soil vapor quality at the site. The vapor wells were all located in the existing parking area. The approximate vapor well locations are shown on Figure 2. The details of the investigation are presented in the following sections. The drilling and well installation work was performed on June 24, 2010; and the vapor wells were sampled on June 29, 2010. Fieldwork was performed by CRA Staff Scientist Chris Benedict under the supervision of James Kiernan, P.E.

Drilling Activities

Prior to drilling, CRA obtained Permit No. 2010-0327 from the Alameda County Public Works Agency for the vapor wells. A copy of the permit is included as Attachment C. Drilling activities were performed by Penecore Drilling of Woodland, California (C-57 License 906899), under the supervision of CRA.

The borings for vapor wells VP-1 through VP-5 were each advanced to a total depth of approximately 6 fbg using a 3-inch diameter hand auger. Soil samples were obtained continuously from the borings for logging and observation purposes. The soil encountered in the borings was logged in accordance with American Society for Testing and Materials (ASTM) D-2488 protocols, and generally consisted of (beneath the surficial asphalt/concrete and underlying aggregate base) clay to 6 fbg. Groundwater was not encountered in any of the borings. Copies of the boring logs are included in Attachment C. Soil samples were screened in the field for the presence of organic vapors using a photo-ionization detector (PID) and visually observed for any evidence of petroleum hydrocarbon impact. The PID measurements are also presented on the boring logs. CRA's standard field procedures are included as Attachment D.

Soil Sampling and Laboratory Analysis

Elevated PID readings were not observed in borings VP-1 or VP-5; therefore, soil samples were collected at 5 fbg and retained for laboratory analysis. In borings VP-2 through VP-4, the highest PID readings were observed at 6 fbg; therefore, the soil samples collected at this depth were retained for laboratory analysis. The samples were collected in stainless-steel liners using the hand- auger, capped using Teflon tape and plastic end caps, labeled, placed in an ice-chilled cooler, and transported under chain-of-custody to Lancaster Laboratories, Inc. (Lancaster) in Lancaster, Pennsylvania, for analysis. The soil samples were analyzed for TPHg by EPA Method 8015B and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8260B.

Soil Vapor Well Installation

Soil vapor wells VP-1 through VP-5 were constructed with ¼-inch diameter Nylaflow® tubing connected to a 6-inch-long, 1-inch diameter, 0.010-inch slotted PVC screen. The screen was placed in the vapor wells at approximately 5.25 to 5.75 fbg, and Monterey Sand #2/12 was used as a filter pack from 5 to 6 fbg. Three inches of dry, granular bentonite was placed above the sand pack and topped with hydrated bentonite gel to approximately 2 fbg. The remainder of the annular space was filled with neat Portland cement to approximately 1 fbg. The tubing exiting the vapor wells was capped, and well boxes were installed flush to grade and equipped with traffic-rated lids. Vapor well construction diagrams are shown on the boring logs (Attachment C).

Soil Vapor Sampling and Laboratory Analysis

Soil vapor samples were collected from vapor wells VP-1 through VP-5 in 1-liter Summa™ canisters. A field duplicate sample (Dupe) was also collected from VP-2 at the same time as the original sample. The samples were collected in general accordance with the Department of Toxic Substances Control (DTSC) January 28, 2003 *Advisory-Active Soil Gas Investigations* guidance document. CRA's standard field procedures are included in Attachment D.
In accordance with the DTSC guidance, leak testing was performed during sampling. Helium was used as the leak check compound to evaluate if significant ambient air was entering the canisters during sampling. To perform the leak testing, a plastic shroud was placed over the sampling apparatus and wellhead and was filled with helium during sample collection. The helium concentration within the shroud was monitored using a helium detector and was maintained between 10 and 20 percent. Copies of the vapor sampling field data sheets are included in Attachment D.

The soil vapor samples were kept at ambient temperature and submitted under chain-of-custody to Air Toxics Ltd. in Folsom, California, for analysis. The five soil vapor samples and the duplicate sample were analyzed for TPHg by EPA Method TO-3 and BTEX by EPA Method TO-15. To evaluate the data quality, the samples were additionally analyzed for helium (leak check compound), oxygen, and carbon dioxide by ASTM Method D-1946.

Investigation-Derived Waste

Soil cuttings and decontamination rinsate generated during drilling activities were temporarily stored onsite in a 55-gallon steel drum, and sampled for disposal purposes. On August 12, 2010, the drum was removed from the site by Integrated Wastestream Management, Inc. (IWM) of San Jose, California, and transported to Vasco Road Landfill in Livermore, California for disposal.

SOIL SAMPLE ANALYTICAL RESULTS

TPHg was only detected in the soil samples collected at 6 fbg from borings VP-2 (230 milligrams per kilogram [mg/kg]), VP-3 (100 mg/kg), and VP-4 (100 mg/kg). Benzene and xylenes were only detected in the soil samples collected from borings VP-3 (0.14 mg/kg and 0.14 mg/kg, respectively) and VP-4 (0.033 mg/kg and 0.074 mg/kg, respectively). Ethylbenzene was only detected in the soil sample collected from boring VP-3 (0.52 mg/kg). No toluene was detected in any of the soil samples. The soil sample analytical results are presented in Table 1. A copy of the laboratory report and chain-of-custody documentation is included as Attachment E.

SOIL VAPOR SAMPLE ANALYTICAL RESULTS

As mentioned above, a field duplicate sample was collected simultaneously with the original sample from VP-2 to further evaluate data quality. The duplicate sample analytical results are not included in the following discussion, as similar concentrations within an acceptable range were detected in both samples. Please refer to Attachment E for the duplicate sample analytical results.

TPHg was detected in the samples collected from vapor wells VP-1 through VP-5 at concentrations ranging from 26,000,000 (VP-1) to 89,000,000 µg/m^3 (VP-2). Benzene was also detected in all the samples at concentrations ranging from 3,700 (VP-1) to 540,000 µg/m^3 (VP-3). Toluene, ethylbenzene, and m,p-xylenes were only detected in the sample collected from vapor well VP-3 (1,700 µg/m^3, 26,000 µg/m^3, and 3,700 µg/m^3, respectively). No o-xylenes were detected in any of the soil vapor samples.

Helium was not detected in any of the samples and the detected oxygen and carbon dioxide concentrations were consistent with subsurface levels. Furthermore, a leak test on the aboveground sampling connections was initially performed by creating a test vacuum using the purge canister. A constant vacuum was maintained for at least 10 minutes prior to sample collection, indicating significant leaks were not occurring. Therefore, the samples appear to be representative of subsurface conditions and the results are assumed to be valid.

The soil vapor analytical results were compared to the shallow soil gas environmental screening levels (ESLs) associated with vapor intrusion concerns at commercial/industrial sites (Table E); established by the San Francisco Bay Regional Water Quality Control Board (RWQCB) in May 2008. The ESLs are for use as screening levels in determining if further evaluation is warranted, in prioritizing areas of concern, in establishing cleanup goals, and in estimation of potential health risks. As stated by the RWQCB, the ESLs are considered to be conservative. The presence of a chemical at a concentration above an ESL does not necessarily indicate that adverse impacts to human health or the environment are occurring; exceeding ESLs indicates that the potential for impacts may exist and that additional evaluation may be needed.

The detected TPHg and benzene concentrations in all the samples exceeded the commercial/industrial ESLs of 29,000 µg/m^3 and 280 µg/m^3, respectively. The detected ethylbenzene concentration in VP-3 also exceeded the ESL of 3,300 µg/m^3. The detected toluene and m,p-xylenes concentrations in VP-3 were well below the respective ESLs. The soil vapor sample analytical results are presented in Table 2. Copies of the laboratory reports and chain-of-custody documentation are included in Attachment E.

CONCLUSIONS AND RECOMMENDATIONS

CRA installed and sampled vapor wells VP-1 through VP-5 to further evaluate soil vapor quality potential vapor intrusion issues at the site. Low concentrations of petroleum hydrocarbons were detected in the soil samples collected from vapor well borings VP-2, VP-3, and VP-4. TPHg and benzene were detected in all the soil vapor samples; the detected concentrations exceeded the respective commercial/industrial ESLs. Toluene, ethylbenzene, and xylenes were only detected in VP-3; the detected ethylbenzene concentration exceeded the commercial/industrial ESL. Based on the analytical results, CRA recommends re-sampling the vapor wells to verify the detected concentrations and evaluate possible seasonal trends.

We appreciate your assistance on this project. If you have any questions or need any additional information, please contact Mr. James Kiernan at (916) 889-8917.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Christopher J. Benedict

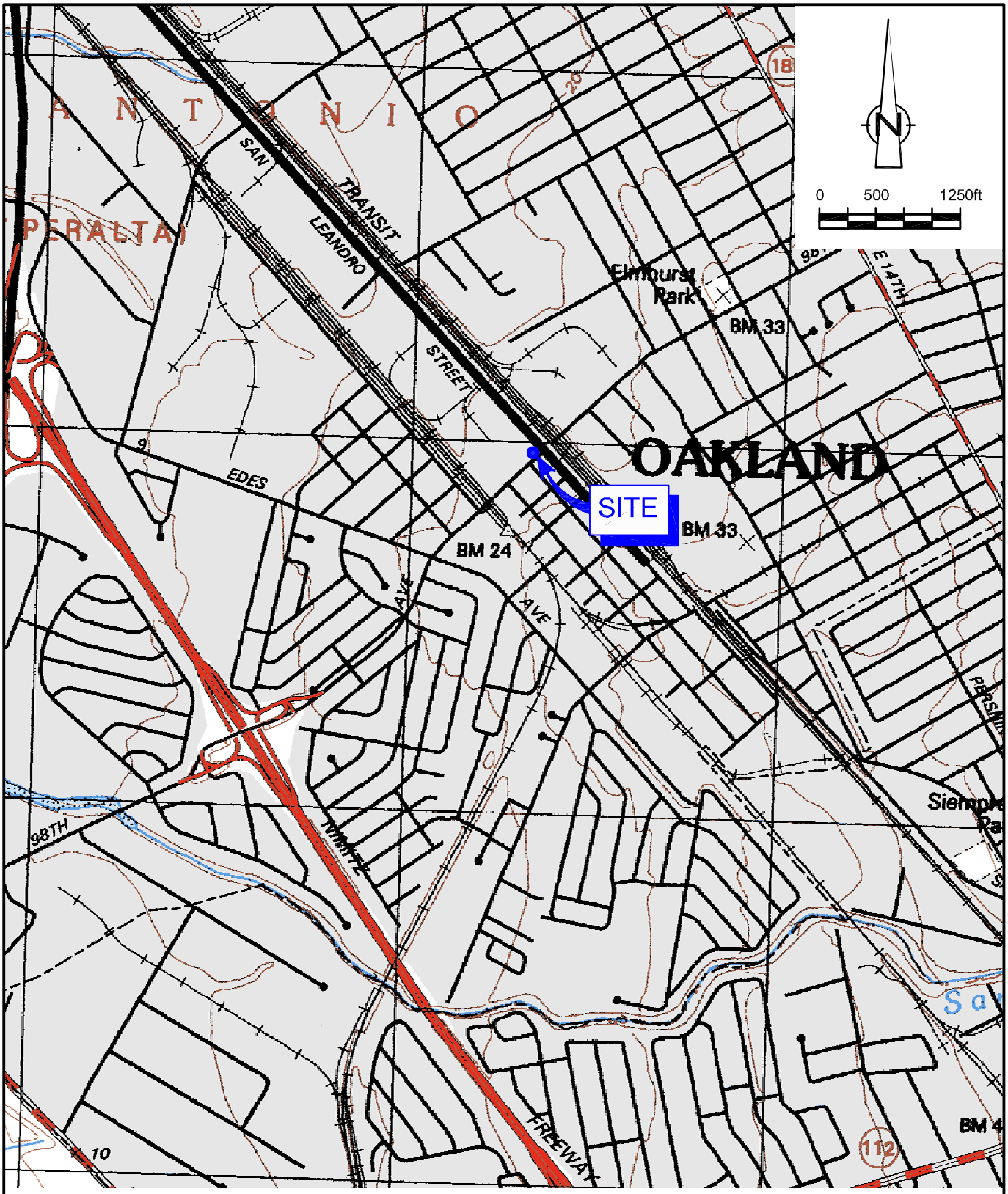
James P. Kiernan, P.E.

CB/cm/3
Encl.

Figure 1	Vicinity Map
Figure 2	Site Plan
Table 1	Soil Sample Analytical Results
Table 2	Soil Vapor Sample Analytical Results
Attachment A	ACEH Letter dated October 23, 2008
Attachment B	Summary of Environmental Investigation and Remediation
Attachment C	Drilling Permit and Boring Logs
Attachment D	Standard Field Procedures and Vapor Sampling Field Data Sheets
Attachment E	Laboratory Reports

cc: Ms. Stacie Frerichs, Chevron (electronic copy)
Ms. Linda Hothem Trust c/o Mr. Jan Greben, Greben & Associates

FIGURES



SOURCE: USGS QUADRANGLE MAP: SAN LEANDRO, CA. 1993.

figure 1

VICINITY MAP
FORMER CHEVRON SERVICE STATION 9-1723
9757 SAN LEANDRO STREET
Oakland, California

610675-2010(003)GN-WA001 JUL 22/2010

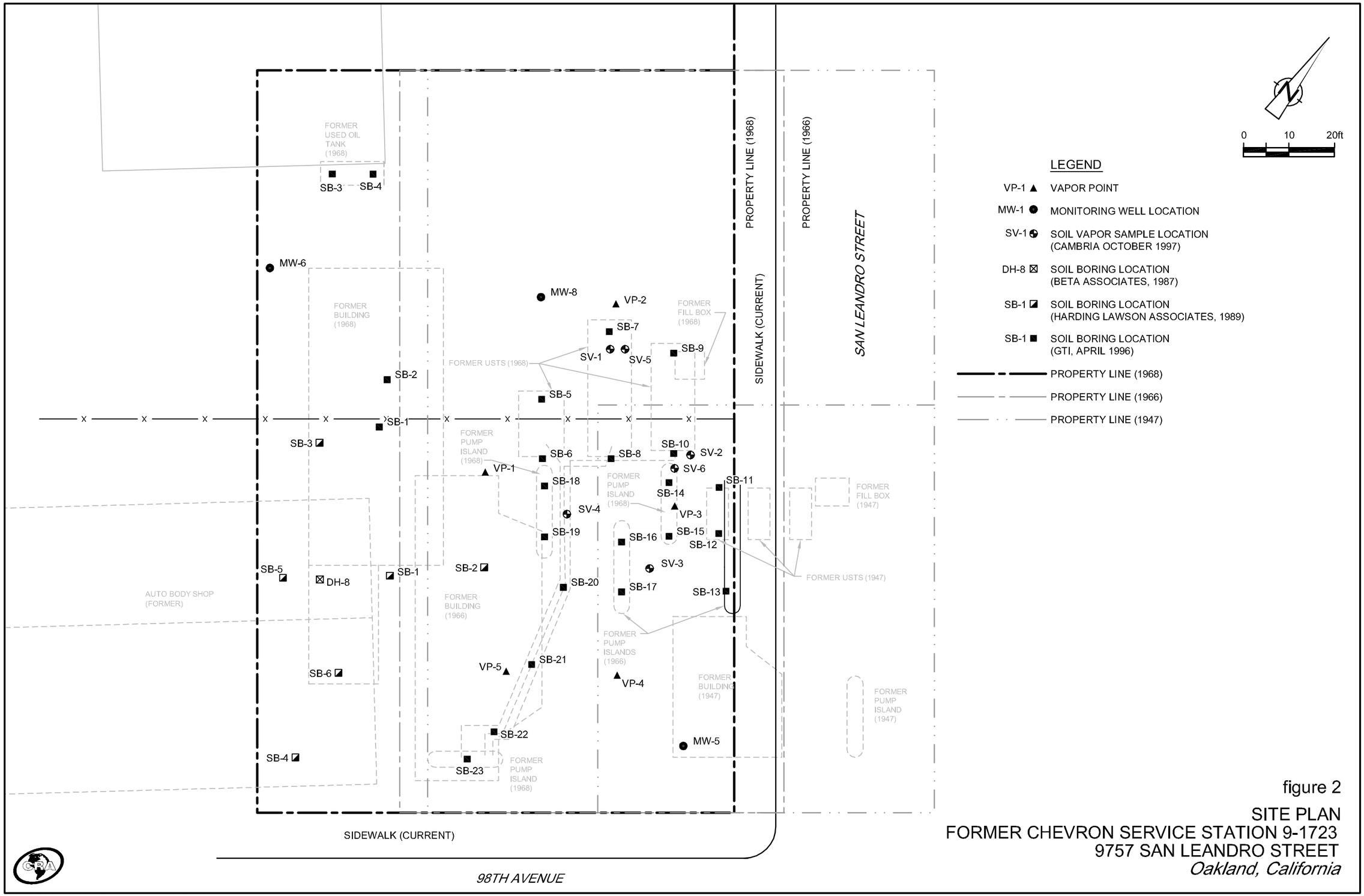


figure 2

SITE PLAN
FORMER CHEVRON SERVICE STATION 9-1723
9757 SAN LEANDRO STREET
Oakland, California

610675-2010(003)GN-WA002 JUL 22/2010

TABLES

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON STATION 9-1723
9757 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Boring ID	*Sample Depth (fbg)*	*Sample Date*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*
			← Concentrations reported in milligrams per kilogram (mg/kg) →				
VP-1	5	6/24/10	<1.0	<0.0005	<0.001	<0.001	<0.001
VP-2	6	6/24/10	230	<0.047	<0.094	<0.094	<0.094
VP-3	6	6/24/10	100	0.14	<0.047	0.52	0.14
VP-4	6	6/24/10	100	0.033	<0.050	<0.050	0.074
VP-5	5	6/24/10	<1.0	<0.0005	<0.001	<0.001	<0.001

Abbreviations/Notes:
fbg = feet below grade
TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015
Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8260B
<x = Not detected at or above stated laboratory reporting limit

TABLE 2

SOIL VAPOR SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON STATION 9-1723
9757 SAN LEANDRO STREET,
OAKLAND, CALIFORNIA

Sample ID	*Date Sampled*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*m,p-Xylenes*	*o-Xylenes*	*Oxygen*	*Helium*	*Carbon Dioxide*
		← Concentrations reported in micrograms per cubic meter (µg/m^3) →						← Reported as percent →		
VP-1	6/29/10	26,000,000	3,700	<3,200	<3,600	<3,600	<3,600	6.2	<0.13	15
VP-2	6/29/10	89,000,000	11,000	<2,500	<2,900	<2,900	<2,900	0.84	<0.13	21
VP-3	6/29/10	88,000,000	540,000	1,700	26,000	3,700	<1,800	2.9	<0.13	14
VP-4	6/29/10	53,000,000	22,000	<2,900	<3,400	<3,400	<3,400	2.4	<0.12	13
VP-5	6/29/10	37,000,000	4,100	<2,700	<3,100	<3,100	<3,100	2.3	<0.14	18
Dupe	6/29/10	90,000,000	12,000	<3,100	<3,600	<3,600	<3,600	0.83	<0.13	21
ESL		29,000	280	180,000	3,300	58,000[a]				

Abbreviations and Methods:

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method TO-3
Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method TO-15
Oxygen, Helium, and Carbon Dioxide by ASTM Method D-1946
< = Not detected at or above stated laboratory reporting limit
Dupe = Field duplicate sample of VP-2
ESL = Environmental Screening Level for shallow soil gas associated with vapor intrusion concerns at commercial/industrial sites-RWQCB May 2008 (Table E)
a = ESL is for total xylenes

ATTACHMENT A

ACEH LETTER DATED OCTOBER 23, 2008

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

October 23, 2008

Mr. Rob Speer
Chevron Environmental Management
6001 Bollinger Canyon Rd K2256
PO Box 6012
San Ramon, CA 94583-2324

J. Jeannero
Gerber Products
445 State Street
Fremont, MI 49412

Ms. Linda Hothem
Linda Hothem Trust
104 Caledonia Street
Sausalito, CA 94565-1952

Subject: Fuel Leak Case No. RO0000412 (Global ID # T0600101789), Chevron #9-1723, 9757 San Leandro Street, Oakland, CA 94603

Dear: Mr. Speer, Ms Hothem and J. Jeannero

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above referenced site and the document entitled "Closure Request," received December 14, 2006 and prepared by Conestoga Rovers Associates (CRA). In May 1996 Chevron completed a site investigation that included the installation of 23 soil borings located throughout the site. Results from the investigation detected high levels of TPHg and benzene contamination at concentrations of up to 1,800 ppm and 99 ppm, respectively. We note that benzene levels in soil detected throughout the site significantly exceed the ESLs. In addition, grab groundwater samples collected during the investigation detected 19,000 µg/L TPHg and 400 µg/L benzene. However, limited groundwater samples were collected and not in areas of high benzene concentrations

In October 1997, Chevron completed an investigation which detected benzene in soil gas at concentrations of up to 319,000 µg/m^3 (sample ID #SV-5) which exceed RWQCB ESLs of 280 µg/m^3 (Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater November 2007, San Francisco Bay Regional Water Quality Control Board, California EPA, http://www.waterboards.ca.gov/sanfranciscobay/esl.htm.) Furthermore, in April 1997 Chevron concluded that the human health risk associated with residual benzene contamination in soil would require institutional controls, if future site redevelopment was considered. Then, in November 2001 Chevron completed a Tier 2 Risk Based Corrective Action which neglected to adequately evaluate the risk associated with the soil vapor data collected from previous soil vapor sampling.

In December 2006, Chevron submitted a "Request for Closure" for the site. In addition, Chevron asserts that soil vapor data collected from soil vapor point SV-5 (319,000 µg/m^3 benzene) is anomalous. ACEH does not agree with Chevron's assumption that simply because soil gas data collected from SV-5 conflicts with soil gas data from SV-1 (1,310 µg/m^3 benzene) the data from SV-5 is anomalous. Rather, data from all soil vapor probes, including SV-5, must be used to evaluate the potential human health risk associated with the soil vapor and the vapor intrusion pathway. Therefore, ACEH cannot consider case closure at this time. This decision to deny closure is subject to appeal to the State Water Resources Control Board (SWRCB), pursuant to Section 25299.39.2(b) of the Health and Safety Code (Thompson-Richter Underground Storage Tank Reform Act - Senate Bill 562). Please contact the SWRCB Underground Storage Tank Program at (916) 341-5851 for information regarding the appeal process.

Based on ACEH staff review of the case file, we request that you address the following technical comments and send us the reports described below. Please provide 72-hour advance written notification to this office (e-mail preferred to mail to:steven.plunkett@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Residual Contamination in Soil and Soil Vapor.** Initial site characterization activities, including the installation of 23 soil borings located throughout the site, indicate that a source of residual contamination remains in soil beneath the former UST tank pit and dispenser islands. Results from the investigation detected high levels of TPHg and benzene contamination at concentrations of up to 1,800 ppm and 99 ppm, respectively. In addition, grab groundwater samples collected during the investigation detected 19,000 µg/L TPHg and 400 µg/L benzene. However, groundwater was only collected from a select set of soil boring, and groundwater was not sampled in areas of high benzene concentration. Furthermore, no remedial action has been performed to mitigate contamination in soil and groundwater beneath the site.

   CRA's assertion that the soil vapor contamination detected in SV-5 (319,000 µg/m^3 benzene) is anomalous is a specious argument. ACEH strongly disagrees with the assumption that low levels of benzene in soil gas collected from SV-1 negate the high concentrations of soil gas detected in SV-5. Furthermore, soil gas data collected from SV-2 (3,100 µg/m^3 benzene), SV-6 (1,850 µg/m^3 benzene) and SV-5 (319,000 µg/m^3 benzene) would indicate that the low concentrations of benzene detected in SV-1 may be anomalous. Prior to the evaluation of your site for regulatory closure, ACEH requests that you assess soil vapor contamination throughout the site. Please prepare a work plan and present your plan to evaluate soil vapor contamination beneath your site. Please submit the work plan according to the schedule presented below.

   Please report your soil gas data in units of µg/m^3, consistent with reporting units utilized soil gas guidance and resubmit the soil gas tables as an attachment in the work plan requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Steven Plunkett), according to the following schedule:

- **February 14, 2009** – Work Plan

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

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of

monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml.

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) 383-1761 or send me an electronic mail message at steven.plunkett@acgov.org.

Sincerely,

Steven Plunkett
Hazardous Materials Specialist

Donna Drogos, PE
Supervising Hazardous Materials Specialist

cc: Laura Genin

CRA
5900 Hollis Street, Suite A
Emeryville, CA 94608

Donna Drogos, ACEH,Steven Plunkett ACEH, File

ATTACHMENT B

SUMMARY OF ENVIRONMENTAL INVESTIGATION AND REMEDIATION

SUMMARY OF ENVIRONMENTAL INVESTIGATION AND REMEDIATION
FORMER CHEVRON STATION 9-1723

1978 Station Demolition

In 1978, the Chevron station was demolished, including removal of the dispenser islands, underground storage tanks (USTs), and associated product piping. There are no detailed records documenting these activities.

1987 Subsurface Investigation

In March and April 1987, Beta Associates (BA) inspected the entire Gerber Products Company (Gerber) facility for potential sources of contamination and drilled exploratory borings DH-1 through DH-11 as part of a subsurface investigation on behalf of Gerber. One of the borings (DH-8) was located on the subject site. Borings DH-1, DH-2, and DH-4 were converted into monitoring wells MW-1, MW-2, and MW-4, respectively. Hydrocarbons were not detected in soil samples collected from borings DH-1 through DH-7. The soil sample collected at 10 feet below grade (fbg) from boring DH-8 contained total petroleum hydrocarbons as gasoline (TPHg) at 1,017 milligrams per kilogram (mg/kg), TPH as motor oil (TPHmo) at 240 mg/kg, benzene at 1.063 mg/kg, toluene at 9.997 mg/kg, and xylenes at 108 mg/kg; TPH as diesel (TPHd) was not detected.

1988 Subsurface Investigation

In May 1988, Groundwater Technology, Inc. (GTI) conducted a subsurface investigation (on behalf of Gerber) on and near the site to further evaluate the hydrocarbon impact to soil and groundwater. The investigation included performance of a ground-penetrating radar (GPR) survey to evaluate if any USTs remained from the two service stations, as well as the installation of monitoring wells MW-5 through MW-8. Well MW-7 was located approximately 100 feet northwest of the site. The GPR survey only identified remnant utility piping. Soil samples were collected from the four well borings at depths of 5 and 10 fbg (and 15 fbg in boring MW-5) and analyzed for TPHg and benzene, toluene, ethylbenzene, and xylenes (BTEX). TPHg was detected in four of the soil samples at concentrations up to 310 mg/kg; low concentrations of toluene (2 mg/kg), ethylbenzene (up to 4 mg/kg), and xylenes (up to 18 mg/kg) were also detected in two of the samples. TPHg and BTEX were not detected in the soil samples collected from boring MW-7. TPHg was detected in the initial groundwater samples collected from wells MW-6 and MW-8 at 1,100 micrograms per liter (µg/L) and 77,000 µg/L, respectively. Benzene was detected at concentrations ranging from 93 (MW-5) to 2,300 µg/L (MW-8). Hydrocarbons were not detected in the initial groundwater sample collected from well MW-7; however, low concentrations of the volatile organic compounds (VOCs) 1,1-dichloroethene (1,1-DCE) (up to 39 µg/L), 1,1-dichloroethane (1,1-DCA) (up to 8 µg/L), and 1,1,1-trichloroethane (1,1,1-TCA) (up to 18 µg/L) were detected. A well survey performed for a ½-mile radius around the site identified nine wells; all were used for industrial purposes. Only one of the wells appeared to be of concern; the well (P2), installed by Gerber, was screened from 160 to 225 fbg. A survey of potential offsite sources of contamination did not identify any nearby cases; however, it was noted that Standard Brands Company once occupied the property upgradient of the site across San Leandro Street. Details of this investigation were presented in GTI's November 17, 1988 *Report-Subsurface Hydrocarbon Investigation*.

1989 Subsurface Investigation

From August to November 1989, Harding Lawson Associates (HLA) drilled borings SB-1 through SB-6 and installed monitoring wells MW-9 and MW-10 to further evaluate the extent of hydrocarbons in soil at the site and in groundwater downgradient of the site. Borings SB-1 through SB-6 were located on the southwestern side of the site. A total of 21 soil samples were collected at various depths from the borings and analyzed for TPHg and BTEX. TPHg was only detected in seven of the soil samples at concentrations ranging from 34 (SB-2 at 9 fbg) to 470 mg/kg (SB-5 at 10 fbg). Benzene was only detected in 10 of the soil samples at concentrations ranging from 0.018 (SB-6 at 5 fbg) to 3.3 mg/kg (SB-4 at 10 fbg). Details of this investigation were presented in HLA's February 21, 1990 *Phase III Site Investigation Addendum*.

1994 Well Survey and Offsite Investigation

In January 1994, GTI performed a well survey that identified approximately 80 wells within ½-mile of the site. An offsite investigation was also performed that identified two nearby cases: Fleischmann's Yeast across San Leandro Street from the site (diesel release) and 9801 San Leandro Street (vehicle fuel release). Details of this investigation were presented in GTI's January 4, 1994 *Environmental Investigation Report*.

1994 Comprehensive Site Evaluation

In June 1994, Weiss Associates (Weiss) performed a comprehensive site evaluation to evaluate if further work was warranted. Based on the data that had been collected to date, it was concluded that although hydrocarbons had been present at the site for at least 16 years, the low permeability soils had kept the plume confined to the vicinity of the site, and it was very unlikely that significant additional migration would occur before natural degradation of the plume occurred. It was also determined that operations associated with the current site owner and adjacent service stations had also impacted groundwater in the vicinity of the site. The hydrocarbon sources (USTs and dispensers) had been removed; it was concluded that due to the hydrogeologic characteristics of the subsurface and the risk of encouraging migration of offsite plumes, no additional appropriate or cost-effective technologies existed that might have significantly accelerated cleanup of the plume. Based on this information, it was concluded that the remaining hydrocarbons at the site were contained in the vicinity of the site and did not pose a threat to human health or the surrounding aquifer. Also, no economically or technically feasible measures were available to further reduce the plume. Details of this investigation were presented in Weiss' June 23, 1994 *Comprehensive Site Evaluation and Proposed Future Action Plan*.

1996 Subsurface Investigation and Well Survey

In April 1996, Fluor Daniel GTI advanced borings SB-1 through SB-23 to further evaluate the extent of hydrocarbons in site soils. A total of 36 soil samples were collected from the borings at depths of 5, 10, or 15 fbg and analyzed for TPHg and BTEX. The samples collected at 10 fbg from borings SB-1 through SB-4 were also analyzed for total oil and grease (TOG). TPHg was detected in the majority of the soil samples at concentrations ranging from 1.9 (SB-16 at 5 fbg) to 1,800 mg/kg (SB-15 at 10 fbg). Benzene was also detected in the majority of the soil samples at concentrations ranging from 0.0054 (SB-8 at 15 fbg) to 99 mg/kg (SB-10 at 10 fbg). Toluene (up to 68 mg/kg), ethylbenzene (up to 150 mg/kg), and xylenes (up to 260 mg/kg) were also detected in the majority of the soil samples. TOG was detected in the four samples analyzed at concentrations ranging from 24 (SB-2 at 5 fbg) to 940 mg/kg (SB-4 at 10 fbg). Petroleum hydrocarbons were not detected in the soil sample collected at 5 fbg from boring SB-21. Groundwater samples were also collected from borings SB-11, SB-19, and SB-22 and analyzed

for TPHg and BTEX. TPHg was detected in the samples collected from borings SB-11, SB-19, and SB-22 at concentrations of 5,100 µg/L, 2,300 µg/L, and 19,000 µg/L, respectively; benzene was detected at 210 µg/L, 170 µg/L, and 400 µg/L, respectively. Low concentrations of toluene (up to 30 µg/L), ethylbenzene (up to 180 µg/L), and xylenes (up to 400 µg/L) were also detected in the groundwater samples.

In May 1996, a field survey of water wells on the former Gerber facility adjacent to the southwest of the site was conducted. A pump (P1) and two wells (P2 and P3) were identified within 250 feet downgradient of the site. The pump served to supply city water to a 200,000-gallon aboveground storage tank (AST) which was used to store process water at the facility. Well P2 was an operative pumping well on standby basis and was used to draw water from a well located in a pump house in the event of a fire. Well P3 was an operating pumping well used to extract water for industrial purposes. It was determined that well P2 may have extended to approximately 600 fbg and may have been screened from 160 to 225 fbg. Details of this investigation were presented in Fluor Daniel GTI's May 15, 1996 *Environmental Assessment Report*.

1997 Soil Vapor Investigation

In October 1997, Cambria Environmental Technology, Inc. (Cambria [now CRA]) collected soil vapor samples from six borings (SV-1 through SV-6) drilled at the site in the area of the former USTs and dispensers. As requested by Alameda County Environmental Health (ACEH), borings SV-5 and SV-6 were located adjacent to borings SV-1 and SV-2, respectively. Soil vapor samples were collected at depths of 3 and 5 fbg from borings SV-1 through SV-4 (and 8 fbg from boring SV-2), and at 5 fbg from borings SV-5 and SV-6, and analyzed for BTEX. Benzene was detected in the samples collected from borings SV-1 through SV-4 at concentrations ranging from 1.8 (SV-4 at 3 fbg) to 3,100 parts per billion by volume (ppbv) (SV-2 at 8 fbg); toluene was detected at concentrations ranging from 2.1 (SV-3 at 5 fbg) to 1,200 ppbv (SV-2 at 8 fbg); ethylbenzene was detected at concentrations ranging from 2.7 (SV-3 at 5 fbg) to 2,900 ppbv (SV-2 at 8 fbg); and total xylenes were detected at concentrations ranging from 12.2 (SV-3 at 5 fbg) to 12,400 ppbv (SV-2 at 8 fbg). Significantly higher concentrations of benzene (100,000 ppbv), toluene (1,500 ppbv), ethylbenzene (4,600 ppbv), and xylenes (1,200 ppbv) were detected in the sample collected at 5 fbg from boring SV-5 located adjacent to boring SV-1. Higher concentrations of benzene (580 ppbv), toluene (120 ppbv), ethylbenzene (490 ppbv), and xylenes (2,200 ppbv) were detected in the sample collected at 5 fbg from boring SV-6 located adjacent to boring SV-2. Details of this investigation were presented in Cambria's January 5, 1998 *Investigation Report*.

1998 Tier 2 Risk-Based Corrective Action (RBCA) Evaluation

In July 1998, Cambria performed a Tier 2 RBCA evaluation for the site. The RCBA indicated that residual petroleum hydrocarbons at the site did not pose a significant risk to human health. Hydrocarbon concentrations were low and decreasing. Therefore, case closure was recommended. Details of this investigation were presented in Cambria's July 7, 1998 *Tier 2 RBCA Analysis and Closure Request*.

2001 Risk Management Plan

In January 2001, Gettler-Ryan Inc. (G-R) prepared a Risk Management Plan that summarized the contaminants of concern (COCs) and risk at the site, and outlined steps for risk management of identified hazards. Impacted soil remained in the vicinity of the former USTs and dispenser

islands. It was noted that the highest concentrations of TPHg and benzene detected in soil were 1,800 mg/kg and 99 mg/kg, respectively, in the vicinity of the former USTs. Based on the data to date, it was determined that the vertical and lateral extent of impacted soil had been adequately delineated. It was also concluded that the benzene concentration detected in soil vapor from boring SV-5 at 5 fbg (100,000 ppbv) appeared to be anomalous based on the data from adjacent boring SV-1. Groundwater had been monitored quarterly since 1993, and decreasing trends of TPHg and benzene were evident. Two industrial wells were present within 250 feet downgradient of the site; however, hydrocarbons generally had not been detected in offsite well MW-9 located near one of the industrial wells. Hydrocarbons had been detected in offsite well MW-2 and perimeter well MW-6; however, the detected TPHg and benzene concentrations were low. Based on the data and the deep screen interval of the industrial supply well, it was concluded that it was unlikely that the industrial wells would have been impacted by hydrocarbons from the site. The results of the RBCA evaluation indicated no complete human or ecological exposure pathways. Details of this investigation were presented in G-R's January 17, 2001 *Risk Management Plan*.

2001 Tier 2 RBCA Evaluation

In November 2001, Delta Environmental Consultants, Inc. (Delta) performed a Tier 2 RBCA evaluation to evaluate if residual hydrocarbons in site soil and groundwater posed a significant risk to human health. The identified potential exposure pathways consisted of subsurface soil and groundwater volatilization to outdoor and indoor air. The results of the evaluation indicated that concentrations did not exceed the Site-Specific Target Levels (SSTLs); therefore, no further work was warranted. Details of this investigation were presented in Delta's November 15, 2001 *Risk-Based Corrective Action Evaluation*.

ATTACHMENT C

DRILLING PERMIT AND BORING LOGS

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: 05/10/2010 By jamesy

Permit Numbers: W2010-0327
Permits Valid from 06/17/2010 to 06/24/2010

Application Id: 1273525059595 **City of Project Site:** Oakland
Site Location: 9757 San Leandro St, Oakland, CA
Project Start Date: 06/15/2010 **Completion Date:** 06/16/2010
Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org
Extension Start Date: 06/17/2010 **Extension End Date:** 06/24/2010
Extension Count: 1 **Extended By:** vickyh1

Applicant: Conetoga-Rovers and Associates - Chris Benedict **Phone:** 916-884-8900
10969 Trade Center Dr, Suite 107, Rancho Cordova, CA 95670
Property Owner: Chevron Gas **Phone:** --
6001 Bollinger Canyon Rd., San Ramon, CA 94612
Client: ** same as Property Owner **

Total Due: $265.00
Receipt Number: WR2010-0163 **Total Amount Paid:** $265.00
Payer Name : Conestoga-Rovers and Associates Paid By: CHECK **PAID IN FULL**

Works Requesting Permits:

Remediation Well Destruction-Vapor Remediation Well - 5 Wells
Driller: Penecore - Lic #: 906899 - Method: Hand **Work Total: $265.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth	State Well #	Orig. Permit #	DWR #
W2010-0327	05/10/2010	09/13/2010	VP1	3.25 in.	0.25 in.	0.50 ft	6.00 ft			
W2010-0327	05/10/2010	09/13/2010	VP2	3.25 in.	0.25 in.	0.50 ft	6.00 ft			
W2010-0327	05/10/2010	09/13/2010	VP3	3.25 in.	0.25 in.	0.50 ft	6.00 ft			
W2010-0327	05/10/2010	09/13/2010	VP4	3.25 in.	0.25 in.	0.50 ft	6.00 ft			
W2010-0327	05/10/2010	09/13/2010	VP5	3.25 in.	0.25 in.	0.50 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. Permittee, 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 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. Remove the Christy box or similar structure. Destroy well by overdrilling & Tremie Grouting with Cement. After the seal has set, backfill the remaining hole with concrete or compacted material to match existing.

7. 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.

8. 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
10969 Trade Center Drive Suite 107
Rancho Cordova, CA 95670
Telephone: (916) 889-8900
Fax: (916) 889-8999

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	**BORING/WELL NAME**	VP-1
JOB/SITE NAME	9-1723	**DRILLING STARTED**	24-Jun-10
LOCATION	9757 San Leandro Street, Oakland, California	**DRILLING COMPLETED**	24-Jun-10
PROJECT NUMBER	610675	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	PeneCore Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand-auger	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	3.25-inch	**SCREENED INTERVAL**	5.25 to 5.75 fbg
LOGGED BY	C. Benedict	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	J. Kiernan, PE# C68498	**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
							4" Asphalt	0.3	1/4"-inner diam. Nylaflow® tubing; Concrete
				1	GM		**AGGREGATE BASE: Silty GRAVEL with sand:** Brown; moist; 3/4 - 1 inch gravel.	1.5	Portland Type I/II
3.1				2			**CLAY:** Grey; moist; high estimated plasticity.		
3.7				3					Bentonite Seal
				4	CH				
17.2		VP-1- 5		5					3" Dry Granular Bentonite; 1"-diam., 0.010" Slotted Schedule 40 PVC
11.4				6				6.0	Monterey Sand #2/12; Bottom of Boring @ 6 fbg

WELL LOG (PID) I:\PROJEC~2\6-CHAR\61---\6106--\610675\610675~2\610675-BORING LOGS.GPJ DEFAULT.GDT 11/29/10

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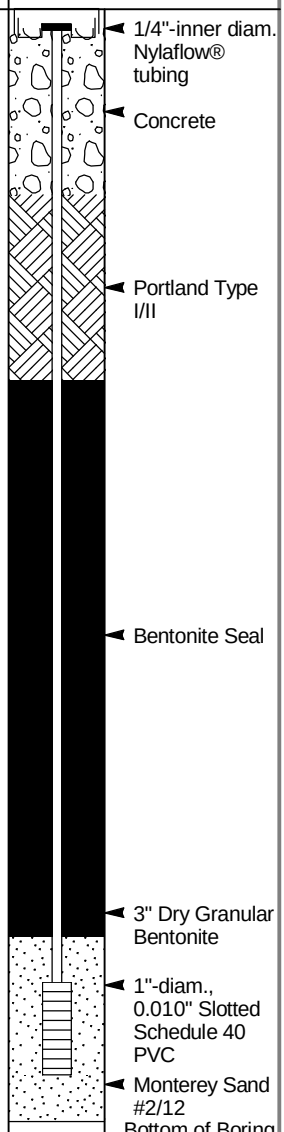
BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	**BORING/WELL NAME**	VP-2
JOB/SITE NAME	9-1723	**DRILLING STARTED**	24-Jun-10
LOCATION	9757 San Leandro Street, Oakland, California	**DRILLING COMPLETED**	24-Jun-10
PROJECT NUMBER	610675	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	PeneCore Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand-auger	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	3.25-inch	**SCREENED INTERVAL**	5.25 to 5.75 fbg
LOGGED BY	C. Benedict	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	J. Kiernan, PE# C68498	**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)
							8" Concrete	0.3
				1	SC		**FILL: Clayey SAND with gravel:** Dark grey; moist; 3/4 - 1 inch gravel.	1.5
				2	CH		**Sandy CLAY:** Grey; moist; high estimated plasticity.	3.0
275		VP-2- 3		3			**CLAY:** Grey; moist; high estimated plasticity.	
412		VP-2- 4		4				
233		VP-2- 5		5	CH			
753		VP-2- 6		6			Brown mottling.	6.0



WELL LOG (PID) I:\PROJEC~2\6-CHAR\61---\6106--\610675\610675~2\610675-BORING LOGS.GPJ DEFAULT.GDT 11/29/10

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	**BORING/WELL NAME**	VP-3
JOB/SITE NAME	9-1723	**DRILLING STARTED**	24-Jun-10
LOCATION	9757 San Leandro Street, Oakland, California	**DRILLING COMPLETED**	24-Jun-10
PROJECT NUMBER	610675	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	PeneCore Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand-auger	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	3.25-inch	**SCREENED INTERVAL**	5.25 to 5.75 fbg
LOGGED BY	C. Benedict	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	J. Kiernan, PE# C68498	**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
							4" Asphalt	0.3	1/4"-inner diam. Nylaflow® tubing; Concrete
				1	GM		**AGGREGATE BASE: Silty GRAVEL with sand:** Brown; moist; 3/4 - 1 inch gravel.	1.5	Portland Type I/II
221		VP-3- 2		2			**CLAY:** Grey; moist; high estimated plasticity.		
103		VP-3- 3.5		3	CH				Bentonite Seal
412		VP-3- 5		4					
				5					3" Dry Granular Bentonite; 1"-diam., 0.010" Slotted Schedule 40 PVC
719		VP-3- 6		6				6.0	Monterey Sand #2/12; Bottom of Boring @ 6 fbg

WELL LOG (PID) I:\PROJEC~2\6-CHAR\61---\6106--\610675\610675~2\610675-BORING LOGS.GPJ DEFAULT.GDT 11/29/10

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	**BORING/WELL NAME**	VP-4
JOB/SITE NAME	9-1723	**DRILLING STARTED**	24-Jun-10
LOCATION	9757 San Leandro Street, Oakland, California	**DRILLING COMPLETED**	24-Jun-10
PROJECT NUMBER	610675	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	PeneCore Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand-auger	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	3.25-inch	**SCREENED INTERVAL**	5.25 to 5.75 fbg
LOGGED BY	C. Benedict	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	J. Kiernan, PE# C68498	**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
							4" Asphalt	0.3	1/4"-inner diam. Nylaflow® tubing; Concrete
				1	GM		**AGGREGATE BASE: Silty GRAVEL with sand:** Brown; moist; 3/4 - 1 inch gravel.	1.5	Portland Type I/II
30.5				2			**CLAY:** Grey; moist; high estimated plasticity.		
				3					Bentonite Seal
57					CH				
639		VP-4- 5		4					
				5					3" Dry Granular Bentonite; 1"-diam., 0.010" Slotted Schedule 40 PVC
896		VP-4- 6		6				6.0	Monterey Sand #2/12; Bottom of Boring @ 6 fbg

WELL LOG (PID) I:\PROJEC~2\6-CHAR\61---\6106--\610675\610675~2\610675-BORING LOGS.GPJ DEFAULT.GDT 11/29/10

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	**BORING/WELL NAME**	VP-5
JOB/SITE NAME	9-1723	**DRILLING STARTED**	24-Jun-10
LOCATION	9757 San Leandro Street, Oakland, California	**DRILLING COMPLETED**	24-Jun-10
PROJECT NUMBER	610675	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	PeneCore Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand-Auger	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	3.25-inch	**SCREENED INTERVAL**	5.25 to 5.75 fbg
LOGGED BY	C. Benedict	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	J. Kiernan, PE# C68498	**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
							4" Asphalt	0.3	1/4"-inner diam. Nylaflow® tubing; Concrete
				1	GM		**AGGREGATE BASE: Silty GRAVEL with sand:** Brown; moist; 3/4 - 1 inch gravel.	1.5	Portland Type I/II
6.1				2			**CLAY:** Grey; moist; high estimated plasticity.		
1.2				3	CH				Bentonite Seal
6.6		VP-5- 5		4					
				5					3" Dry Granular Bentonite; 1"-diam., 0.010" Slotted Schedule 40 PVC
22.5				6				6.0	Monterey Sand #2/12; Bottom of Boring @ 6 fbg

WELL LOG (PID) I:\PROJEC~2\6-CHAR\61---\6106--\610675\610675~2\610675-BORING LOGS.GPJ DEFAULT.GDT 11/29/10

ATTACHMENT D

STANDARD FIELD PROCEDURES AND VAPOR SAMPLING FIELD DATA SHEETS

Conestoga-Rovers & Associates

STANDARD FIELD PROCEDURES FOR HAND-AUGER SOIL BORINGS

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

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor odor or staining, estimate ground water depth and quality and to submit samples for chemical analysis.

Soil Classification/Logging

All soil samples are classified according to the Unified Soil Classification System by a trained geologist or engineer working under the supervision of a California Professional Geologist (PG) or a Certified Engineering Geologist (CEG). The following soil properties are noted for each soil sample:

- Principal and secondary grain size category (i.e. sand, silt, clay or gravel)
- Approximate percentage of each grain size category,
- Color,
- Approximate water or product saturation percentage,
- Observed odor and/or discoloration,
- Other significant observations (i.e. cementation, presence of marker horizons, mineralogy), and
- Estimated permeability.

Soil Boring and Sampling

Hand-auger borings are typically drilled using a hand-held bucket auger to remove soil to the desired sampling depth. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments beyond the bottom of the augered hole. The vertical location of each soil sample is determined using a tape measure. All sample depths use the ground surface immediately adjacent to the boring as a datum. The horizontal location of each boring is measured in the field from an onsite permanent reference using a measuring wheel or tape measure.

Augering and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Storage, Handling and Transport

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4°C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable photoionization detector (PID) measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. PID measurements are used along with the field observations, odors, stratigraphy and ground water depth to select soil samples for analysis.

Water Sampling

Water samples, if they are collected from the boring, are collected from the open borehole using bailers. The ground water samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory.

Duplicates and Blanks

Blind duplicate water samples are collected usually collected only for monitoring well sampling programs, at a rate of one blind sample for every 10 wells sampled. Laboratory-supplied trip blanks accompany samples collected for all sampling programs to check for cross-contamination caused by sample handling and transport. These trip blanks are analyzed if the internal laboratory QA/QC blanks contain the suspected field contaminants. An equipment blank may also be analyzed if non-dedicated sampling equipment is used.

Grouting

The borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

Waste Handling and Disposal

Soil cuttings from drilling activities are usually stockpiled onsite on top of and covered by plastic sheeting. At least four individual soil samples are collected from the stockpiles for later compositing at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Ground water removed during sampling and/or rinsate generated during decontamination procedures are stored onsite in sealed 55-gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Disposal of the water is based on the analytic results for the well samples. The water is either pumped out using a vacuum truck for transport to a licensed waste treatment/disposal facility or the individual drums are picked up and transported to the waste facility where the drum contents are removed and appropriately disposed.

Conestoga-Rovers & Associates

STANDARD FIELD PROCEDURES FOR SOIL VAPOR PROBE INSTALLATION AND SAMPLING

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.

Shallow Soil Vapor Point Installation

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 probe, connected with Swagelok fittings to nylon or Teflon tubing of ¼-inch outer-diameter, is placed within 12-inches of number 2/16 filter sand (Figure A). A 12-inch layer of dry granular bentonite is placed on top of the filter pack. Pre-hydrated granular bentonite is then poured to fill the borehole. The tube is coiled and placed within a wellbox finished flush to the surface. Soil vapor samples will be collected no sooner than 48 hours 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.

Sampling of Soil Vapor Points

Samples will be collected using a SUMMA™ canister connected to sampling tubing at each vapor point. Prior to collecting soil vapor samples, the initial vacuum of the canisters is measured and recorded on the chain-of-custody. The vacuum of the SUMMA™ canister is used to draw the soil vapor through the flow controller until a negative pressure of approximately 5-inches of Hg is observed on the vacuum gauge and recorded on

the chain-of-custody. The flow controllers should be set to 100-200 ml/minute. Field duplicates should be collected for every day of sampling and/or for every 10 samples collected.

Prior to sample collection, stagnant air in the sampling apparatus should be removed by purging approximately 3 purge volumes. The purge volume is defined as the amount of air within the probe and tubing.

In accordance with the DTSC Advisory-Active Soil Gas Investigations guidance document, dated January 28, 2003, leak testing needs to be performed during sampling. Helium is recommended, although shaving cream is acceptable.

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.

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: ~~VP-5~~ VP-1 **Date:** 6/29/10

Job/Site Name: Chevron 9-1723 **Technician:** C. Benedict

Project No. 610675 **PM:** J. Kiernan

Site Address: 9757 San Leandro Street, Oakland, CA

Vapor Sampling Apparatus Pressure Testing

Time	Vacuum Reading	Unit	Comments
1217	-29		
	-25		Fail
1230	-27	in/Hg	
1240	-27		

Purge Volume

Calculated Purge Volume: 100 mL ~36 secs

Time	Flow	Volume	PID Reading
1240			

Sample Collection

Flow Control Orifice Setting: 167 mL/min Summa Canister ID: CHANGE ~~35610~~ 37303

Summa Canister Size: _____ Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum
1242	-30	1250	-5.5

Notes: Helium ~ 14%

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: VP-2 / DUPE **Date:** 6/29/10

Job/Site Name: Chevron 9-1723 **Technician:** C. Benedict

Project No. 610675 **PM:** J. Kiernan

Site Address: 9757 San Leandro Street, Oakland, CA

Vapor Sampling Apparatus Pressure Testing

Time	Vacuum Reading	Unit	Comments
1415	-25.5		
1425	-25.5		

Purge Volume

Calculated Purge Volume: 100 mL

Time	Flow	Volume	PID Reading
1426	167 mL/min 36 sec	100 mL	

Sample Collection

Flow Control Orifice Setting: 167 m2 Summa Canister ID: 35610 / 9371

Summa Canister Size: 1L / 1L Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum
1431	-30 / -30	1843	-5 / -5

Notes: $H_{2}O_{conc}$ ≈ 18%

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: VP-3		**Date:**	6/29/10
Job/Site Name:	Chevron 9-1723	**Technician:**	C. Benedict
Project No.	610675	**PM:**	J. Kiernan
Site Address:	9757 San Leandro Street, Oakland, CA		

Vapor Sampling Apparatus Pressure Testing

Time	Vacuum Reading	Unit	Comments
1343	-26	in/Hg	
1353	-24		

Purge Volume

Calculated Purge Volume: 100 mL ~36 sec

Time	Flow	Volume	PID Reading
1353		100 mL	

Sample Collection

Flow Control Orifice Setting: 167 mL/min Summa Canister ID: 2085

Summa Canister Size: 1 L Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum
1356	-29	1402	-5

Notes: He leak ~18%

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: VP-4		**Date:**	6/29/10
Job/Site Name:	Chevron 9-1723	**Technician:**	C. Benedict
Project No.	610675	**PM:**	J. Kiernan
Site Address:	9757 San Leandro Street, Oakland, CA		

Vapor Sampling Apparatus Pressure Testing

Time	Vacuum Reading	Unit	Comments
1314	-29	in/Hg	
1324	-29		

Purge Volume

Calculated Purge Volume: ~100mL - 36 sec

Time	Flow	Volume	PID Reading
1325			

Sample Collection

Flow Control Orifice Setting: 167 mL/min Summa Canister ID: 1024

Summa Canister Size: 1 L Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum
1326	-30	1332	-5

Notes: He leak ≈ 15%

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: ~~VP-1~~ VP-5 **Date:** 6/29/0

Job/Site Name: Chevron 9-1723 **Technician:** C. Benedict

Project No. 610675 **PM:** J. Kiernan

Site Address: 9757 San Leandro Street, Oakland, CA

Vapor Sampling Apparatus Pressure Testing "SHUT IN TEST"

Time	Vacuum Reading	Unit	Comments
1147	-30	in/Hg	
1157	-30		

Purge Volume

Calculated Purge Volume: 100 mL ~36 sec

Time	Flow	Volume	PID Reading

Sample Collection

Flow Control Orifice Setting: 167 mL/min Summa Canister ID: 34641

Summa Canister Size: 1L Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum
1202	-30 in/Hg	1210	-6 in/Hg

Notes: Helium ~12%

ATTACHMENT E

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

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron c/o CRA
Suite 107
10969 Trade Center Drive
Rancho Cordova CA 95670

July 08, 2010

Project: 91723

Submittal Date: 06/26/2010
Group Number: 1200664
PO Number: 91723
Release Number: MTI
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
VP-1-S-5-100624 Grab Soil	6017993
VP-2-S-6-100624 Grab Soil	6017994
VP-3-S-6-100624 Grab Soil	6017995
VP-4-S-6-100624 Grab Soil	6017996
VP-5-S-5-100624 Grab Soil	6017997

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

ELECTRONIC COPY TO	Chevron c/o CRA	Attn: CRA EDD
ELECTRONIC COPY TO	Chevron c/o CRA	Attn: James Kiernan

Lancaster Laboratories

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Analysis Report

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

Respectfully Submitted,

Valerie L. Tomayko
Group Leader

Lancaster Laboratories

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Analysis Report

Sample Description: VP-1-S-5-100624 Grab Soil
Facility# 91723 MTI# 610675 CRAW
9757 San Leandro-Oakland T0600101789 VP-1

LLI Sample # SW 6017993
LLI Group # 1200664
Account # 11997

Project Name: 91723

Collected: 06/24/2010 13:55 by CB

Submitted: 06/26/2010 09:30
Reported: 07/08/2010 17:10
Discard: 08/08/2010

Chevron c/o CRA
Suite 107
10969 Trade Center Drive
Rancho Cordova CA 95670

SLOV1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	**mg/kg**	
10950	Benzene	71-43-2	N.D.	0.0005	0.005	1.03
10950	Ethylbenzene	100-41-4	N.D.	0.001	0.005	1.03
10950	Toluene	108-88-3	N.D.	0.001	0.005	1.03
10950	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	1.03
GC Volatiles	**SW-846 8015B modified**		**mg/kg**	**mg/kg**	**mg/kg**	
01725	TPH-GRO N. CA soil C6-C12	n.a.	N.D.	1.0	1.0	26.21

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	201017921562	06/28/2010 22:32	Scott W Freisher	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201017921562	06/28/2010 22:32	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201017921562	06/28/2010 22:01	Scott W Freisher	n.a.
10950	BTEX 8260 Soil	SW-846 8260B	1	A101811AA	06/30/2010 04:57	Holly Berry	1.03
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201017921562	06/28/2010 22:01	Scott W Freisher	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10181A34A	07/01/2010 02:53	Marie D John	26.21

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

Lancaster Laboratories

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Analysis Report

Sample Description: VP-2-S-6-100624 Grab Soil
Facility# 91723 MTI# 610675 CRAW
9757 San Leandro-Oakland T0600101789 VP-2

LLI Sample # SW 6017994
LLI Group # 1200664
Account # 11997

Project Name: 91723

Collected: 06/24/2010 10:55 by CB

Submitted: 06/26/2010 09:30
Reported: 07/08/2010 17:10
Discard: 08/08/2010

Chevron c/o CRA
Suite 107
10969 Trade Center Drive
Rancho Cordova CA 95670

SLOV2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	**mg/kg**	
10950	Benzene	71-43-2	N.D.	0.047	0.47	94.34
10950	Ethylbenzene	100-41-4	N.D.	0.094	0.47	94.34
10950	Toluene	108-88-3	N.D.	0.094	0.47	94.34
10950	Xylene (Total)	1330-20-7	N.D.	0.094	0.47	94.34
	The GC/MS volatile analysis was performed according to the high level soil method due to the level of non-target compounds. Therefore, the reporting limits were raised.					
GC Volatiles	**SW-846 8015B modified**		**mg/kg**	**mg/kg**	**mg/kg**	
01725	TPH-GRO N. CA soil C6-C12	n.a.	230	21	21	517.6

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	201017921562	06/28/2010 22:32	Scott W Freisher	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201017921562	06/28/2010 22:32	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201017921562	06/28/2010 22:05	Scott W Freisher	n.a.
10950	BTEX 8260 Soil	SW-846 8260B	1	Q101823AA	07/01/2010 23:59	Kristen D Pelliccia	94.34
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201017921562	06/28/2010 22:06	Scott W Freisher	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10181A34A	07/01/2010 16:30	Marie D John	517.6

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

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Analysis Report

Sample Description: VP-3-S-6-100624 Grab Soil
Facility# 91723 MTI# 610675 CRAW
9757 San Leandro-Oakland T0600101789 VP-3

LLI Sample # SW 6017995
LLI Group # 1200664
Account # 11997

Project Name: 91723

Collected: 06/24/2010 11:55 by CB

Submitted: 06/26/2010 09:30
Reported: 07/08/2010 17:10
Discard: 08/08/2010

Chevron c/o CRA
Suite 107
10969 Trade Center Drive
Rancho Cordova CA 95670

SLOV3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	**mg/kg**	
10950	Benzene	71-43-2	0.14	0.024	0.24	47.35
10950	Ethylbenzene	100-41-4	0.52	0.047	0.24	47.35
10950	Toluene	108-88-3	N.D.	0.047	0.24	47.35
10950	Xylene (Total)	1330-20-7	0.14	0.047	0.24	47.35
	The GC/MS volatile analysis was performed according to the high level soil method due to the level of non-target compounds. Therefore, the reporting limits were raised.					
GC Volatiles	**SW-846 8015B modified**		**mg/kg**	**mg/kg**	**mg/kg**	
01725	TPH-GRO N. CA soil C6-C12	n.a.	100	78	78	1951.22

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	201017921562	06/28/2010 22:32	Scott W Freisher	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201017921562	06/28/2010 22:32	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201017921562	06/28/2010 22:09	Scott W Freisher	n.a.
10950	BTEX 8260 Soil	SW-846 8260B	1	Q101822AA	07/01/2010 08:49	Stephanie A Selis	47.35
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201017921562	06/28/2010 22:10	Scott W Freisher	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10181A34A	07/01/2010 15:53	Marie D John	1951.22

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

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Analysis Report

Sample Description: VP-4-S-6-100624 Grab Soil
Facility# 91723 MTI# 610675 CRAW
9757 San Leandro-Oakland T0600101789 VP-4

LLI Sample # SW 6017996
LLI Group # 1200664
Account # 11997

Project Name: 91723

Collected: 06/24/2010 12:32 by CB

Submitted: 06/26/2010 09:30
Reported: 07/08/2010 17:10
Discard: 08/08/2010

Chevron c/o CRA
Suite 107
10969 Trade Center Drive
Rancho Cordova CA 95670

SLOV4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	**mg/kg**	
10950	Benzene	71-43-2	0.033	0.025	0.25	50.3
10950	Ethylbenzene	100-41-4	N.D.	0.050	0.25	50.3
10950	Toluene	108-88-3	N.D.	0.050	0.25	50.3
10950	Xylene (Total)	1330-20-7	0.074	0.050	0.25	50.3
	The GC/MS volatile analysis was performed according to the high level soil method due to the level of non-target compounds. Therefore, the reporting limits were raised.					
GC Volatiles	**SW-846 8015B modified**		**mg/kg**	**mg/kg**	**mg/kg**	
01725	TPH-GRO N. CA soil C6-C12	n.a.	100	7.9	7.9	196.85

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	201017921562	06/28/2010 22:32	Scott W Freisher	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201017921562	06/28/2010 22:32	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201017921562	06/28/2010 22:12	Scott W Freisher	n.a.
10950	BTEX 8260 Soil	SW-846 8260B	1	Q101822AA	07/01/2010 11:52	Stephanie A Selis	50.3
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201017921562	06/28/2010 22:13	Scott W Freisher	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10181A34A	07/01/2010 17:06	Marie D John	196.85

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

Lancaster Laboratories

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Analysis Report

Sample Description: VP-5-S-5-100624 Grab Soil
Facility# 91723 MTI# 610675 CRAW
9757 San Leandro-Oakland T0600101789 VP-5

LLI Sample # SW 6017997
LLI Group # 1200664
Account # 11997

Project Name: 91723

Collected: 06/24/2010 13:20 by CB

Submitted: 06/26/2010 09:30
Reported: 07/08/2010 17:10
Discard: 08/08/2010

Chevron c/o CRA
Suite 107
10969 Trade Center Drive
Rancho Cordova CA 95670

SLOV5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	**mg/kg**	
10950	Benzene	71-43-2	N.D.	0.0005	0.005	1.07
10950	Ethylbenzene	100-41-4	N.D.	0.001	0.005	1.07
10950	Toluene	108-88-3	N.D.	0.001	0.005	1.07
10950	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	1.07
GC Volatiles	**SW-846 8015B modified**		**mg/kg**	**mg/kg**	**mg/kg**	
01725	TPH-GRO N. CA soil C6-C12	n.a.	N.D.	1	1	23.81

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	1	201017921562	06/28/2010 22:32	Scott W Freisher	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201017921562	06/28/2010 22:32	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201017921562	06/28/2010 22:15	Scott W Freisher	n.a.
10950	BTEX 8260 Soil	SW-846 8260B	1	A101811AA	06/30/2010 05:20	Holly Berry	1.07
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201017921562	06/28/2010 22:16	Scott W Freisher	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10181A34A	07/01/2010 03:30	Marie D John	23.81

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

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: Chevron c/o CRA
Group Number: 1200664
Reported: 07/08/10 at 05:10 PM

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**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: A101811AA	Sample number(s): 6017993,6017997								
Benzene	N.D.	0.0005	0.005	mg/kg	115	113	80-120	2	30
Ethylbenzene	N.D.	0.001	0.005	mg/kg	115	112	80-120	3	30
Toluene	N.D.	0.001	0.005	mg/kg	113	111	80-120	2	30
Xylene (Total)	N.D.	0.001	0.005	mg/kg	111	108	80-120	2	30
Batch number: Q101822AA	Sample number(s): 6017995-6017996								
Benzene	N.D.	0.025	0.25	mg/kg	95	98	80-120	3	30
Ethylbenzene	N.D.	0.050	0.25	mg/kg	92	95	80-120	3	30
Toluene	N.D.	0.050	0.25	mg/kg	97	100	80-120	2	30
Xylene (Total)	N.D.	0.050	0.25	mg/kg	93	96	80-120	3	30
Batch number: Q101823AA	Sample number(s): 6017994								
Benzene	N.D.	0.025	0.25	mg/kg	98	98	80-120	0	30
Ethylbenzene	N.D.	0.050	0.25	mg/kg	95	94	80-120	2	30
Toluene	N.D.	0.050	0.25	mg/kg	100	99	80-120	1	30
Xylene (Total)	N.D.	0.050	0.25	mg/kg	96	95	80-120	2	30
Batch number: 10181A34A	Sample number(s): 6017993-6017997								
TPH-GRO N. CA soil C6-C12	N.D.	1.0	1.0	mg/kg	103	115	67-119	11	30

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: A101811AA	Sample number(s): 6017993,6017997 UNSPK: P017773								
Benzene	111		55-143						
Ethylbenzene	115		44-141						
Toluene	115		50-146						
Xylene (Total)	109		44-136						

Surrogate Quality Control

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

Analysis Name: VOCs by 8260B - Solid
Batch number: A101811AA

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

Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1200664
Reported: 07/08/10 at 05:10 PM

Surrogate Quality Control

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6017993	97	99	108	98
6017997	99	102	106	95
Blank	101	109	103	98
LCS	101	105	105	103
LCSD	99	99	105	102
MS	97	96	109	95
Limits:	71-114	70-109	70-123	70-111

Analysis Name: VOCs by 8260B - Solid
Batch number: Q101822AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6017995	81	89	89	85
6017996	81	88	90	83
Blank	88	97	94	88
LCS	87	93	95	90
LCSD	90	97	96	94
Limits:	71-114	70-109	70-123	70-111

Analysis Name: VOCs by 8260B - Solid
Batch number: Q101823AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6017994	75	80	85	78
Blank	90	98	100	93
LCS	90	97	98	92
LCSD	88	96	95	91
Limits:	71-114	70-109	70-123	70-111

Analysis Name: TPH-GRO N. CA soil C6-C12
Batch number: 10181A34A

	Trifluorotoluene-F
6017993	72
6017994	116
6017995	88
6017996	145*
6017997	73
Blank	81
LCS	78
LCSD	84
Limits:	61-122

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

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories
Where quality is a science.

For Lancaster Laboratories use only
Acct. #: 11997 Sample #: 6017993-97 SCR#: 248590

MT: 610675

Grp # 1200664

Facility #: 9-1723
Site Address: 9757 SAN LEANDRO ST., OAKLAND
Chevron PM: ROB SPEER Lead Consultant: CRA
Consultant/Office: RANCHO CORDOVA
Consultant Prj. Mgr.: JAMES KIERNAN
Consultant Phone #: 916 859 8900 Fax #: 916 859 8999
Sampler: CHRIS BENEDICT
Service Order #: ☐ Non SAR:

Analyses Requested

Preservation Codes

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

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-1-5	SOIL		5	10 6 24	1355	X	X		1	X	X				
VP-2-3			3		1045	X	X		1						
VP-2-4			4		1047	X	X		1						
VP-2-5			5		1050	X	X		1						
VP-2-6			5.5		1055	X	X		1	X	X				
VP-3-2			2		1142	X	X		1						
VP-3-3.5			3.5		1142	X	X		1						
VP-3-5			5		1153	X	X		1						
VP-3-6			5.5		1155	X	X		1	X	X				
VP-4-5			5		1229	X	X		1						
VP-4-6			5.5		1232	X	X		1	X	X				
VP-5-5			5		1320	X	X		1	X	X				

Comments / Remarks

PLACE VP-2-3, VP-2-4, VP-2-5, VP-3-2, VP-3-3.5, VP-3-5, VP-4-5 ON HOLD.

Turnaround Time Requested (TAT) (please circle)

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

Data Package Options (please circle if required)

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

Relinquished by:	Date	Time	Received by:	Date	Time
Chris Benedict	6/25/10	1000			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by Commercial Carrier: UPS ~~FedEx~~ Other			Received by:	Date	Time
				6/26/10	0930
Temperature Upon Receipt 2.2 C°			Custody Seals Intact? Yes No		

Explanation of Symbols and Abbreviations

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

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

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

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

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

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
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 sample 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 meet all requirements of NELAC unless otherwise noted under the individual analysis.

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

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

Air Toxics LTD.
Laboratory Services Since 1989

7/28/2010
Mr. Chris Benedict
Conestoga-Rovers Associates (CRA)
10969 Trade Center Dr
Suite 107
Rancho Cordova CA 95670

Project Name: 9-1723
Project #: 610675
Workorder #: 1006761BR1

Dear Mr. Chris Benedict

The following report includes the data for the above referenced project for sample(s) received on 6/30/2010 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-3 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

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

Regards,

Karen Lopez

Project Manager

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 1006761BR1

Work Order Summary

CLIENT:	Mr. Chris Benedict Conestoga-Rovers Associates (CRA) 10969 Trade Center Dr Suite 107 Rancho Cordova, CA 95670	**BILL TO:**	Mr. Chris Benedict Conestoga-Rovers Associates (CRA) 10969 Trade Center Dr Suite 107 Rancho Cordova, CA 95670
PHONE:	916-889-8925	**P.O. #**	4031644
FAX:	916-889-8999	**PROJECT #**	610675 9-1723
DATE RECEIVED:	06/30/2010	**CONTACT:**	Karen Lopez
DATE COMPLETED:	07/15/2010		
DATE REISSUED:	07/28/2010		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	VP-1	Modified TO-3	7.4 "Hg	15 psi
01AA	VP-1 Lab Duplicate	Modified TO-3	7.4 "Hg	15 psi
02A	VP-2	Modified TO-3	7.0 "Hg	15 psi
03A	VP-3	Modified TO-3	6.0 "Hg	15 psi
04A	VP-4	Modified TO-3	5.8 "Hg	15 psi
05A	VP-5	Modified TO-3	8.6 "Hg	15 psi
06A	DUPE	Modified TO-3	7.0 "Hg	15 psi
07A	Lab Blank	Modified TO-3	NA	NA
08A	LCS	Modified TO-3	NA	NA

CERTIFIED BY: Linda J. Furman DATE: 07/28/10

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763,
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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# 1006761BR1

Six 1 Liter Summa Canister (100% Certified) samples were received on June 30, 2010. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L.

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

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

There were no receiving discrepancies.

Analytical Notes

The recovery of surrogate Fluorobenzene in samples VP-1, VP-1 Lab Duplicate, VP-2, VP-3, VP-4, VP-5 and DUPE was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

THE WORKORDER WAS REISSUED ON 07/28/10 TO REPORT RESULTS IN PPMV AND UG/M3.

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.
Laboratory Services Since 1989

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

Client Sample ID: VP-1

Lab ID#: 1006761BR1-01A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	13	6500	55000	26000000

Client Sample ID: VP-1 Lab Duplicate

Lab ID#: 1006761BR1-01AA

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	13	7900	55000	32000000

Client Sample ID: VP-2

Lab ID#: 1006761BR1-02A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	26	22000	110000	89000000

Client Sample ID: VP-3

Lab ID#: 1006761BR1-03A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	25	21000	100000	88000000

Client Sample ID: VP-4

Lab ID#: 1006761BR1-04A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	25	13000	100000	53000000

Client Sample ID: VP-5

Lab ID#: 1006761BR1-05A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: VP-5

Lab ID#: 1006761BR1-05A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	14	9000	58000	37000000

Client Sample ID: DUPE

Lab ID#: 1006761BR1-06A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	26	22000	110000	90000000

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Client Sample ID: VP-1

Lab ID#: 1006761BR1-01A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d070708**	**Date of Collection: 6/29/10 12:50:00 PM**	
Dil. Factor:	**536**	**Date of Analysis: 7/7/10 01:48 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	13	6500	55000	26000000

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

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	174 Q	75-150

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Laboratory Services Since 1989

Client Sample ID: VP-1 Lab Duplicate

Lab ID#: 1006761BR1-01AA

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d070709**	**Date of Collection: 6/29/10 12:50:00 PM**	
Dil. Factor:	**536**	**Date of Analysis: 7/7/10 02:23 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	13	7900	55000	32000000

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

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	230 Q	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-2

Lab ID#: 1006761BR1-02A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d070710**	**Date of Collection: 6/29/10 2:43:00 PM**	
Dil. Factor:	**1060**	**Date of Analysis: 7/7/10 02:55 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	26	22000	110000	89000000

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

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	270 Q	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-3

Lab ID#: 1006761BR1-03A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d070711**	**Date of Collection: 6/29/10 2:02:00 PM**	
Dil. Factor:	**1010**	**Date of Analysis: 7/7/10 03:31 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	25	21000	100000	88000000

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

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	278 Q	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-4

Lab ID#: 1006761BR1-04A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d070712**	**Date of Collection: 6/29/10 1:32:00 PM**	
Dil. Factor:	**1000**	**Date of Analysis: 7/7/10 04:07 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	25	13000	100000	53000000

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

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	192 Q	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-5

Lab ID#: 1006761BR1-05A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d070713**	**Date of Collection: 6/29/10 12:10:00 PM**	
Dil. Factor:	**566**	**Date of Analysis: 7/7/10 04:53 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	14	9000	58000	37000000

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

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	168 Q	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: DUPE

Lab ID#: 1006761BR1-06A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d070714**	**Date of Collection: 6/29/10**	
Dil. Factor:	**1060**	**Date of Analysis: 7/7/10 05:29 PM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	26	22000	110000	90000000

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

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	276 Q	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 1006761BR1-07A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d070702**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/7/10 10:15 AM**	

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.025	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	107	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 1006761BR1-08A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d070720**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/7/10 09:04 PM**	

Compound	**%Recovery**
TPH (Gasoline Range)	112

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Fluorobenzene (FID)	117	75-150

Air Toxics LTD.
Laboratory Services Since 1989

7/15/2010
Mr. Chris Benedict
Conestoga-Rovers Associates (CRA)
10969 Trade Center Dr
Suite 107
Rancho Cordova CA 95670

Project Name: 9-1723
Project #: 610675
Workorder #: 1006761A

Dear Mr. Chris Benedict

The following report includes the data for the above referenced project for sample(s) received on 6/30/2010 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 (5&20 ppbv) are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

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

Regards,

Karen Lopez

Project Manager

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 1006761A

Work Order Summary

CLIENT:	Mr. Chris Benedict Conestoga-Rovers Associates (CRA) 10969 Trade Center Dr Suite 107 Rancho Cordova, CA 95670	**BILL TO:**	Mr. Chris Benedict Conestoga-Rovers Associates (CRA) 10969 Trade Center Dr Suite 107 Rancho Cordova, CA 95670
PHONE:	916-889-8925	**P.O. #**	4031644
FAX:	916-889-8999	**PROJECT #**	610675 9-1723
DATE RECEIVED:	06/30/2010	**CONTACT:**	Karen Lopez
DATE COMPLETED:	07/15/2010		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	VP-1	Modified TO-15 (5&20 ppbv	7.4 "Hg	15 psi
02A	VP-2	Modified TO-15 (5&20 ppbv	7.0 "Hg	15 psi
03A	VP-3	Modified TO-15 (5&20 ppbv	6.0 "Hg	15 psi
03AA	VP-3 Lab Duplicate	Modified TO-15 (5&20 ppbv	6.0 "Hg	15 psi
04A	VP-4	Modified TO-15 (5&20 ppbv	5.8 "Hg	15 psi
05A	VP-5	Modified TO-15 (5&20 ppbv	8.6 "Hg	15 psi
06A	DUPE	Modified TO-15 (5&20 ppbv	7.0 "Hg	15 psi
07A	Lab Blank	Modified TO-15 (5&20 ppbv	NA	NA
08A	CCV	Modified TO-15 (5&20 ppbv	NA	NA
09A	LCS	Modified TO-15 (5&20 ppbv	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 07/15/10

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763,
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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

LABORATORY NARRATIVE
Modified TO-15 Soil Gas
Conestoga-Rovers Associates (CRA)
Workorder# 1006761A

Six 1 Liter Summa Canister (100% Certified) samples were received on June 30, 2010. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 50 mLs 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

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on samples VP-1, VP-2, VP-3, VP-3 Lab Duplicate, VP-4, VP-5 and DUPE due to the presence of high level non-target species.

The recovery of surrogate 1,2-Dichloroethane-d4 in samples VP-2, VP-3, VP-3 Lab Duplicate and DUPE was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

Definition of Data Qualifying Flags

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

B - Compound present in laboratory blank greater than reporting limit (background subtraction 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.
Laboratory Services Since 1989

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

Client Sample ID: VP-1

Lab ID#: 1006761A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	840	1200	2700	3700

Client Sample ID: VP-2

Lab ID#: 1006761A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	660	3300	2100	11000

Client Sample ID: VP-3

Lab ID#: 1006761A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	420	170000	1300	540000
Toluene	420	450	1600	1700
Ethyl Benzene	420	6000	1800	26000
m,p-Xylene	420	860	1800	3700

Client Sample ID: VP-3 Lab Duplicate

Lab ID#: 1006761A-03AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	420	160000	1300	520000
Toluene	420	440	1600	1700
Ethyl Benzene	420	6100	1800	26000
m,p-Xylene	420	890	1800	3800

Client Sample ID: VP-4

Lab ID#: 1006761A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	780	6900	2500	22000

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: VP-5

Lab ID#: 1006761A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	710	1300	2300	4100

Client Sample ID: DUPE

Lab ID#: 1006761A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	820	3800	2600	12000

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Client Sample ID: VP-1

Lab ID#: 1006761A-01A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**w071508**	**Date of Collection: 6/29/10 12:50:00 PM**	
Dil. Factor:	**168**	**Date of Analysis: 7/14/10 09:56 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	840	1200	2700	3700
Toluene	840	Not Detected	3200	Not Detected
Ethyl Benzene	840	Not Detected	3600	Not Detected
m,p-Xylene	840	Not Detected	3600	Not Detected
o-Xylene	840	Not Detected	3600	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-2

Lab ID#: 1006761A-02A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**w071509**	**Date of Collection: 6/29/10 2:43:00 PM**	
Dil. Factor:	**132**	**Date of Analysis: 7/14/10 10:21 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	660	3300	2100	11000
Toluene	660	Not Detected	2500	Not Detected
Ethyl Benzene	660	Not Detected	2900	Not Detected
m,p-Xylene	660	Not Detected	2900	Not Detected
o-Xylene	660	Not Detected	2900	Not Detected

Q = Exceeds Quality Control limits.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	164 Q	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	93	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-3

Lab ID#: 1006761A-03A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**w071510**	**Date of Collection: 6/29/10 2:02:00 PM**	
Dil. Factor:	**84.3**	**Date of Analysis: 7/14/10 10:47 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	420	170000	1300	540000
Toluene	420	450	1600	1700
Ethyl Benzene	420	6000	1800	26000
m,p-Xylene	420	860	1800	3700
o-Xylene	420	Not Detected	1800	Not Detected

Q = Exceeds Quality Control limits.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	157 Q	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	92	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-3 Lab Duplicate

Lab ID#: 1006761A-03AA

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**w071511**	**Date of Collection: 6/29/10 2:02:00 PM**	
Dil. Factor:	**84.3**	**Date of Analysis: 7/14/10 11:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	420	160000	1300	520000
Toluene	420	440	1600	1700
Ethyl Benzene	420	6100	1800	26000
m,p-Xylene	420	890	1800	3800
o-Xylene	420	Not Detected	1800	Not Detected

Q = Exceeds Quality Control limits.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	156 Q	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	93	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-4

Lab ID#: 1006761A-04A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**w071512**	**Date of Collection: 6/29/10 1:32:00 PM**	
Dil. Factor:	**156**	**Date of Analysis: 7/14/10 11:42 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	780	6900	2500	22000
Toluene	780	Not Detected	2900	Not Detected
Ethyl Benzene	780	Not Detected	3400	Not Detected
m,p-Xylene	780	Not Detected	3400	Not Detected
o-Xylene	780	Not Detected	3400	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	92	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-5

Lab ID#: 1006761A-05A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**w071513**	**Date of Collection: 6/29/10 12:10:00 PM**	
Dil. Factor:	**142**	**Date of Analysis: 7/15/10 12:08 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	710	1300	2300	4100
Toluene	710	Not Detected	2700	Not Detected
Ethyl Benzene	710	Not Detected	3100	Not Detected
m,p-Xylene	710	Not Detected	3100	Not Detected
o-Xylene	710	Not Detected	3100	Not Detected

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	93	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: DUPE

Lab ID#: 1006761A-06A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**w071514**	**Date of Collection: 6/29/10**	
Dil. Factor:	**165**	**Date of Analysis: 7/15/10 12:30 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	820	3800	2600	12000
Toluene	820	Not Detected	3100	Not Detected
Ethyl Benzene	820	Not Detected	3600	Not Detected
m,p-Xylene	820	Not Detected	3600	Not Detected
o-Xylene	820	Not Detected	3600	Not Detected

Q = Exceeds Quality Control limits.

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

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	153 Q	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	92	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 1006761A-07A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**w071507**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/14/10 09:25 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	5.0	Not Detected	16	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 1006761A-08A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**w071502**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/14/10 06:23 PM**	

Compound	%Recovery
Benzene	104
Toluene	105
Ethyl Benzene	104
m,p-Xylene	103
o-Xylene	100

Container Type: NA - Not Applicable

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 1006761A-09A

MODIFIED EPA METHOD TO-15 GC/MS

File Name:	**w071503**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/14/10 06:59 PM**	

Compound	%Recovery
Benzene	101
Toluene	98
Ethyl Benzene	103
m,p-Xylene	104
o-Xylene	102

Container Type: NA - Not Applicable

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

Air Toxics LTD.
Laboratory Services Since 1989

7/15/2010
Mr. Chris Benedict
Conestoga-Rovers Associates (CRA)
10969 Trade Center Dr
Suite 107
Rancho Cordova CA 95670

Project Name: 9-1723
Project #: 610675
Workorder #: 1006761C

Dear Mr. Chris Benedict

The following report includes the data for the above referenced project for sample(s) received on 6/30/2010 at Air Toxics Ltd.

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

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

Regards,

Karen Lopez

Project Manager

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 1006761C

Work Order Summary

CLIENT:	Mr. Chris Benedict Conestoga-Rovers Associates (CRA) 10969 Trade Center Dr Suite 107 Rancho Cordova, CA 95670	**BILL TO:**	Mr. Chris Benedict Conestoga-Rovers Associates (CRA) 10969 Trade Center Dr Suite 107 Rancho Cordova, CA 95670
PHONE:	916-889-8925	**P.O. #**	4031644
FAX:	916-889-8999	**PROJECT #**	610675 9-1723
DATE RECEIVED:	06/30/2010	**CONTACT:**	Karen Lopez
DATE COMPLETED:	07/14/2010		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	VP-1	Modified ASTM D-1946	7.4 "Hg	15 psi
01AA	VP-1 Lab Duplicate	Modified ASTM D-1946	7.4 "Hg	15 psi
02A	VP-2	Modified ASTM D-1946	7.0 "Hg	15 psi
03A	VP-3	Modified ASTM D-1946	6.0 "Hg	15 psi
04A	VP-4	Modified ASTM D-1946	5.8 "Hg	15 psi
05A	VP-5	Modified ASTM D-1946	8.6 "Hg	15 psi
06A	DUPE	Modified ASTM D-1946	7.0 "Hg	15 psi
07A	Lab Blank	Modified ASTM D-1946	NA	NA
07B	Lab Blank	Modified ASTM D-1946	NA	NA
08A	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 07/15/10

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763,
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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# 1006761C

Six 1 Liter Summa Canister (100% Certified) samples were received on June 30, 2010. The laboratory performed analysis via Modified ASTM Method D-1946 for fixed gases in air using 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

There were no receiving discrepancies.

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.
Laboratory Services Since 1989

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

Client Sample ID: VP-1

Lab ID#: 1006761C-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.27	6.2
Carbon Dioxide	0.027	15

Client Sample ID: VP-1 Lab Duplicate

Lab ID#: 1006761C-01AA

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.27	6.2
Carbon Dioxide	0.027	14

Client Sample ID: VP-2

Lab ID#: 1006761C-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	0.84
Carbon Dioxide	0.026	21

Client Sample ID: VP-3

Lab ID#: 1006761C-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	2.9
Carbon Dioxide	0.025	14

Client Sample ID: VP-4

Lab ID#: 1006761C-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	2.4
Carbon Dioxide	0.025	13

Air Toxics LTD.
Laboratory Services Since 1989

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

Client Sample ID: VP-5

Lab ID#: 1006761C-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.28	2.3
Carbon Dioxide	0.028	18

Client Sample ID: DUPE

Lab ID#: 1006761C-06A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	0.83
Carbon Dioxide	0.026	21

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-1

Lab ID#: 1006761C-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9070721b**	**Date of Collection: 6/29/10 12:50:00 PM**	
Dil. Factor:	**2.68**	**Date of Analysis: 7/7/10 06:06 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.27	6.2
Carbon Dioxide	0.027	15
Helium	0.13	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-1 Lab Duplicate

Lab ID#: 1006761C-01AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9070722b**	**Date of Collection: 6/29/10 12:50:00 PM**	
Dil. Factor:	**2.68**	**Date of Analysis: 7/7/10 06:33 PM**	

Compound	**Rpt. Limit (%)**	**Amount (%)**
Oxygen	0.27	6.2
Carbon Dioxide	0.027	14
Helium	0.13	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-2

Lab ID#: 1006761C-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9070723b**	**Date of Collection: 6/29/10 2:43:00 PM**	
Dil. Factor:	**2.64**	**Date of Analysis: 7/7/10 06:55 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	0.84
Carbon Dioxide	0.026	21
Helium	0.13	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-3

Lab ID#: 1006761C-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9070724b**	**Date of Collection:**	**6/29/10 2:02:00 PM**
Dil. Factor:	**2.52**	**Date of Analysis:**	**7/7/10 07:20 PM**

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	2.9
Carbon Dioxide	0.025	14
Helium	0.13	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-4

Lab ID#: 1006761C-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9070725b**	**Date of Collection: 6/29/10 1:32:00 PM**	
Dil. Factor:	**2.50**	**Date of Analysis: 7/7/10 07:44 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	2.4
Carbon Dioxide	0.025	13
Helium	0.12	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: VP-5

Lab ID#: 1006761C-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9070726b**	**Date of Collection: 6/29/10 12:10:00 PM**	
Dil. Factor:	**2.83**	**Date of Analysis: 7/7/10 08:09 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.28	2.3
Carbon Dioxide	0.028	18
Helium	0.14	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: DUPE

Lab ID#: 1006761C-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9070727b**	**Date of Collection: 6/29/10**	
Dil. Factor:	**2.64**	**Date of Analysis: 7/7/10 09:06 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	0.83
Carbon Dioxide	0.026	21
Helium	0.13	Not Detected

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

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 1006761C-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9070703b**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/7/10 08:36 AM**	

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

Container Type: NA - Not Applicable

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 1006761C-07B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9070702b**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/7/10 08:11 AM**	

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

Container Type: NA - Not Applicable

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 1006761C-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**9070728b**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/7/10 09:28 PM**	

Compound	%Recovery
Oxygen	97
Carbon Dioxide	99
Helium	99

Container Type: NA - Not Applicable

Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

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

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

Project Manager JAMES KIERNAN

Collected by: (Print and Sign) CHRIS BENEDICT

Company CRA Email jkiernan@craworld.com

Address 10969 TRADE CENTER # 107 City RANCHO CORDOVA State CA Zip 95670

Phone 916 858 5900 Fax 916 858 5999

Project Info:
P.O. #
Project # 610675
Project Name 9-1723

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	VP-1	37303	6/29/10	1250	• TPH$_g$ by TO-3	-30	-5.5		
02A	VP-2	35610		1443	• BTEX by TO-15	-30	-5		
03A	VP-3	2085		1402	• He, O_2, CO_2 by ASTM 1946	-29	-5		
04A	VP-4	1024		1332		-30	-5		
05A	VP-5	34641		1210		-30	-6		
06A	DUP#2	9371				-30	-5		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Chris Benedict	6/30/10 1515	Monica Gregsen AIR	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time 6/30/10 1515
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes: Report in µg/m³

Lab Use Only

Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
DOP OTS	—	NA	Good	Yes No (None)	1006761

Form 1293 rev.11