



RECEIVED

10:33 am, Aug 12, 2010

Alameda County
Environmental Health

Stacie H. Frerichs
Team Lead
Marketing Business Unit

**Chevron Environmental
Management Company**
6001 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 842-9655
Fax (925) 842-8370

August 10, 2010
(date)

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

Re: Chevron Facility # 9-0504

Address: 15900 Hesperian Boulevard, San Lorenzo, California

I have reviewed the attached report titled Soil Vapor Quality Evaluation and Second Request for Case Closure and dated August 10, 2010.

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,

Stacie H. Frerichs
Project Manager

Enclosure: Report



August 10, 2010

Reference No. 611641

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 and Second Request for Case Closure
Chevron Station 9-0504
15900 Hesperian Boulevard
San Lorenzo, California
LOP Case RO0000007

Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA) has prepared this *Soil Vapor Quality Evaluation and Second Request for Case Closure* 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 16, 2008 (Attachment A), Alameda County Environmental Health (ACEH) requested an evaluation of potential vapor intrusion concerns at the site. To evaluate shallow soil vapor quality, CRA installed and sampled soil vapor wells VP-1 through VP-4 at the site. The work was performed in general accordance with the January 30, 2009 *Work Plan for Additional Investigation* (work plan). Presented below are the site description and background, details and results of the investigation, and our conclusions and recommendations.

SITE DESCRIPTION AND BACKGROUND

The site is an operating Chevron service station located on the northeast side of Hesperian Boulevard between Paseo Grande and Post Office Drive in San Lorenzo, California (Figure 1). Current site facilities include a station building with three service bays, three dispenser islands, three 10,000-gallon gasoline underground storage tanks (USTs), and one 10,000-gallon diesel UST (Figure 2). The site has been occupied by a service station since approximately 1969. In 1983, two 10,000-gallon and one 5,000-gallon steel USTs were replaced with the existing fiberglass tanks. In 1994, a 1,000-gallon steel used-oil UST was replaced with a 1,000-gallon fiberglass UST, which was later removed in 2001. The site is located in a mixed commercial and residential area. The site is bounded by Post Office Road followed by a parking lot to the northwest, a parking lot for the post office to the northeast, a commercial building to the southeast, and Hesperian Boulevard to the southwest. Residential properties are located across Hesperian Boulevard to the west-southwest.



August 10, 2010

Reference No. 611641

- 2 -

Environmental work has been ongoing at the site since 1983. A summary of previous environmental investigation and remediation work performed at the site is included as Attachment B. Approximate well, boring, and soil sampling locations are presented on Figure 2.

CRA previously submitted the September 14, 2007 *Site Conceptual Model and Closure Request*, in which case closure was recommended based on the San Francisco Bay Regional Water Quality Control Board (RWQCB) low-risk criteria. In the October 16, 2008 letter, ACEH noted that during the installation of monitoring wells C-1 through C-5 in 1983, no soil samples were collected, and during an investigation in 1992, soil samples were not collected deeper than 10 feet below grade (fbg); leaving the vertical extent of contamination in the source area undefined. ACEH also noted that although a groundwater extraction (GWE) and treatment system operated successfully onsite from 1992 to 1994, no post-remediation soil sampling had been conducted to verify its effectiveness. Finally, it was noted that although a previous risk assessment evaluated potential vapor intrusion from groundwater to indoor air, soil to indoor air had not been adequately evaluated. Therefore, ACEH requested additional investigation to further evaluate:

- The vertical extent of petroleum hydrocarbons in the source area.
- The effectiveness of previous remedial activities.
- Potential vapor intrusion concerns.

In the January 30, 2009 work plan, justification was presented that no further investigation was warranted pertaining to the first two bulleted items above, and the installation and sampling of four soil vapor wells was proposed to evaluate potential vapor intrusion concerns.

INVESTIGATION ACTIVITIES

CRA installed and sampled vapor wells VP-1 through VP-4 to evaluate shallow soil vapor quality at the site. The approximate 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 May 25, 2010; and the wells were sampled on June 3, 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. 2010-0326 from 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 (C-57 License 906899) of Woodland, California, under the supervision of CRA.



August 10, 2010

Reference No. 611641

- 3 -

The well borings were advanced to a total depth of approximately 6 fbg. Soil samples were obtained continuously from the borings for logging and observation purposes. The soil was logged in accordance with American Society for Testing and Materials (ASTM) D-2488 protocols, and generally consisted of silty to clayey sand to approximately 1 or 2 fbg, followed by silt with varying amounts of sand to the bottom of the borings. 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

No evidence of impact was observed in the borings, and elevated concentrations of organic vapors were not detected using the PID. Therefore, soil samples were collected from the borings at approximately 5.5 fbg for laboratory analysis using the hand auger. The samples were collected in stainless-steel liners, 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 total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015B; and benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8260B.

Soil Vapor Well Installation

Soil vapor wells VP-1 through VP-4 were constructed with ¼-inch diameter Nylaflow® tubing connected to a 3-inch-long micro-porous silica diffuser. The diffuser (screen) was placed in the wells at approximately 5.3 to 5.5 fbg. Monterey Sand #2/12 was used as a filter pack from the bottom of the borings to 3 inches above the top of the screen. Three inches of dry, granular bentonite was placed above the sand pack 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 well was capped, and well boxes were installed flush to grade and equipped with traffic-rated lids. Well construction diagrams are shown on the boring logs (Attachment C).

Soil Vapor Sampling and Laboratory Analysis

Soil vapor samples were collected from VP-1 through VP-4 in 1-liter Summa™ canisters. A field duplicate sample (Dupe) was also collected from VP-3 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.



August 10, 2010

Reference No. 611641

- 4 -

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 four soil vapor samples and the duplicate sample were analyzed for TPHg by EPA Method TO-3 and BTEX and MTBE 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 July 21, 2010, the drum was removed from the site by Integrated Wastestream Management (IWM) of San Jose, California, and transported to Vasco Road Landfill in Livermore, California for disposal.

SOIL SAMPLE ANALYTICAL RESULTS

No TPHg, BTEX, or MTBE 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-3 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 VP-1 through VP-4 at concentrations of 3,900 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), 1,500 $\mu\text{g}/\text{m}^3$, 1,600 $\mu\text{g}/\text{m}^3$, and 2,600 $\mu\text{g}/\text{m}^3$,



August 10, 2010

Reference No. 611641

- 5 -

respectively; toluene was also detected at concentrations of 6.7 $\mu\text{g}/\text{m}^3$, 5.7 $\mu\text{g}/\text{m}^3$, 5.6 $\mu\text{g}/\text{m}^3$, and 5.5 $\mu\text{g}/\text{m}^3$, respectively. M,p-xylenes and o-xylenes were only detected in the sample collected from VP-1 (11 $\mu\text{g}/\text{m}^3$ and 5.5 $\mu\text{g}/\text{m}^3$, respectively). No benzene, ethylbenzene, or MTBE was detected in any of the soil vapor samples.

No helium was 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 residential sites (Table E) (most conservative); established by the 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. Under most circumstances, the presence of a chemical in soil, groundwater, or soil gas at concentrations below the corresponding ESL can be assumed to not pose a significant, long-term (chronic) threat to human health and the environment.

The detected TPHg concentrations did not exceed the ESL of 10,000 $\mu\text{g}/\text{m}^3$. The concentrations of the remaining detected compounds (toluene and xylenes) 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 soil vapor wells VP-1 through VP-4 to evaluate potential vapor intrusion issues at the site. No petroleum hydrocarbons were detected in any of the soil samples collected from the well borings. TPHg was detected in all the soil vapor samples; low concentrations of toluene and xylenes were detected in one or more of the samples. The detected concentrations did not exceed the respective residential ESLs and therefore do not appear to pose a significant threat to human health. No further investigation appears warranted.



**CONESTOGA-ROVERS
& ASSOCIATES**

August 10, 2010

Reference No. 611641

- 6 -

Based on the results of this investigation, the recent groundwater monitoring results, and the discussion of the site conditions and the RWQCB low-risk criteria previously presented in the September 14, 2007 *Site Conceptual Model and Closure Request*, this site still meets low-risk criteria. Therefore, CRA, on behalf of Chevron, respectfully requests approval for case closure.

We appreciate your assistance on this project and look forward to your reply. 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. C68498

CB/jt/5
Encl.

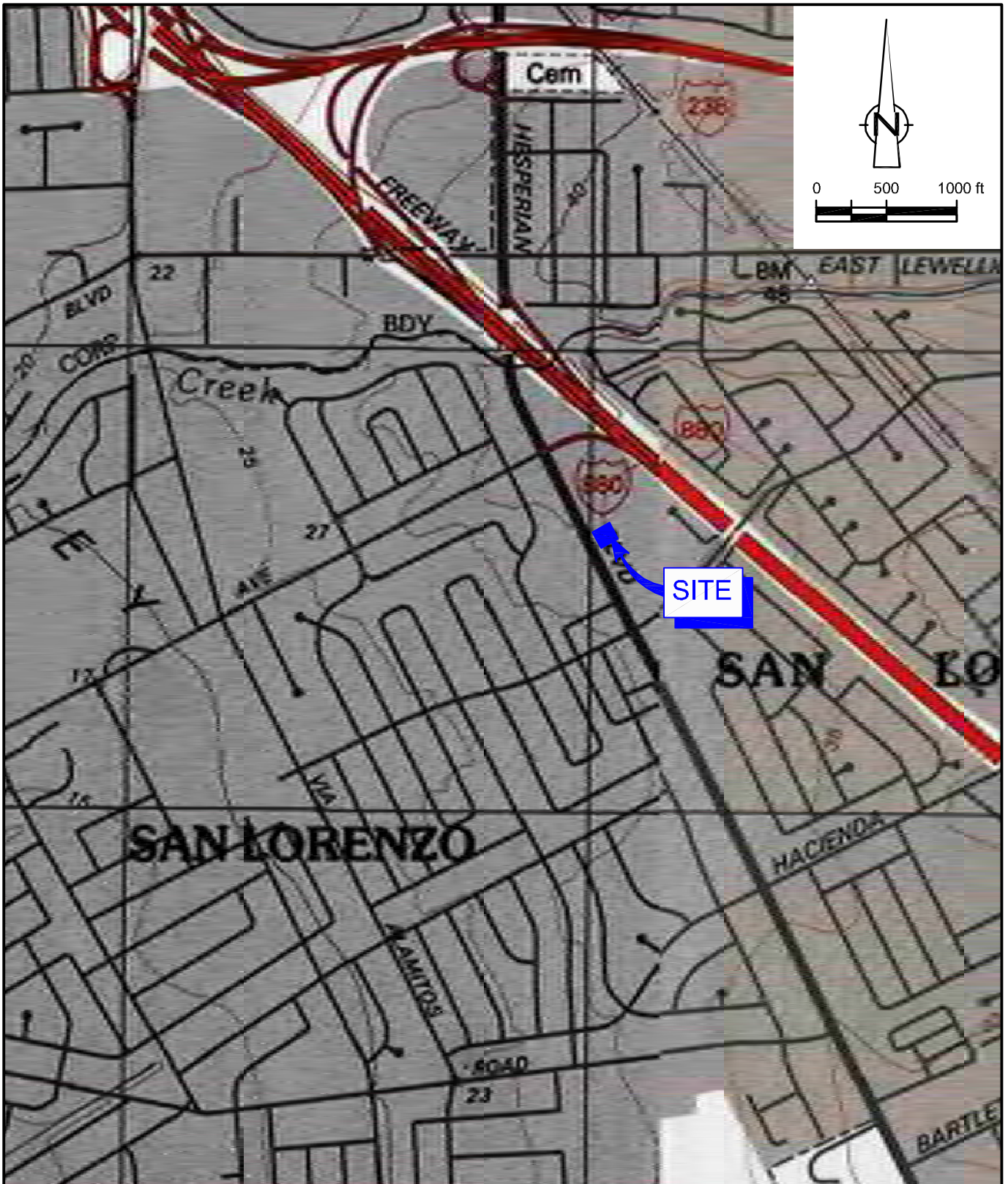
Figure 1	Vicinity Map
Figure 2	Site Plan
Table 1	Soil Sample Analytical Results
Table 2	Soil Vapor Sample Analytical Results

Attachment A	ACEH Letter Dated October 16, 2008
Attachment B	Summary of Previous Environmental Investigation and Remediation
Attachment C	Well 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*)
Mr. Scott Bohannon, Bohannon Organization



FIGURES

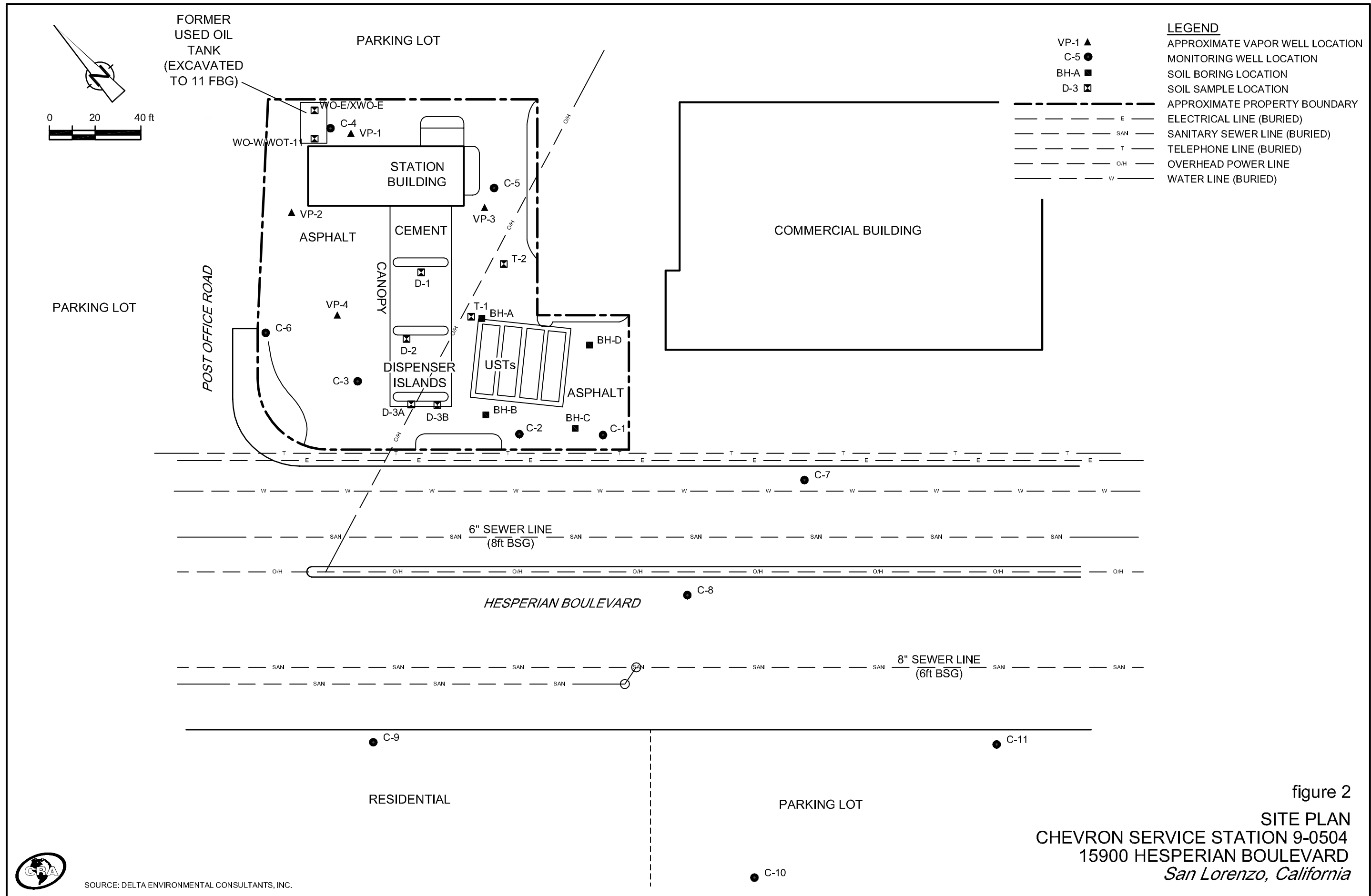


SOURCE: TOPO! MAPS.

figure 1

VICINITY MAP
 CHEVRON SERVICE STATION 9-0504
 15900 HESPERIAN BOULEVARD
San Lorenzo, California





SOURCE: DELTA ENVIRONMENTAL CONSULTANTS, INC.

TABLES

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS
 CHEVRON STATION 9-0504
 15900 HESPERIAN BOULEVARD
 SAN LORENZO, CALIFORNIA

<i>Boring ID</i>	<i>Sample Depth (fbg)</i>	<i>Sample Date</i>	<i>TPHg</i>	<i>Benzene</i>	<i>Toluene</i>	<i>Ethylbenzene</i>	<i>Xylenes</i>	<i>MTBE</i>
← Concentrations reported in milligrams per kilogram (mg/kg) →								
VP-1	5.5	5/25/10	<0.9	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005
VP-2	5.5	5/25/10	<1	<0.0005	<0.001	<0.001	<0.001	<0.0005
VP-3	5.5	5/25/10	<1	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005
VP-4	5.5	5/25/10	<1	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005

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

MTBE = Methyl tertiary butyl ether by EPA Method 8260B

<x = Not detected at or above stated laboratory reporting limits

**SOIL VAPOR SAMPLE ANALYTICAL RESULTS
CHEVRON STATION 9-0504
15900 HESPERIAN BOULEVARD
SAN LORENZO, CALIFORNIA**

<i>Sample ID</i>	<i>Date Sampled</i>	<i>TPHg</i>	<i>Benzene</i>	<i>Toluene</i>	<i>Ethylbenzene</i>	<i>m,p-Xylenes</i>	<i>o-Xylenes</i>	<i>MTBE</i>	<i>Oxygen</i>	<i>Helium</i>	<i>Carbon Dioxide</i>
VP-1	6/3/10	3,900	<3.4	6.7	<4.7	11	5.5	<3.9	12	<0.11	5.1
VP-2	6/3/10	1,500	<3.7	5.7	<5.0	<5.0	<5.0	<4.2	7.9	<0.12	8.7
VP-3	6/3/10	1,600	<4.0	5.6	<5.5	<5.5	<5.5	<4.6	14	<0.13	5.2
VP-4	6/3/10	2,600	<4.0	5.5	<5.5	<5.5	<5.5	<4.6	11	<0.13	7.1
Dupe	6/3/10	1,600	<4.0	6.2	<5.5	<5.5	<5.5	<4.6	14	<0.13	5.2
Residential ESL		10,000	84	63,000	980	21,000 ^a		9,400			

Abbreviations and Methods:

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

Benzene, toluene, ethylbenzene, and xylenes by EPA Method TO-15

MTBE = Methyl tertiary butyl ether 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-3

ESL = Environmental Screening Level for shallow soil gas associated with vapor intrusion concerns at residential sites-RWQCB May 2008 (Table E)

a = ESL is for total xylenes

ATTACHMENT A

ACEH LETTER DATED OCTOBER 16, 2008

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



611241

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

October 16, 2008

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

Mr. Scott Bohannon
Bohannon Organization
60 31st Avenue
San Mateo, CA 94403

CRA SK
OCT 22 2008
Received

Subject: Fuel Leak Case No. RO0000007 (Global ID # T0600100302), Chevron #9-0504, 15900 Hesperian Blvd., San Lorenzo, CA 9458

Dear Mr. Rob Speer and Mr. Scott Bohannon:

Alameda County Environmental Health (ACEH) staff have reviewed the case file for the above referenced site and the document entitled "Site Conceptual Model and Closure Request," received September 14, 2007 and prepared by Conestoga Rovers Associates (CRA). Based on our review of the case file, ACEH noted that during monitoring well installation in 1983 soil samples were not collected from source area wells C-1 through C-5. Furthermore, high levels of dissolved phase contamination were detected in well C-2 at concentrations of up to 1,200,000 µg/l TPHg and 4,700 µg/l benzene.

In 1992, Weiss Associates installed a groundwater extraction system using existing monitoring wells C-1 and C-2. The system removed approximately 1,300,000 gallons of hydrocarbon impacted groundwater and was operational from 1992 through 1994. The treatment system ceased operation in 1994, when concentrations of benzene in the source area reached 1 µg/l.

In September 2007, Chevron submitted a Site Conceptual Model and Request for Closure for the site. However, ACEH has determined that even though a groundwater extraction and treatment system was operational on site and a risk assessment was performed for contamination volatilization from groundwater to indoor air, no post remediation confirmation soil sampling has been conducted near the former source area to verify remediation effectiveness nor has soil sampling been conducted to evaluate contamination volatilization from soil to indoor air. 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](mailto:steven.plunkett@acgov.org)) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Confirmation Soil Sampling and Source Area Characterization.** During previous site characterization and monitoring well installation activities conducted in 1983, gasoline vapors were identified in well C-1 at 11 feet bgs. However, no soil samples were collected during the installation of wells C-1 through C-5 leaving the extent of contamination in the source area undefined. In addition, soil borings installed during a subsequent investigation completed in 1992 did not collect soil samples below 10 feet bgs, leaving the vertical extent of contamination in source area undefined. During the 1992 investigation, petroleum hydrocarbon contamination was detected in soil boring BH-C at 10 feet bgs at concentrations of up to 660 ppm TPHg and 0.82 ppm benzene. Furthermore, a risk assessment performed in 1997 neglected to evaluate the potential for volatilization from residual contamination detected in unsaturated soil in the vadoze zone. As a result, the potential for vapor intrusion from soil has not been adequately evaluated. Therefore, ACEH request that you prepare a work plan to collect soil samples to evaluate the vertical extent of contamination in the source area, perform verification sampling to evaluate remediation effectiveness; evaluate the potential for volatilization of hydrocarbon contamination from the vadoze zone and thus assess the vapor intrusion pathway. Please prepare a work plan that addresses the above mentioned issues and submit work plan according to the schedule below.

TECHNICAL REPORT REQUEST

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

- **January 7, 2009** -- Work Plan for Soil and Groundwater Investigation

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

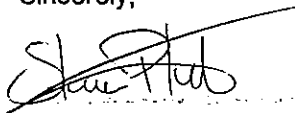
Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

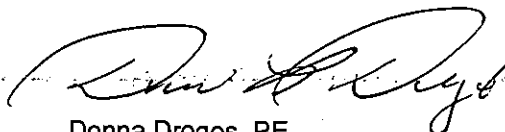
If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 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 PREVIOUS ENVIRONMENTAL INVESTIGATION AND REMEDIATION

SUMMARY OF PREVIOUS ENVIRONMENTAL INVESTIGATION AND REMEDIATION
CHEVRON SERVICE STATION 9-0504

1983 Tank Failure and Replacement

According to Chevron records, a 10,000-gallon underground storage tank (UST) failed a tank tightness test conducted in December 1983. Chevron replaced two 10,000-gallon and one 5,000-gallon steel USTs (and associated product lines) following the December 1983 inspection. A hole was observed in the bottom of the 10,000-gallon UST during removal. Approximately 120 cubic yards of impacted soil was excavated and disposed offsite during the work.

1983 Well Installation

In December 1983, Gettler-Ryan Inc. (G-R) installed groundwater monitoring wells C-1 through C-5 following the UST removal. The wells were installed to depths of approximately 20 feet below grade (fbg). Wells C-1 through C-3 were located near the USTs and dispenser islands. Well C-4 was located adjacent to the used-oil UST, and well C-5 was located southeast of the station building. Groundwater was encountered in the borings at depths ranging from 14 to 15 fbg. A gasoline odor was noted at 11 fbg in the boring for well C-1. No soil samples were collected from the borings. Details of the investigation were presented in G-R's untitled letter report dated January 9, 1984.

November 1989 Well Installation

In November 1989, GeoStrategies, Inc. (GSI) installed groundwater monitoring wells C-6 through C-8 to approximately 25 fbg. Well C-6 was installed northwest of the USTs and dispenser islands. Wells C-7 and C-8 were installed in Hesperian Boulevard south of the site. Soil samples were collected from each boring at depths of 10.5 fbg, 15.5 fbg, and 20.5 fbg and analyzed for total petroleum hydrocarbons as gasoline (TPHg), and benzene, toluene, ethylbenzene, and xylenes (BTEX). Low concentrations of TPHg (up to 37 milligrams per kilogram [mg/kg]) and BTEX (up to 0.24 mg/kg) were detected in three of the samples. Details of the investigation were presented in GSI's *Well Installation Report* dated October 19, 1990.

December 1989 LNAPL Detection

In December 1989, G-R observed light non-aqueous phase liquid (LNAPL) in wells C-1 and C-2 during quarterly sampling. G-R reported LNAPL thicknesses of 0.01 feet in well C-1, and 0.15 feet in well C-2. G-R also observed a sheen in well C-3. Bailing of LNAPL from wells C-1 and C-2 was performed on a weekly basis.

August 1990 Well Installation

In August 1990, GSI installed wells C-9 through C-11 across Hesperian Boulevard to further evaluate the extent of hydrocarbons. Soil samples were collected from each boring at depths of 10.5 fbg and 15.5 fbg and analyzed for TPHg and BTEX, which were not detected. The initial

groundwater samples collected from the wells did not contain TPHg or BTEX. Details of the investigation were presented in GSI's *Well Installation Report* dated October 19, 1990.

August 1990 Well Survey

GSI reviewed Alameda County Public Works Agency files to identify any water-supply wells within ½-mile of the site. The active wells identified included: 14 irrigation wells, three domestic wells, and one cathodic protection well. The nearest domestic well was approximately 2,200 feet northeast (crossgradient) of the site. The nearest irrigation well was located approximately 1,700 feet west (crossgradient) of the site.

July 1992 Borings

In July 1992, Weiss Associates (WA) drilled four soil borings (BH-A through BH-D) in the vicinity of the USTs to an approximate depth of 11.5 fbg. The borings were drilled to evaluate the distribution of hydrocarbons in the source area near the tanks. Soil samples were collected at 5 fbg and 10 fbg from each boring and analyzed for TPHg and BTEX. Low concentrations of TPHg (up to 11 mg/kg) and BTEX (up to 0.36 mg/kg) were detected in most of the samples. In the sample collected at 10 fbg from boring BH-C to the south of the USTs, TPHg was detected at 660 mg/kg, and benzene was detected at 0.82 mg/kg. Details of the investigation were presented in WA's *Soil Sampling Results* dated August 14, 1992.

August 1992 Groundwater Extraction System Installation

In August 1992, WA installed a groundwater extraction (GWE) system. The system extracted groundwater from wells C-1 and C-2 using submersible pumps, and two 1,000-pound aqueous-phase carbon vessels were used for treatment. The treated groundwater was discharged to the sanitary sewer under a permit from the Oro Loma Sanitary District. The system removed approximately 1,290,430 gallons of groundwater (26 pounds of hydrocarbons) from August 1992 to July 1994. The system was shutdown when benzene concentrations in groundwater approached the Maximum Contaminant Level (MCL) for drinking water of 1.0 microgram per liter (µg/L). Chevron notified Alameda County Environmental Health (ACEH) in a letter dated April 6, 1999 that the system had achieved its objective of containment, and proposed removal of the system.

January through March 1994 Soil Sampling and Over-Excavation

In January 1994, WA collected six soil samples (D-1, D-2, D-3A, D-3B, T-1, and T-2) during dispenser and product line replacement activities. The samples were analyzed for TPHg and BTEX. TPHg (up to 5 mg/kg) and BTEX (up to 0.23 mg/kg) were only detected in two of the samples. Approximately 310 cubic yards of soil was excavated and disposed offsite during the work.

March 1994 Waste Oil Tank Removal

In March 1994, a 1,000-gallon used-oil UST was removed from the site. Touchstone Developments (Touchstone) observed the UST removal and collected two soil samples (WO-E and WO-W) beneath the former UST at 9 fbg. The samples were analyzed for TPHg, TPH as diesel (TPHd), BTEX, halogenated volatile organic compounds (HVOCs), total oil and grease (TOG), semi-VOCs, and the metals cadmium, chromium, lead, nickel, and zinc. The analytes generally were not detected in the two samples with the exception of TOG at 110 mg/kg and dichloromethane at 0.006 mg/kg in sample WO-E. The metals chromium, nickel, and zinc were detected in both samples; the concentrations were consistent with background levels. The eastern half of the excavation was subsequently over-excavated to 11 fbg. A soil sample (XWO-E) collected at 11 fbg did not contain TOG or HVOCs. Approximately 45 cubic yards of impacted soil was disposed offsite during the work. The UST was replaced with a 1,000-gallon double-walled fiberglass used-oil UST. Details of the investigation were presented in Touchstone's *Underground Storage Tank Removal Report* dated April 14, 1994.

June 1995 Records Search

In June 1995, G-R reviewed records of past land use for the site. G-R concluded from their review that Chevron leased the property from the David D. Bohannon Organization in 1969, who reportedly had owned the property since 1959. The property reportedly consisted of retail businesses.

June 2001 Waste Oil Tank Removal

In June 2001, the 1,000-gallon double-walled fiberglass used-oil UST was removed from the site. The tank appeared to be in good condition, no holes or cracks were observed. G-R collected one confirmation soil sample (WOT-11) beneath the former UST at approximately 11 fbg. The sample was analyzed for TPHg, TPHd, BTEX, methyl tertiary butyl ether (MTBE), HVOCs, semi-VOCs, TOG, and the metals cadmium, chromium, lead, nickel, and zinc. TOG was detected in the sample at 63 mg/kg; chromium (29 mg/kg), nickel (25 mg/kg), and zinc (33 mg/kg) were also detected. Details of the investigation were presented in G-R's *Underground Storage Tank Removal Observation Report* dated July 13, 2001.

ATTACHMENT C
WELL 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: W2010-0326
Permits Valid from 05/25/2010 to 05/26/2010

Application Id: 1273509950407
Site Location: 15900 Hesperian Blvd, San Lorenzo, CA
Project Start Date: 05/25/2010
Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org
City of Project Site: San Lorenzo
Completion Date: 05/26/2010
Applicant: Conestoga Rovers Associates - Chris Benedict
10969 Trade Center St, Ste 107, Rancho Cordova, CA 95670
Phone: 916-889-8900
Property Owner: Bohannon Org.
60 31st Avenue, San Mateo, CA 94403
Phone: --
Client: Chevron Gas Station
6001 Bollinger Cyn Rd., San Ramon, CA 94583
Phone: --

Total Due: \$265.00
Receipt Number: WR2010-0162 Total Amount Paid: \$265.00
Payer Name : Conestoga Rovers & Associates Paid By: CHECK **PAID IN FULL**

Works Requesting Permits:

Remediation Well Construction-Vapor Remediation Well - 4 Wells

Driller: Pencore - 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
W2010-0326	05/10/2010	08/23/2010	VP1	3.25 in.	0.25 in.	0.50 ft	6.00 ft
W2010-0326	05/10/2010	08/23/2010	VP2	3.25 in.	0.25 in.	0.50 ft	6.00 ft
W2010-0326	05/10/2010	08/23/2010	VP3	3.25 in.	0.25 in.	0.50 ft	6.00 ft
W2010-0326	05/10/2010	08/23/2010	VP4	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 construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit

Alameda County Public Works Agency - Water Resources Well Permit

number and site map.

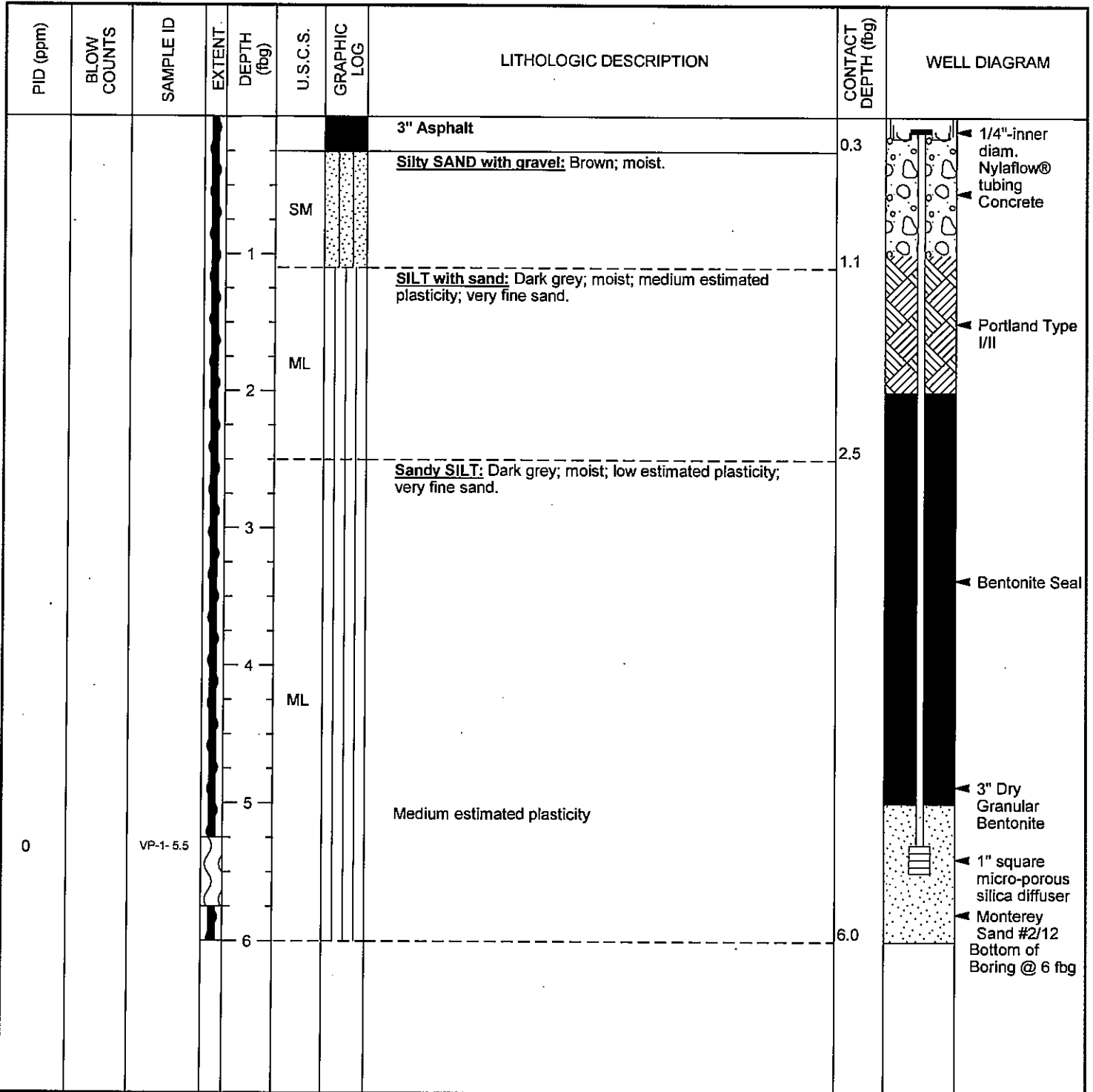
4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
 5. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
 6. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).
 7. Minimum surface seal thickness is two inches of cement grout placed by tremie
 8. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
 9. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
-



Conestoga-Rovers & Associates
 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	9-0504	DRILLING STARTED	25-May-10
LOCATION	15900 Hesperian Boulevard	DRILLING COMPLETED	25-May-10
PROJECT NUMBER	611641	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	5.3 to 5.5 fbg
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	J. Kieman, PE# C68498	DEPTH TO WATER (Static)	NA
REMARKS			



WELL LOG (PID) I:\CHEVRON\6116-1611641-1611641-3611641-BORING LOGS.GPJ_DEFAULT.GDT 7/16/10



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-2
JOB/SITE NAME	9-0504	DRILLING STARTED	25-May-10
LOCATION	15900 Hesperian Boulevard	DRILLING COMPLETED	25-May-10
PROJECT NUMBER	611641	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	5.3 to 5.5 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
			0.0 - 0.3		3" Asphalt	0.3	<p>1/4"-inner diam. Nylaflow® tubing Concrete Portland Type III Bentonite Seal 3" Dry Granular Bentonite 1" square micro-porous silica diffuser Monterey Sand #2/12 Bottom of Boring @ 6 fbg</p>
			0.3 - 0.9	SC	Clayey SAND with gravel: Brown; moist.	0.9	
			0.9 - 4.5	ML	SILT with sand: Dark brown; moist; medium estimated plasticity. Color change to brown Trace gravel, 1/4 to 1/2" sub-rounded	4.5	
			4.5 - 6.0	ML	Sandy SILT: Light brown; moist; medium estimated plasticity.	6.0	
0		VP-2-5.5	5.3 - 5.5				
			6.0 - 6.0				

WELL LOG (PID) I:\CHEVRON\6116-1611641-1611641-BORING LOGS.GPJ DEFAULT.GDT 7/16/10



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-3
JOB/SITE NAME	9-0504	DRILLING STARTED	25-May-10
LOCATION	15900 Hesperian Boulevard	DRILLING COMPLETED	25-May-10
PROJECT NUMBER	611641	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	5.3 to 5.5 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
			0.3			3" Asphalt	0.3	<p>1/4"-inner diam. Nylaflo® tubing Concrete Portland Type I/II Bentonite Seal 3" Dry Granular Bentonite 1" square micro-porous silica diffuser Monterey Sand #2/12 Bottom of Boring @ 6 fbg</p>
			1.2	SM		Silty SAND with gravel; Brown; moist.	1.2	
			2.0			Gravelly SILT with sand; Grey; moist; low estimated plasticity.		
			3.0	ML				
			4.0			Color change to brown		
			5.0			Sandy SILT; Grey; moist; low estimated plasticity.	5.0	
0		VP-3-5.5	6.0	ML			6.0	

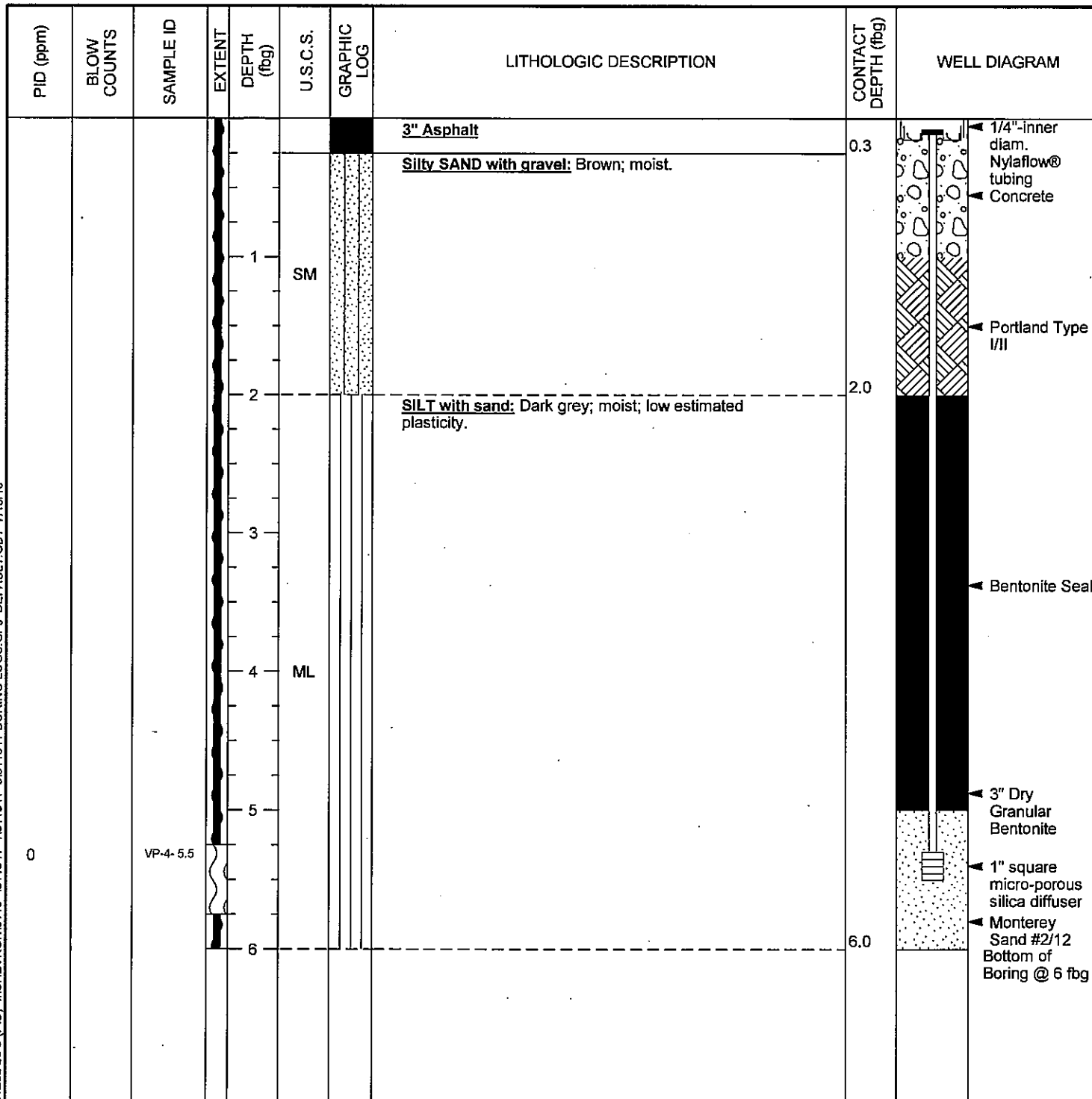
WELL LOG (PID) I:\CHEVRON\B116-1611641-31611641-BORING LOGS.GPJ DEFAULT.GDT 7/16/10



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-4
JOB/SITE NAME	9-0504	DRILLING STARTED	25-May-10
LOCATION	15900 Hesperian Boulevard	DRILLING COMPLETED	25-May-10
PROJECT NUMBER	611641	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	5.3 to 5.5 fbg
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	J. Kiernan, PE# C68498	DEPTH TO WATER (Static)	NA
REMARKS			



WELL LOG (PID) I:\CHEVRON\6116-16-1611641-31611641-BORING LOGS.GPJ DEFAULT.GDT 7/16/10

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.

Conestoga-Rovers & Associates

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

Conestoga-Rovers & Associates

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-1 Date: 6/3/10
 Job/Site Name: Chevron 9-0504 Technician: C. Benedict
 Project No. 611641 PM: J. Kiernan
 Site Address: 15900 Hesperian Blvd., San Lorenzo, CA

Vapor Sampling Apparatus Pressure Testing

Time	Vacuum Reading	Unit	Comments
1000	-29	1/4" Hg	
1010	-29		Pass

Purge Volume

Calculated Purge Volume: ~100 mL

Time	Flow	Volume	PID Reading
1011	167 mL/min · 36 sec ≈	100 mL	

Sample Collection

Flow Control Orifice Setting: 167 mL/min Summa Canister ID: 33645
 Summa Canister Size: 12 Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum
1015	-29	1022	-5

Notes:

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: VP-2 Date: 6/3/10
 Job/Site Name: Chevron 9-0504 Technician: C. Benedict
 Project No. 611641 PM: J. Kiernan
 Site Address: 15900 Hesperian Blvd., San Lorenzo, CA

Vapor Sampling Apparatus Pressure Testing

Time	Vacuum Reading	Unit	Comments
1025	-28	$\frac{1}{4}$ Hg	
1035	-28		Pass

Purge Volume

Calculated Purge Volume: ~100ml

Time	Flow	Volume	PID Reading
1040	167 ml/min \times 36 sec \approx	100 ml	

Sample Collection

Flow Control Orifice Setting: 167 ml/min Summa Canister ID: 3341
 Summa Canister Size: 1L Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum
1056	-29	1103	-5

Notes:

C:\Documents and Settings\cbenedict\Desktop\sites notes\611641\611641-Soil Vapor Sampling Form.xls]SV form

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: VP-3/Dupe Date: 6/3/10
 Job/Site Name: Chevron 9-0504 Technician: C. Benedict
 Project No. 611641 PM: J. Kiernan
 Site Address: 15900 Hesperian Blvd., San Lorenzo, CA

Vapor Sampling Apparatus Pressure Testing

Time	Vacuum Reading	Unit	Comments
1231	-25	in/Hg	
1241	-25		Pass

Purge Volume

Calculated Purge Volume: ~100 mL

Time	Flow	Volume	PID Reading
1242	167 mL/min x 36 sec	~100 mL	

Sample Collection

Flow Control Orifice Setting: 167 mL/min Summa Canister ID: 36463/36421
 Summa Canister Size: 1L Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum
1245	-29	1255	-4

Notes:

Conestoga-Rovers & Associates

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: VP-4 Date: 10/3/10
 Job/Site Name: Chevron 9-0504 Technician: C. Benedict
 Project No. 611641 PM: J. Kiernan
 Site Address: 15900 Hesperian Blvd., San Lorenzo, CA

Vapor Sampling Apparatus Pressure Testing

Time	Vacuum Reading	Unit	Comments
1137	-27	in/Hg	
1147	-27		Pass

Purge Volume

Calculated Purge Volume: 100 mL

Time	Flow	Volume	PID Reading
1148	167 mL/min x 36 sec	~100 mL	

Sample Collection

Flow Control Orifice Setting: 167 mL/min Summa Canister ID: 210288
 Summa Canister Size: 1L Analysis: _____

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum
1150	-29	1159	-5

Notes:

ATTACHMENT E
LABORATORY REPORTS

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

June 03, 2010

Project: 90504

Submittal Date: 05/27/2010

Group Number: 1196259

PO Number: 90504

Release Number: MTI

State of Sample Origin: CA

Client Sample DescriptionVP-1-S-5.5-100525 Grab Soil
VP-2-S-5.5-100525 Grab Soil
VP-3-S-5.5-100525 Grab Soil
VP-4-S-5.5-100525 Grab SoilLancaster Labs (LL) #5991287
5991288
5991289
5991290

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

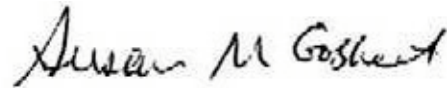
ELECTRONIC Chevron c/o CRA
COPY TO
ELECTRONIC Chevron c/o CRA
COPY TO

Attn: CRA EDD

Attn: James Kiernan

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

Respectfully Submitted,



Susan M. Goshert
Group Leader



Analysis Report

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

Sample Description: VP-1-S-5.5-100525 Grab Soil
Facility# 90504 **MTI#** 611641 **CRAW**
 15900 Hesperian-San Lorenzo T0600100302 VP-1

LLI Sample # SW 5991287
LLI Group # 1196259
Account # 11997

Project Name: 90504

Collected: 05/25/2010 09:20 by CB Chevron c/o CRA
 Suite 107
 Submitted: 05/27/2010 08:50 10969 Trade Center Drive
 Reported: 06/03/2010 17:05 Rancho Cordova CA 95670
 Discard: 07/04/2010

VP1-5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B						
10950	Benzene	71-43-2	N.D.	0.0005	0.005	0.94
10950	Ethylbenzene	100-41-4	N.D.	0.0009	0.005	0.94
10950	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.94
10950	Toluene	108-88-3	N.D.	0.0009	0.005	0.94
10950	Xylene (Total)	1330-20-7	N.D.	0.0009	0.005	0.94
GC Volatiles SW-846 8015B modified						
01725	TPH-GRO N. CA soil C6-C12	n.a.	N.D.	0.9	0.9	23.15

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	201014721271	05/27/2010 21:28	Lois E Hiltz	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201014721271	05/27/2010 21:28	Lois E Hiltz	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201014721271	05/27/2010 21:05	Lois E Hiltz	n.a.
10950	BTEX/MTBE 8260 Soil	SW-846 8260B	1	A101481AA	05/28/2010 12:06	Holly Berry	0.94
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201014721271	05/27/2010 21:06	Lois E Hiltz	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10145B34B	05/28/2010 14:01	Elizabeth J Marin	23.15

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

Sample Description: VP-2-S-5.5-100525 Grab Soil
Facility# 90504 **MTI#** 611641 **CRAW**
 15900 Hesperian-San Lorenzo T0600100302 VP-2

LLI Sample # SW 5991288
LLI Group # 1196259
Account # 11997

Project Name: 90504

Collected: 05/25/2010 12:35 by CB Chevron c/o CRA
 Suite 107
 Submitted: 05/27/2010 08:50 10969 Trade Center Drive
 Reported: 06/03/2010 17:05 Rancho Cordova CA 95670
 Discard: 07/04/2010

VP2-5

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	0.97
10950	Ethylbenzene	100-41-4	N.D.	0.001	0.005	0.97
10950	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.97
10950	Toluene	108-88-3	N.D.	0.001	0.005	0.97
10950	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	0.97
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	24.51

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	201014721271	05/27/2010 21:28	Lois E Hiltz	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201014721271	05/27/2010 21:28	Lois E Hiltz	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201014721271	05/27/2010 21:11	Lois E Hiltz	n.a.
10950	BTEX/MTBE 8260 Soil	SW-846 8260B	1	A101481AA	05/28/2010 12:29	Holly Berry	0.97
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201014721271	05/27/2010 21:13	Lois E Hiltz	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10145B34B	05/28/2010 14:37	Elizabeth J Marin	24.51

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

Sample Description: VP-3-S-5.5-100525 Grab Soil
Facility# 90504 **MTI#** 611641 **CRAW**
 15900 Hesperian-San Lorenzo T0600100302 VP-3

LLI Sample # SW 5991289
LLI Group # 1196259
Account # 11997

Project Name: 90504

Collected: 05/25/2010 13:20 by CB Chevron c/o CRA
 Suite 107
 Submitted: 05/27/2010 08:50 10969 Trade Center Drive
 Reported: 06/03/2010 17:05 Rancho Cordova CA 95670
 Discard: 07/04/2010

VP3-5

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	0.92
10950	Ethylbenzene	100-41-4	N.D.	0.0009	0.005	0.92
10950	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.92
10950	Toluene	108-88-3	N.D.	0.0009	0.005	0.92
10950	Xylene (Total)	1330-20-7	N.D.	0.0009	0.005	0.92
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	24.65

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	201014721271	05/27/2010 21:28	Lois E Hiltz	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201014721271	05/27/2010 21:28	Lois E Hiltz	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201014721271	05/27/2010 21:17	Lois E Hiltz	n.a.
10950	BTEX/MTBE 8260 Soil	SW-846 8260B	1	B101521AA	06/01/2010 17:49	Matthew S Woods	0.92
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201014721271	05/27/2010 21:18	Lois E Hiltz	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10145B34B	05/28/2010 15:12	Elizabeth J Marin	24.65



Analysis Report

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

Sample Description: VP-4-S-5.5-100525 Grab Soil
Facility# 90504 **MTI#** 611641 **CRAW**
 15900 Hesperian-San Lorenzo T0600100302 VP-4

LLI Sample # SW 5991290
LLI Group # 1196259
Account # 11997

Project Name: 90504

Collected: 05/25/2010 11:15 by CB Chevron c/o CRA
 Suite 107
 Submitted: 05/27/2010 08:50 10969 Trade Center Drive
 Reported: 06/03/2010 17:05 Rancho Cordova CA 95670
 Discard: 07/04/2010

VP4-5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B						
10950	Benzene	71-43-2	N.D.	0.0005	0.005	0.95
10950	Ethylbenzene	100-41-4	N.D.	0.0009	0.005	0.95
10950	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.95
10950	Toluene	108-88-3	N.D.	0.0009	0.005	0.95
10950	Xylene (Total)	1330-20-7	N.D.	0.0009	0.005	0.95
GC Volatiles SW-846 8015B modified						
01725	TPH-GRO N. CA soil C6-C12	n.a.	N.D.	1	1	24.75

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	201014721271	05/27/2010 21:28	Lois E Hiltz	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201014721271	05/27/2010 21:28	Lois E Hiltz	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201014721271	05/27/2010 21:22	Lois E Hiltz	n.a.
10950	BTEX/MTBE 8260 Soil	SW-846 8260B	1	B101521AA	06/01/2010 18:11	Matthew S Woods	0.95
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201014721271	05/27/2010 21:24	Lois E Hiltz	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10145B34B	05/28/2010 15:48	Elizabeth J Marin	24.75

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

Quality Control Summary

 Client Name: Chevron c/o CRA
 Reported: 06/03/10 at 05:05 PM

Group Number: 1196259

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

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: A101481AA	Sample number(s): 5991287-5991288								
Benzene	N.D.	0.0005	0.005	mg/kg	111		80-120		
Ethylbenzene	N.D.	0.001	0.005	mg/kg	103		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005	mg/kg	96		74-121		
Toluene	N.D.	0.001	0.005	mg/kg	101		80-120		
Xylene (Total)	N.D.	0.001	0.005	mg/kg	98		80-120		
Batch number: B101521AA	Sample number(s): 5991289-5991290								
Benzene	N.D.	0.0005	0.005	mg/kg	98	102	80-120	4	30
Ethylbenzene	N.D.	0.001	0.005	mg/kg	91	96	80-120	5	30
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005	mg/kg	89	89	74-121	0	30
Toluene	N.D.	0.001	0.005	mg/kg	91	94	80-120	4	30
Xylene (Total)	N.D.	0.001	0.005	mg/kg	91	95	80-120	4	30
Batch number: 10145B34B	Sample number(s): 5991287-5991290								
TPH-GRO N. CA soil C6-C12	N.D.	1.0	1.0	mg/kg	106	98	67-119	8	30

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: A101481AA	Sample number(s): 5991287-5991288 UNSPK: P986556								
Benzene	90	84	55-143	7	30				
Ethylbenzene	60	54	44-141	10	30				
Methyl Tertiary Butyl Ether	91	84	55-129	8	30				
Toluene	73	65	50-146	11	30				
Xylene (Total)	56	50	44-136	11	30				
Batch number: B101521AA	Sample number(s): 5991289-5991290 UNSPK: P990591								
Benzene	111		55-143						
Ethylbenzene	102		44-141						
Methyl Tertiary Butyl Ether	89		55-129						
Toluene	103		50-146						
Xylene (Total)	100		44-136						

Surrogate Quality Control

*- 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
 Reported: 06/03/10 at 05:05 PM

Group Number: 1196259

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: A101481AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5991287	100	100	98	90
5991288	99	98	99	87
Blank	101	101	99	93
LCS	101	102	99	99
MS	99	95	101	91
MSD	99	93	100	93
Limits:	71-114	70-109	70-123	70-111

 Analysis Name: VOCs by 8260B - Solid
 Batch number: B101521AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5991289	97	95	101	89
5991290	101	106	97	94
Blank	99	103	97	96
LCS	98	103	100	103
LCSD	96	102	99	104
MS	98	101	101	102
Limits:	71-114	70-109	70-123	70-111

 Analysis Name: TPH-GRO N. CA soil C6-C12
 Batch number: 10145B34B

	Trifluorotoluene-F
5991287	68
5991288	74
5991289	72
5991290	72
Blank	76
LCS	90
LCSD	85
Limits:	61-122

*- Outside of specification

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

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

Chevron California Region Analysis Request/Chain of Custody



For Lancaster Laboratories use only
 Acct. #: 11997 Sample #: 5991287-90 SCR#: _____

MT: 611641

Group# 1196259

Facility #: CHEVRON 9-0504
 Site Address: 15900 HESPERIAN BOULEVARD SAN LORENZO
 Chevron PM: ROB SPEER Lead Consultant: CRA
 Consultant/Office: RANCHO CORDOVA
 Consultant Prj. Mgr.: JAMES KIERNAN
 Consultant Phone #: 916 889 8900 Fax #: 916 889 8999
 Sampler: CHRIS BENEDICT
 Service Order #: _____ Non SAR: _____

Analyses Requested

Preservation Codes										
BTEX + MTBE	8260	8021	<input type="checkbox"/>	TPH 8015 MOD	GRO	TPH 8015 MOD DRO	<input type="checkbox"/>	Silica Gel Cleanup	<input type="checkbox"/>	
			8260 full scan	Oxygenates				Lead 7420	<input type="checkbox"/>	7421

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

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

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

Field Point Name	Matrix	Repeat Sample	Top Depth	Year Month Day	Time Collected	New Field Pt.	Grab	Composite	Total Number of Containers	BTEX + MTBE	8260	8021 <th>TPH 8015 MOD</th> <th>GRO</th> <th>TPH 8015 MOD DRO</th> <th>Silica Gel Cleanup</th> <th>8260 full scan</th> <th>Oxygenates</th> <th>Lead 7420</th> <th>7421</th>	TPH 8015 MOD	GRO	TPH 8015 MOD DRO	Silica Gel Cleanup	8260 full scan	Oxygenates	Lead 7420	7421	
VP-1-5.5	SOIL			5 10 25	9:20		X			X	X		X	X							
VP-2-5.5				10 5 25	12:35		X			X	X		X	X							
VP-3-5.5				10 5 25	13:20		X			X	X		X	X							
VP-4-5.5				10 5 25	11:15		X			X	X		X	X							

Comments / Remarks

Turnaround Time Requested (TAT) (please circle)

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

Data Package Options (please circle if required)

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

Relinquished by: <u>Chris Benedict</u>	Date: <u>5/26/10</u>	Time: <u>1100</u>	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by Commercial Carrier: UPS <u>FedEx</u> Other _____	Received by: <u>Delorana Neal</u>		Date: <u>5/27/10</u>	Time: <u>0850</u>	
Temperature Upon Receipt: <u>3.4</u> °C	Custody Seals Intact? <u>Yes</u> No				

Explanation of Symbols and Abbreviations

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

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

U.S. EPA CLP Data Qualifiers:

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

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

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

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

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

6/17/2010

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

Project Name: Chevron 9-0504
Project #: 611641
Workorder #: 1006124B

Dear Mr. Chris Benedict

The following report includes the data for the above referenced project for sample(s) received on 6/4/2010 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

WORK ORDER #: 1006124B

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. #	611641
FAX:	916-889-8999	PROJECT #	611641 Chevron 9-0504
DATE RECEIVED:	06/04/2010	CONTACT:	Karen Lopez
DATE COMPLETED:	06/17/2010		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-1	Modified TO-3	2.0 "Hg	15 psi
02A	VP-2	Modified TO-3	4.0 "Hg	15 psi
03A	VP-3	Modified TO-3	6.0 "Hg	15 psi
04A	VP-4	Modified TO-3	6.0 "Hg	15 psi
05A	Dupe	Modified TO-3	6.0 "Hg	15 psi
05AA	Dupe Lab Duplicate	Modified TO-3	6.0 "Hg	15 psi
06A	Lab Blank	Modified TO-3	NA	NA
07A	LCS	Modified TO-3	NA	NA

CERTIFIED BY: 

DATE: 06/17/10

Laboratory Director

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

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

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

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

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

LABORATORY NARRATIVE
Modified TO-3
Conestoga-Rovers Associates (CRA)
Workorder# 1006124B

Five 1 Liter Summa Canister (100% Certified) samples were received on June 04, 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/m³.

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

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

Receiving Notes

The Chain of Custody (COC) information for sample VP-2 did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

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

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

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

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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

Client Sample ID: VP-1

Lab ID#: 1006124B-01A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.054	0.96	220	3900

Client Sample ID: VP-2

Lab ID#: 1006124B-02A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.058	0.38	240	1500

Client Sample ID: VP-3

Lab ID#: 1006124B-03A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.063	0.40	260	1600

Client Sample ID: VP-4

Lab ID#: 1006124B-04A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.063	0.64	260	2600

Client Sample ID: Dupe

Lab ID#: 1006124B-05A

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.063	0.39	260	1600

Client Sample ID: Dupe Lab Duplicate

Lab ID#: 1006124B-05AA

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.063	0.38	260	1500



Client Sample ID: VP-1

Lab ID#: 1006124B-01A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d061409	Date of Collection:	6/3/10 10:22:00 AM
Dil. Factor:	2.16	Date of Analysis:	6/14/10 01:00 PM

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.054	0.96	220	3900

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	104	75-150

Client Sample ID: VP-2

Lab ID#: 1006124B-02A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d061410	Date of Collection: 6/3/10 11:03:00 AM
Dil. Factor:	2.33	Date of Analysis: 6/14/10 01:33 PM

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.058	0.38	240	1500

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	104	75-150

Client Sample ID: VP-3

Lab ID#: 1006124B-03A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d061411	Date of Collection: 6/3/10 12:55:00 PM
Dil. Factor:	2.52	Date of Analysis: 6/14/10 02:55 PM

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.063	0.40	260	1600

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	106	75-150

Client Sample ID: VP-4

Lab ID#: 1006124B-04A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d061412	Date of Collection:	6/3/10 11:59:00 AM
Dil. Factor:	2.52	Date of Analysis:	6/14/10 03:42 PM

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.063	0.64	260	2600

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	103	75-150

Client Sample ID: Dupe

Lab ID#: 1006124B-05A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d061413	Date of Collection:	6/3/10
Dil. Factor:	2.52	Date of Analysis:	6/14/10 04:14 PM

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.063	0.39	260	1600

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	103	75-150



Client Sample ID: Dupe Lab Duplicate

Lab ID#: 1006124B-05AA

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d061414	Date of Collection:	6/3/10
Dil. Factor:	2.52	Date of Analysis:	6/14/10 05:07 PM

Compound	Rpt. Limit (ppmv)	Amount (ppmv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	0.063	0.38	260	1500

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

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	106	75-150

Client Sample ID: Lab Blank

Lab ID#: 1006124B-06A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d061403	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	6/14/10 09:09 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)	102	75-150

Client Sample ID: LCS

Lab ID#: 1006124B-07A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	d061419	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/14/10 09:09 PM

Compound	%Recovery
TPH (Gasoline Range)	103

Container Type: NA - Not Applicable

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

6/18/2010

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

Project Name: Chevron 9-0504
Project #: 611641
Workorder #: 1006124A

Dear Mr. Chris Benedict

The following report includes the data for the above referenced project for sample(s) received on 6/4/2010 at Air Toxics Ltd.

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

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

Regards,



Karen Lopez
Project Manager

WORK ORDER #: 1006124A

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. #	611641
FAX:	916-889-8999	PROJECT #	611641 Chevron 9-0504
DATE RECEIVED:	06/04/2010	CONTACT:	Karen Lopez
DATE COMPLETED:	06/18/2010		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-1	Modified TO-15	2.0 "Hg	15 psi
01AA	VP-1 Lab Duplicate	Modified TO-15	2.0 "Hg	15 psi
02A	VP-2	Modified TO-15	4.0 "Hg	15 psi
03A	VP-3	Modified TO-15	6.0 "Hg	15 psi
04A	VP-4	Modified TO-15	6.0 "Hg	15 psi
05A	Dupe	Modified TO-15	6.0 "Hg	15 psi
06A	Lab Blank	Modified TO-15	NA	NA
07A	CCV	Modified TO-15	NA	NA
08A	LCS	Modified TO-15	NA	NA

CERTIFIED BY: 

DATE: 06/18/10

Laboratory Director

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

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

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

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

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

LABORATORY NARRATIVE
Modified TO-15
Conestoga-Rovers Associates (CRA)
Workorder# 1006124A

Five 1 Liter Summa Canister (100% Certified) samples were received on June 04, 2010. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

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

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

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

Receiving Notes

The Chain of Custody (COC) information for sample VP-2 did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

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

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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

Client Sample ID: VP-1

Lab ID#: 1006124A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.1	1.8	4.1	6.7
m,p-Xylene	1.1	2.6	4.7	11
o-Xylene	1.1	1.2	4.7	5.5

Client Sample ID: VP-1 Lab Duplicate

Lab ID#: 1006124A-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.2	2.8	4.5	10
m,p-Xylene	1.2	4.0	5.2	17
o-Xylene	1.2	2.0	5.2	8.8

Client Sample ID: VP-2

Lab ID#: 1006124A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.2	1.5	4.4	5.7

Client Sample ID: VP-3

Lab ID#: 1006124A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.3	1.5	4.8	5.6

Client Sample ID: VP-4

Lab ID#: 1006124A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.3	1.5	4.8	5.5

Client Sample ID: Dupe

Lab ID#: 1006124A-05A



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

Client Sample ID: Dupe

Lab ID#: 1006124A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Toluene	1.3	1.6	4.8	6.2

Client Sample ID: VP-1

Lab ID#: 1006124A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2061510	Date of Collection: 6/3/10 10:22:00 AM
Dil. Factor:	2.16	Date of Analysis: 6/15/10 04:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.1	Not Detected	3.9	Not Detected
Benzene	1.1	Not Detected	3.4	Not Detected
Toluene	1.1	1.8	4.1	6.7
Ethyl Benzene	1.1	Not Detected	4.7	Not Detected
m,p-Xylene	1.1	2.6	4.7	11
o-Xylene	1.1	1.2	4.7	5.5

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

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	114	70-130
4-Bromofluorobenzene	110	70-130



Client Sample ID: VP-1 Lab Duplicate

Lab ID#: 1006124A-01AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2061509	Date of Collection: 6/3/10 10:22:00 AM
Dil. Factor:	2.40	Date of Analysis: 6/15/10 03:32 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.2	Not Detected	4.3	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
Toluene	1.2	2.8	4.5	10
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	4.0	5.2	17
o-Xylene	1.2	2.0	5.2	8.8

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

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	111	70-130

Client Sample ID: VP-2

Lab ID#: 1006124A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2061511	Date of Collection: 6/3/10 11:03:00 AM
Dil. Factor:	2.33	Date of Analysis: 6/15/10 04:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.2	Not Detected	4.2	Not Detected
Benzene	1.2	Not Detected	3.7	Not Detected
Toluene	1.2	1.5	4.4	5.7
Ethyl Benzene	1.2	Not Detected	5.0	Not Detected
m,p-Xylene	1.2	Not Detected	5.0	Not Detected
o-Xylene	1.2	Not Detected	5.0	Not Detected

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

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	108	70-130

Client Sample ID: VP-3

Lab ID#: 1006124A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2061512	Date of Collection: 6/3/10 12:55:00 PM
Dil. Factor:	2.53	Date of Analysis: 6/15/10 05:32 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
Benzene	1.3	Not Detected	4.0	Not Detected
Toluene	1.3	1.5	4.8	5.6
Ethyl Benzene	1.3	Not Detected	5.5	Not Detected
m,p-Xylene	1.3	Not Detected	5.5	Not Detected
o-Xylene	1.3	Not Detected	5.5	Not Detected

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

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	113	70-130
4-Bromofluorobenzene	110	70-130

Client Sample ID: VP-4

Lab ID#: 1006124A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2061513	Date of Collection: 6/3/10 11:59:00 AM
Dil. Factor:	2.53	Date of Analysis: 6/15/10 06:09 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
Benzene	1.3	Not Detected	4.0	Not Detected
Toluene	1.3	1.5	4.8	5.5
Ethyl Benzene	1.3	Not Detected	5.5	Not Detected
m,p-Xylene	1.3	Not Detected	5.5	Not Detected
o-Xylene	1.3	Not Detected	5.5	Not Detected

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

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

Client Sample ID: Dupe

Lab ID#: 1006124A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2061514	Date of Collection: 6/3/10
Dil. Factor:	2.53	Date of Analysis: 6/15/10 06:47 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
Benzene	1.3	Not Detected	4.0	Not Detected
Toluene	1.3	1.6	4.8	6.2
Ethyl Benzene	1.3	Not Detected	5.5	Not Detected
m,p-Xylene	1.3	Not Detected	5.5	Not Detected
o-Xylene	1.3	Not Detected	5.5	Not Detected

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

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	113	70-130
4-Bromofluorobenzene	106	70-130

Client Sample ID: Lab Blank

Lab ID#: 1006124A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2061506	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/15/10 01:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	114	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: CCV

Lab ID#: 1006124A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2061502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/15/10 10:05 AM

Compound	%Recovery
Methyl tert-butyl ether	98
Benzene	100
Toluene	102
Ethyl Benzene	105
m,p-Xylene	108
o-Xylene	110

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	91	70-130
1,2-Dichloroethane-d4	115	70-130
4-Bromofluorobenzene	115	70-130

Client Sample ID: LCS

Lab ID#: 1006124A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2061503	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/15/10 10:42 AM

Compound	%Recovery
Methyl tert-butyl ether	104
Benzene	104
Toluene	102
Ethyl Benzene	110
m,p-Xylene	111
o-Xylene	115

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	93	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	112	70-130

6/17/2010

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

Project Name: Chevron 9-0504
Project #: 611641
Workorder #: 1006124C

Dear Mr. Chris Benedict

The following report includes the data for the above referenced project for sample(s) received on 6/4/2010 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

WORK ORDER #: 1006124C

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. #	611641
FAX:	916-889-8999	PROJECT #	611641 Chevron 9-0504
DATE RECEIVED:	06/04/2010	CONTACT:	Karen Lopez
DATE COMPLETED:	06/17/2010		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-1	Modified ASTM D-1946	2.0 "Hg	15 psi
02A	VP-2	Modified ASTM D-1946	4.0 "Hg	15 psi
03A	VP-3	Modified ASTM D-1946	6.0 "Hg	15 psi
04A	VP-4	Modified ASTM D-1946	6.0 "Hg	15 psi
05A	Dupe	Modified ASTM D-1946	6.0 "Hg	15 psi
05AA	Dupe Lab Duplicate	Modified ASTM D-1946	6.0 "Hg	15 psi
06A	Lab Blank	Modified ASTM D-1946	NA	NA
06B	Lab Blank	Modified ASTM D-1946	NA	NA
07A	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY: 

DATE: 06/17/10

Laboratory Director

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

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

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

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

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

**LABORATORY NARRATIVE
Modified ASTM D-1946
Conestoga-Rovers Associates (CRA)
Workorder# 1006124C**

Five 1 Liter Summa Canister (100% Certified) samples were received on June 04, 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.

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

Receiving Notes

The Chain of Custody (COC) information for sample VP-2 did not match the information on the

canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

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

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

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

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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

Client Sample ID: VP-1

Lab ID#: 1006124C-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	12
Carbon Dioxide	0.022	5.1

Client Sample ID: VP-2

Lab ID#: 1006124C-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	7.9
Carbon Dioxide	0.023	8.7

Client Sample ID: VP-3

Lab ID#: 1006124C-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	14
Carbon Dioxide	0.025	5.2

Client Sample ID: VP-4

Lab ID#: 1006124C-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	11
Carbon Dioxide	0.025	7.1

Client Sample ID: Dupe

Lab ID#: 1006124C-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	14
Carbon Dioxide	0.025	5.2

Client Sample ID: Dupe Lab Duplicate

Lab ID#: 1006124C-05AA



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

Client Sample ID: Dupe Lab Duplicate

Lab ID#: 1006124C-05AA

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	14
Carbon Dioxide	0.025	5.2



Client Sample ID: VP-1

Lab ID#: 1006124C-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9061009b	Date of Collection:	6/3/10 10:22:00 AM
Dil. Factor:	2.16	Date of Analysis:	6/10/10 11:08 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	12
Carbon Dioxide	0.022	5.1
Helium	0.11	Not Detected

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



Client Sample ID: VP-2

Lab ID#: 1006124C-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9061010b	Date of Collection:	6/3/10 11:03:00 AM
Dil. Factor:	2.33	Date of Analysis:	6/10/10 11:31 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	7.9
Carbon Dioxide	0.023	8.7
Helium	0.12	Not Detected

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

Client Sample ID: VP-3

Lab ID#: 1006124C-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9061011b	Date of Collection:	6/3/10 12:55:00 PM
Dil. Factor:	2.52	Date of Analysis:	6/10/10 11:52 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	14
Carbon Dioxide	0.025	5.2
Helium	0.13	Not Detected

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



Client Sample ID: VP-4

Lab ID#: 1006124C-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9061012b	Date of Collection:	6/3/10 11:59:00 AM
Dil. Factor:	2.52	Date of Analysis:	6/10/10 12:19 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	11
Carbon Dioxide	0.025	7.1
Helium	0.13	Not Detected

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



Client Sample ID: Dupe

Lab ID#: 1006124C-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9061013b	Date of Collection:	6/3/10
Dil. Factor:	2.52	Date of Analysis:	6/10/10 01:32 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	14
Carbon Dioxide	0.025	5.2
Helium	0.13	Not Detected

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



Client Sample ID: Dupe Lab Duplicate

Lab ID#: 1006124C-05AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9061014b	Date of Collection:	6/3/10
Dil. Factor:	2.52	Date of Analysis:	6/10/10 02:01 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	14
Carbon Dioxide	0.025	5.2
Helium	0.13	Not Detected

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



Client Sample ID: Lab Blank

Lab ID#: 1006124C-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9061004b	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	6/10/10 08:47 AM

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

Container Type: NA - Not Applicable



Client Sample ID: Lab Blank

Lab ID#: 1006124C-06B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9061003b	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	6/10/10 08:22 AM

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

Container Type: NA - Not Applicable

Client Sample ID: LCS

Lab ID#: 1006124C-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9061025b	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 6/10/10 07:30 PM

Compound	%Recovery
Oxygen	86
Carbon Dioxide	102
Helium	105

Container Type: NA - Not Applicable



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

Page ___ of ___

Project Manager JAMES KIERMAN
 Collected by: (Print and Sign) CHRIS BENEDICT *Chris Benedict*
 Company CONESTOGA-ROVERS ASSOC Email jkierman@crworld.com
 Address 1065 TRADE CENTER DR #107 City RANCHO CORDOVA State CA Zip 95670
 Phone 916 889 8900 Fax 916 889 8999

Project Info: P.O. # _____ Project # <u>641641</u> Project Name <u>Chem 9-0504</u>	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	<small>Lab Use Only</small> Pressurized by: Date: Pressurization Gas: N ₂ He
--	---	---

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	33645	6/3/10	1022	TPH _g - TO3 BTEX, MTBE - TO15 H ₂ , O ₂ , CO ₂ ASTM D1146	-29	-5		
02A	VP-2	3341	6/3/10	1103		-29	-5		
03A	VP-3	36463	6/3/10	1255		-29	-6		
04A	VP-4	21028	6/3/10	1159		-29	-5		
05A	Dupe	36421	6/3/10			-29	-6		

Relinquished by: (signature) <i>Chris Benedict</i> Date/Time <u>6/4/10 930</u>	Received by: (signature) <i>Bruce Whittaker</i> Date/Time <u>900 6/4/10</u>	Notes: <i>report in ug/m³</i>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>ATL DROP OFF</u>	_____	_____	<u>GOOD</u>	Yes No <u>None</u>	<u>1006124</u>