**Brian Waite**
Project Manager
Marketing Business Unit

**Chevron Environmental Management Company**
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November 16, 2012

**RECEIVED**

9:44 am, Nov 20, 2012

Alameda County
Environmental Health

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

Re: Chevron Facility # 94930

Address: 3369 Castro Valley Boulevard, Castro Valley, CA

I have reviewed the attached report titled *Addendum to Request for Case Closure* and dated November 16, 2012.

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,

Brian A. Waite

Digitally signed by Brian A. Waite
DN: cn=Brian A. Waite, o=Chevron Environmental Management Company, ou=Marketing Business Unit, email=BWaite@chevron.com, c=US
Date: 2012.11.16 11:53:38 -08'00'

Brian Waite
Project Manager

Enclosure: Report

CONESTOGA-ROVERS & ASSOCIATES

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November 16, 2012 Reference No. 611967D

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

Re: Addendum to Request for Case Closure
Former Chevron Service Station 94930
3369 Castro Valley Boulevard
Castro Valley, California
Case No. RO0000416

Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA) is submitting this *Addendum to Request for Case Closure* for the site referenced above (Figure 1) on behalf of Chevron Environmental Management Company (Chevron). CRA previously submitted the December 3, 2010 *Soil Vapor Quality Evaluation and Request for Case Closure* (Attachment A), in which case closure was requested based on low-risk conditions. To date, a response to this request has not been received from ACEH.

The purpose of this addendum is to present the results of our evaluation of current site conditions to the general and media-specific closure criteria included in the recently adopted *Low-Threat Underground Storage Tank Case Closure Policy* (the "policy"). The site meets the stated closure criteria; therefore, we are requesting ACEH concur that the site meets low-threat case closure criteria and grant case closure. A summary of the policy, an evaluation of the site conditions to the policy case closure criteria, and our conclusions and recommendations are presented below.

## PURPOSE OF THE LOW THREAT UNDERGROUND STORAGE TANK CASE CLOSURE POLICY

On August 17, 2012, the State Water Resources Control Board (SWRCB) adopted the policy via Resolution 2012-0016. The intent of the policy is to increase cleanup process efficiency at petroleum release sites. A benefit of improved efficiency is the preservation of limited resources for mitigation of releases posing the greatest threat to human and environmental health. Per the policy, sites that meet the specified general and media-specific criteria pose a low threat to human health, safety, or the environment and are appropriate for case closure

pursuant to Health and Safety Code section 25296.10. The policy further states that those sites that meet the criteria for low-threat closure do not require further corrective action and shall be issued a uniform closure letter. The general and media-specific criteria are described below.

## GENERAL CRITERIA

The eight general criteria that must be satisfied by all candidate sites, and the site-specific evaluation for each of these criteria, are presented below.

*a. The unauthorized release is located within the service area of a public water system.*

**Satisfied:** Water for the site and surrounding vicinity is provided by the East Bay Municipal Utility District (EBMUD) from distant surface water sources.

*b. The unauthorized release consists only of petroleum.*

**Satisfied:** The unauthorized release at the site has been characterized as a release of petroleum-based products (gasoline and related constituents, used-oil).

*c. The unauthorized ("primary") release from the UST system has been stopped.*

**Satisfied:** The original potential source(s) of the released petroleum hydrocarbons (USTs, dispensers, and piping) were removed from the site by 1993.

*d. Free product has been removed to the maximum extent practicable.*

**Satisfied:** No light non-aqueous phase liquid (LNAPL) was observed in the site wells prior to their destruction.

*e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed.*

**Satisfied:** Previous reports and information included herein contain all elements of a conceptual site model.

*f. Secondary source has been removed to the extent practicable.*

**Satisfied:** The majority of the site was excavated to 11 to 15 feet below grade (fbg) in 1993, removing approximately 7,500 cubic yards of impacted soil.

*g. Soil and groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code section 25296.15.*

**Satisfied:** Soil and groundwater samples have been analyzed for MTBE, and reported in accordance with Health and Safety Code section 25296.15.

*h. Nuisance as defined by Water Code section 13050 does not exist at the site.*

**Satisfied:** Conditions defined as a "nuisance" in Water Code section 13050 do not exist at the site.

## MEDIA-SPECIFIC CRITERIA

Impacts to human health and the environment can occur due to releases from USTs through contact with contaminated media (groundwater, surface water, soil, and soil vapor) via various exposure pathways. In the policy, the most common exposure scenarios have been combined into three media-specific criteria:

1. Groundwater
2. Vapor Intrusion to Indoor Air
3. Direct Contact and Outdoor Air Exposure

Candidate sites must satisfy all three of these criteria, described further below.

### *Groundwater*

It is a fundamental tenet of the policy that if the closure criteria described in the policy are satisfied at an unauthorized petroleum release site, attaining background water quality is not feasible, and applicable water quality objectives (WQOs) will be attained through natural attenuation within a reasonable amount of time, prior to the expected need for use of any affected groundwater. If a site has groundwater with a designated beneficial use that is affected by an unauthorized release, to satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds WQOs must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites listed in the policy as follows:

1. a. The contaminant plume that exceeds WQOs is less than 100 feet in length.
   b. There is no free product.
   c. The nearest existing water supply well or surface water body is greater than 250 feet from the defined plume boundary.
2. a. The contaminant plume that exceeds WQOs is less than 250 feet in length.
   b. There is no free product.
   c. The nearest existing water supply well or surface water body is greater than 1,000 feet from the defined plume boundary.
   d. The dissolved concentration of benzene is less than 3,000 micrograms per liter (µg/L) and the dissolved concentration of MTBE is less than 1,000 µg/L.
3. a. The contaminant plume that exceeds WQOs is less than 250 feet in length.
   b. Free product may be present below the site but does not extend off-site.
   c. The plume has been stable or decreasing for a minimum of 5 years.
   d. The nearest existing water supply well or surface water body is greater than 1,000 feet from the defined plume boundary.
   e. The property owner is willing to accept a land use restriction if the regulatory agency requires a land use restriction as a condition of closure.
4. a. The contaminant plume that exceeds WQOs is less than 1,000 feet in length.
   b. There is no free product.
   c. The nearest existing water supply well or surface water body is greater than 1,000 feet from the defined plume boundary.
   d. The dissolved concentration of benzene is less than 1,000 µg/L and the dissolved concentration of MTBE is less than 1,000 µg/L.
5. a. The regulatory agency determines, based on an analysis of site specific conditions, that under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and WQOs will be achieved within a reasonable time frame.

**Satisfied:** The site satisfies the characteristics of Class 4 above. The site monitoring wells were destroyed in 2006 with ACEH approval, and the most recent groundwater samples (CPT-1 and CPT-2) were collected in 2007. The petroleum hydrocarbon plume at the time that exceeded WQOs (Environmental Screening Levels [ESLs]) was less than 1,000 feet in length and there was no LNAPL. The nearest identified water supply well and surface water body were greater than 1,000 feet from the defined plume boundary. No benzene was detected in groundwater during the last monitoring event in 2005 or in the groundwater samples collected in 2007, and the detected MTBE concentrations (up to 17 µg/L) were well below 1,000 µg/L.

***Petroleum Vapor Intrusion to Indoor Air***

The low-threat vapor intrusion criteria described below apply to sites where the release originated and impacted or potentially impacted adjacent parcels when: (1) existing buildings are occupied or may be reasonably expected to be occupied in the future, or (2) buildings for human occupancy are reasonably expected to be constructed in the future.

Petroleum release sites will satisfy the media-specific screening criteria for petroleum vapor intrusion if:

a. Site-specific conditions at the release site satisfy all of the characteristics and criteria of scenarios 1 through 3 as applicable, or all of the characteristics and criteria of scenario 4 as applicable; or,
b. A site-specific risk assessment for vapor intrusion is conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency; or,
c. The regulatory agency determines there is no significant risk of adversely affecting human health through the use of institutional or engineering controls.

Scenarios 1-4 of criteria (a) (existing building or future construction) are described below.

***Scenario 1: Unweathered* LNAPL in Groundwater***

- Depth to groundwater with unweathered* LNAPL is ≥30 feet below building foundation.
- Total TPH (TPHg + TPHd) in soil within 30 feet below building foundation is <100 milligrams per kilogram (mg/kg).

***Scenario 2: Unweathered* LNAPL in Soil***

- Unweathered* LNAPL in soil is ≥30 feet from building foundation in all directions, and depth to groundwater is >30 feet below building foundation.
- Total TPH in soil within 30 feet of building foundation in all directions is <100 mg/kg.

***Scenario 3A: No LNAPL, dissolved phase benzene in groundwater***

- Depth to groundwater is ≥5 feet below building foundation.
- Dissolved benzene in groundwater is <100 µg/L.
- Total TPH in soil within 5 feet below building foundation is <100 mg/kg.
- Oxygen ($O_2$) concentration in soil within 5 feet below building foundation is <4%, or no $O_2$ data.

***Scenario 3B: No LNAPL, dissolved phase benzene in groundwater***

- Depth to groundwater is ≥10 feet below building foundation.
- Dissolved benzene in groundwater is ≥100 µg/L and <1,000 µg/L.
- Total TPH in soil within 10 feet below building foundation is <100 mg/kg.
- $O_2$ concentration in soil within 10 feet below building foundation is <4%, or no $O_2$ data.

***Scenario 3C: No LNAPL, dissolved phase benzene in groundwater***

- Depth to groundwater is ≥5 feet below building foundation.
- Dissolved benzene in groundwater is <1,000 µg/L.
- Total TPH in soil within 5 feet below building foundation is <100 mg/kg.
- $O_2$ concentration in soil within 5 below building foundation is ≥4%.

***Scenario 4A: Direct soil gas measurements at least 5 fbg or foundation at sites without bioattenuation zone*****

| | *Benzene µg/m³* | *Ethylbenzene µg/m³* | *Naphthalene µg/m³* |
|---|---|---|---|
| Residential | <85 | <1,100 | <93 |
| Commercial | <280 | <3,600 | <310 |

µg/m³ – micrograms per cubic meter

***Scenario 4B: Direct soil gas measurements at least 5 fbg or foundation at sites with bioattenuation zone*****

| | *Benzene µg/m³* | *Ethylbenzene µg/m³* | *Naphthalene µg/m³* |
|---|---|---|---|
| Residential | <85,000 | <1,100,000 | <93,000 |
| Commercial | <280,000 | <3,600,000 | <310,000 |

*Unweathered LNAPL is comparable to recently dispensed fuel where product has not been subjected to significant volatilization or solubilization.
**Bioattentuation zone = total TPH <100 mg/kg in upper 5' of soil, and ≥4% oxygen in soil at 5' sample depth; a 1,000-fold bioattenuation of petroleum vapors is assumed for the zone.

Petroleum release sites shall satisfy the media-specific criteria for petroleum vapor intrusion to indoor air and be considered low-threat for the vapor intrusion to indoor air pathway if any of the above criteria are met.

**Satisfied:** The site satisfies scenario 4A of criteria (a) above. Soil gas sampling was performed in 2010 and the samples were collected from three vapor wells screened at approximately 5.5

fbg. Benzene was only detected in one of the samples, at a concentration well below the most conservative (residential) limit of 85 µg/m$^3$; the reporting limits for the remaining samples were also below this limit (see Table 2 of Attachment A). No ethylbenzene was detected in the soil gas samples; the reporting limits were well below the residential limit of 1,100 µg/m$^3$. Upon request, the laboratory updated the analytical report associated with the December 3, 2010 report to include results for naphthalene (Attachment B). No naphthalene was detected in the soil gas samples; the reporting limits for two of the samples were below the residential limit of 93 µg/m$^3$, and the reporting limit for the third sample was greater than the residential limit but less than the commercial limit of 310 µg/m$^3$. Therefore, the site is low-threat with regards to vapor intrusion for at least commercial use.

***Direct Contact and Outdoor Air Exposure***

The policy describes conditions where direct contact with contaminated soil or inhalation of contaminants volatized to outdoor air poses a low threat to human health. Release sites where human exposure may occur satisfy the media-specific criteria for direct contact and outdoor air exposure and shall be considered low-threat if they meet any one of the following:

a. Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in the table below for the specified depth below ground surface. The limits from 0 to 5 fbg protect from ingestion, dermal contact, and outdoor inhalation of volatile and particulate emissions. The 5 to 10 fbg limits protect from inhalation of volatile emissions only; the ingestion and dermal contact pathways are not considered significant. In addition, if exposure to construction workers or utility trench workers is reasonably anticipated, the concentration limits for Utility Worker shall also be satisfied.

| Constituent | *Residential* | | *Commercial/Industrial* | | *Utility Worker* |
|---|---|---|---|---|---|
| | *0–5 fbg (mg/kg)* | *Volatilization to outdoor air (5–10 fbg) (mg/kg)* | *0–5 fbg (mg/kg)* | *Volatilization to outdoor air (5–10 fbg) (mg/kg)* | *0–10 fbg (mg/kg)* |
| Benzene | 1.9 | 2.8 | 8.2 | 12 | 14 |
| Ethylbenzene | 21 | 32 | 89 | 134 | 314 |
| Naphthalene | 9.7 | 9.7 | 45 | 45 | 219 |
| PAH* | 0.063 | NA | 0.68 | NA | 4.5 |

* Based on the seven carcinogenic polycyclic aromatic hydrocarbons (PAHs) as benzo(a)pyrene toxicity equivalent [BaPe]. The PAH screening level is only applicable where soil is affected by either waste oil and/or Bunker C fuel.
NA = not applicable

b. Maximum concentrations of petroleum constituents in soil are less than levels that a site-specific risk assessment demonstrates will have no significant risk of adversely affecting human health.

c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, the regulatory agency determines that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health.

**Satisfied:** The site meets the characteristics of criteria (a) above. The maximum detected concentrations of benzene and ethylbenzene in soil samples collected in the 0 to 5 fbg and 5 to 10 fbg intervals do not exceed the limits for commercial/industrial land use or utility worker concerns (see Table 1 of Attachment A). The site is currently used for commercial purposes. Naphthalene and PAHs were not detected in the soil sample collected at 5 fbg in the area of the former used-oil UST; the reporting limits were well below the limits. As such, no naphthalene is expected in soil below 5 fbg.

## CONCLUSIONS AND RECOMMENDATIONS

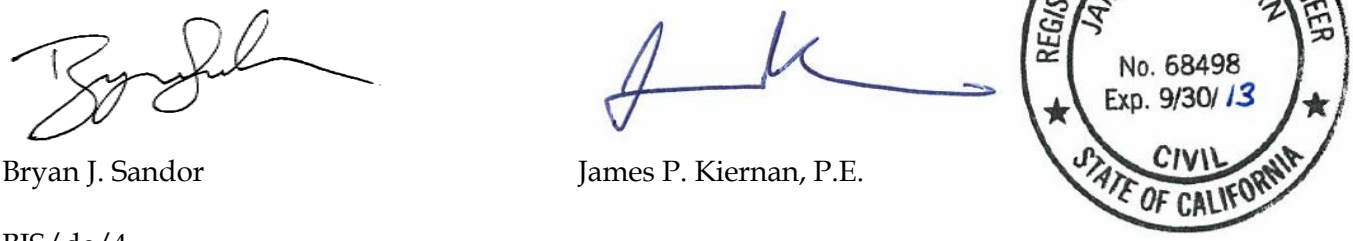
Based on the information presented in this and previous reports, site conditions meet the general and media-specific criteria of a low-threat UST release case established in the policy, and therefore pose a low threat to human health, safety, and the environment. A completed SWRCB low-threat checklist is included as Attachment C. The site satisfies the case closure requirements of Health and Safety Code section 25296.10, and case closure is consistent with

Resolution 92-49 that requires cleanup goals be met within a reasonable time frame. Therefore, on behalf of Chevron, CRA respectfully requests ACEH grant case closure.

We appreciate your assistance on this project and look forward to your reply. Please contact James Kiernan at (916) 889-8917 if you have any questions or require additional information.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES




Bryan J. Sandor James P. Kiernan, P.E.

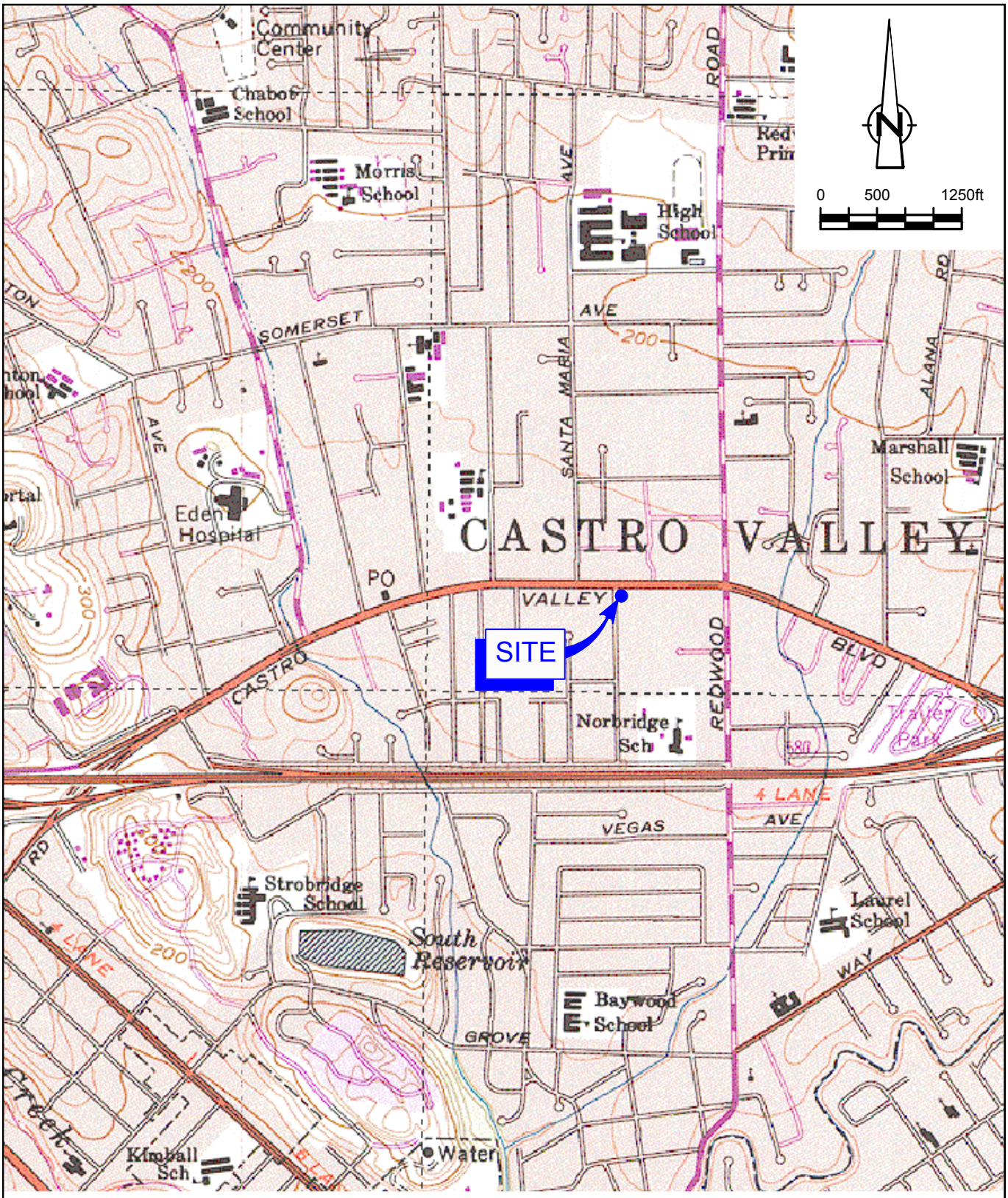
BJS/de/4
Encl.

| | |
|---|---|
| Figure 1 | Vicinity Map |
| Figure 2 | Site Plan |
| Figure 3 | Extended Site Plan |

| | |
|---|---|
| Attachment A | December 3, 2012 *Soil Vapor Quality Evaluation and Request for Case Closure* |
| Attachment B | Updated Laboratory Analytical Report |
| Attachment C | Low-Threat Checklist |

cc: Mr. Brian Waite, Chevron *(electronic copy)*
Ms. Anna Counelis and Ms. Tula Gallanes c/o Mr. Robert Young, Esq., Berding & Weil LLP

# FIGURES




SOURCE: TOPO! MAPS.

figure 1

VICINITY MAP
FORMER CHEVRON SERVICE STATION 94930
3369 CASTRO VALLEY BOULEVARD
*Castro Valley, California*

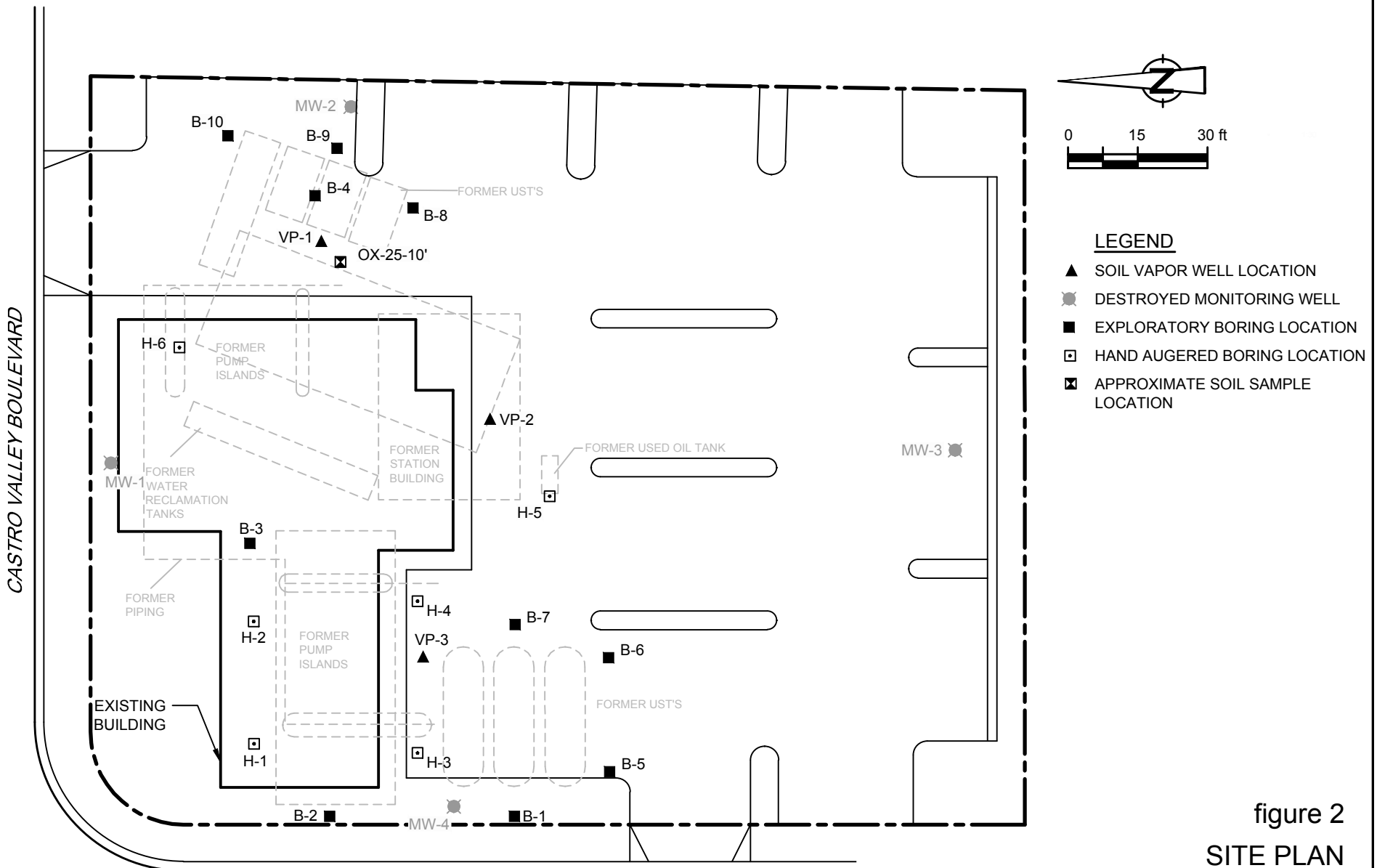
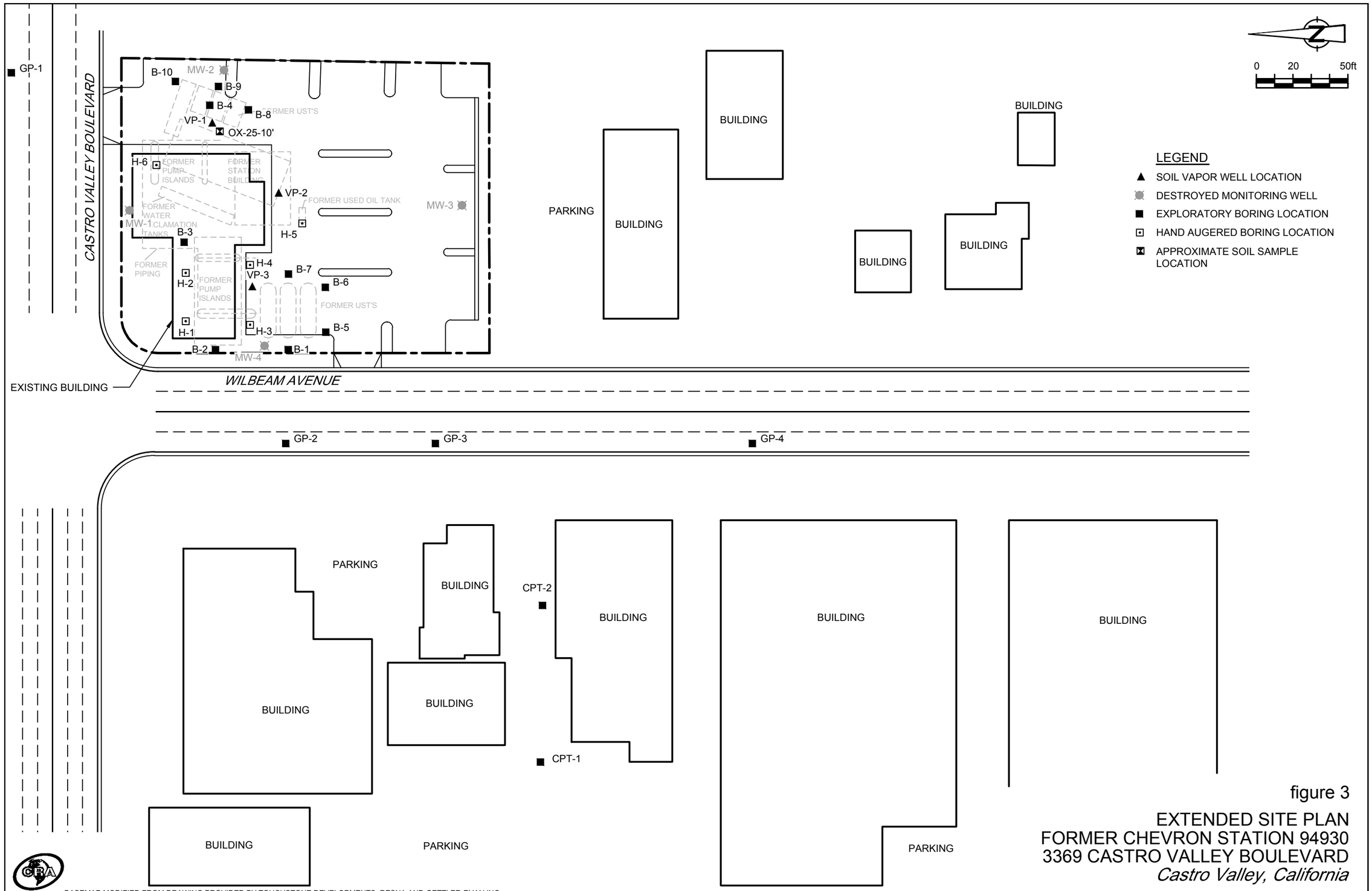



figure 2

# SITE PLAN
# FORMER CHEVRON STATION 94930
# 3369 CASTRO VALLEY BOULEVARD
*Castro Valley, California*

BASEMAP MODIFIED FROM DRAWING PROVIDED BY TOUCHSTONE DEVELOPMENTS, RESNA AND GETTLER-RYAN INC.

611967D-00(004)GN-WA002 NOV 1/2012




BASEMAP MODIFIED FROM DRAWING PROVIDED BY TOUCHSTONE DEVELOPMENTS, RESNA AND GETTLER-RYAN INC.

figure 3

EXTENDED SITE PLAN
FORMER CHEVRON STATION 94930
3369 CASTRO VALLEY BOULEVARD
*Castro Valley, California*

611967D-00(004)GN-WA003 NOV 1/2012

ATTACHMENT A

DECEMBER 3, 2010 SOIL VAPOR QUALITY EVALUATION AND REQUEST FOR CASE CLOSURE

**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

December 3, 2010

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

Re: Chevron Facility # 9-4930

Address: 3369 Castro Valley Boulevard, Castro Valley, California

I have reviewed the attached report titled *Soil Vapor Quality Evaluation and Request for Case Closure* and dated December 3 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,

SH Frerichs

Stacie H. Frerichs
Project Manager

Enclosure: Report

CONESTOGA-ROVERS
& ASSOCIATES

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Rancho Cordova, California 95670
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www.CRAworld.com

December 3, 2010 Reference No. 611967

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 Request for Case Closure
Former Chevron Service Station 9-4930
3369 Castro Valley Boulevard
Castro Valley, California
LOP Case No. RO0000416

Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA) has prepared this *Soil Vapor Quality Evaluation and 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 January 26, 2009 (Attachment A), Alameda County Environmental Health (ACEH) requested an evaluation of potential vapor intrusion concerns at the site, as well as further evaluation of the vertical extent of impacted soil in the area of previous over-excavation confirmation soil sample OX-25-10' (collected in 1993), prior to consideration for case closure. To evaluate shallow soil vapor quality, CRA installed and sampled soil vapor wells VP-1 through VP-3 at the site. To further evaluate the vertical extent of petroleum hydrocarbons in soil, the boring for well VP-1 was extended to 15 feet below grade (fbg) for the collection of soil samples. The work was performed in general accordance with the March 24, 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 a former Chevron gasoline service station located on the southeast corner of the intersection of Castro Valley Boulevard and Wilbeam Avenue (Figure 1), and is currently occupied by a one-story commercial structure and associated parking and landscaping areas. The building is currently occupied by a Chipotle restaurant and 1st United Services Credit Union; former occupants have also included a Boston Market restaurant. The site is located in a mixed commercial and residential area and is bounded by Castro Valley Boulevard to the north, Wilbeam Avenue to the west, an apartment building and associated parking area to the south, and a commercial building (Pet Food Express) and associated parking area to the east. An auto

repair facility and former Leaking Underground Storage Tank (LUST) case (Sal's Foreign Car Service) is located across Wilbeam Avenue to the west of the site.

The site appears to have first been occupied by a service station as early as 1957; the original station facilities included four fuel underground storage tanks (USTs) in the northeast portion of the site, a station building in the central portion of the site, a used-oil UST adjacent to the southwest corner of the station building, and two dispenser islands on the northern side of the site. Based on historical aerial photographs, sometime between 1968 and 1980 the station was reconfigured including the removal of the five USTs, the two dispenser islands, and the station building. A new station building/car wash facility (Valley Car Wash) was constructed in the northern portion of the site, and three 10,000-gallon, fiberglass, gasoline USTs and two dispenser islands were installed on the western side of the site. Underground wastewater reclamation tanks associated with the car wash were also installed. A former residential property to the south appeared to be incorporated as part of the new station. In 1993, the station was demolished and all aboveground and belowground facilities were removed, and the site subsequently was a vacant lot. By 1996, the existing building had been constructed. Current and former site facilities are presented on Figure 2.

Environmental investigation has been ongoing at the site since 1992. Prior to the current investigation, work has included the drilling of borings B-1 through B-10, H-1 through H-6, GP-1 through GP-4, CPT-1, and CPT-2; and the installation of monitoring wells MW-1 through MW-4. Extensive remedial excavation and confirmation sampling was performed during station demolition in 1993. Wells MW-1 through MW-4 were destroyed in September 2006 with ACEH approval. A summary of the previous environmental work is included as Attachment B. The approximate well and boring locations are presented on Figures 2 and 3.

CRA previously submitted the February 8, 2008 *Case Closure Request*, in which case closure was requested based on low-risk conditions. However, in the January 26, 2009 letter, ACEH requested that prior to consideration for case closure, further evaluation of the vertical extent of impacted soil be performed in the area of previous sample OX-25-10'. This sample reportedly was collected at 10 fbg and contained total petroleum hydrocarbons as gasoline (TPHg) and benzene at 5,100 milligrams per kilogram (mg/kg) and 3.9 mg/kg, respectively. However, as discussed in the March 29, 2009 work plan, based on the information presented in the June 5, 1993 *Tank/Line Removal and Over-Excavation Report* that documented the over-excavation activities, it appears that additional soil may have been removed following the collection of sample OX-25-10' as the final depth of excavation ranged from 11 to 15 fbg; therefore, this sample may not have actually represented what remained at the site. In addition, ACEH requested an evaluation of soil vapor quality and potential vapor intrusion issues for site occupants. In the March 24, 2009 work plan, the installation and sampling of three shallow soil vapor wells was proposed to evaluate potential vapor intrusion concerns. To further evaluate

the vertical extent of impacted soil, one of the vapor well borings would be drilled to approximately 15 fbg for the collection of deeper soil samples.

## INVESTIGATION ACTIVITIES

CRA installed and sampled vapor wells VP-1 through VP-3 to evaluate shallow soil vapor quality at the site; the boring for well VP-1 was drilled to a depth of approximately 15 fbg to further evaluate the vertical extent of impacted soil in this area. Well VP-1 was located to the east of the existing building in the area of the first-generation fuel USTs, and wells VP-2 and VP-3 were located to the south of the existing building in the area of the former station building and the second-generation gasoline USTs/dispensers, respectively. 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 October 18 and 19, 2010; and the vapor wells were sampled on October 27, 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. 2010-0727 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.

The boring for well VP-1 was advanced to approximately 6 fbg using a 3-inch diameter hand auger, then to a total depth of approximately 15 fbg using truck-mounted direct push equipment. The borings for wells VP-2 and VP-3 were advanced to the total depth of approximately 6 fbg using the hand auger. Soil samples were obtained continuously from the borings for logging and observation purposes. Below 6 fbg in boring VP-1, the soil samples were collected using a macro-core sampler containing a 5-foot acetate liner hydraulically driven into undisturbed soil at the bottom of the borehole at each interval. The soil encountered in the borings was logged in accordance with American Society for Testing and Materials (ASTM) D-2488 protocols, and generally consisted of gravelly fill material (likely placed during the 1993 excavation activities). In boring VP-1, the fill was encountered to approximately 9 fbg, followed by clay to 15 fbg. Groundwater was not encountered in any of the borings. Copies of the boring logs are included in Attachment C. Soil samples were screened in the field for the presence of organic vapors using a photo-ionization detector (PID) and visually observed for any evidence of petroleum hydrocarbon impact. The PID measurements are also presented on the boring logs. CRA's standard field procedures are included as Attachment D.

***Soil Sampling and Laboratory Analysis***

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 borings VP-2 and VP-3 at approximately 5.5 fbg for laboratory analysis using the hand auger; the samples were collected in stainless-steel liners. Soil samples were collected of native soil from boring VP-1 at approximately 10, 12.5, and 15 fbg by cutting the acetate liner at the appropriate interval. The samples were capped using Teflon tape and plastic end caps, labeled, placed in an ice-chilled cooler, and transported under chain-of-custody to Lancaster Laboratories, Inc. (Lancaster) in Lancaster, Pennsylvania, for analysis. The soil samples were analyzed for TPHg by EPA Method 8015B; and benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8260B.

***Soil Vapor Well Installation***

Prior to the construction of vapor well VP-1, the borehole was backfilled with hydrated bentonite to approximately 6 fbg. Soil vapor wells VP-1 through VP-3 were constructed with ¼-inch diameter Nylaflow® tubing connected to a 1½-inch-long micro-porous stainless steel diffuser. The diffuser (screen) was placed in the wells at approximately 5.4 to 5.5 fbg. Monterey Sand #2/12 was used as a filter pack from 6 fbg to 4.5 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-3 in 1-liter Summa™ canisters. A field duplicate sample (Dupe) was also collected from VP-2 at the same time as the original sample. The samples were collected in general accordance with the Department of Toxic Substances Control (DTSC) January 28, 2003 *Advisory-Active Soil Gas Investigations* guidance document. CRA's standard field procedures are included in Attachment D.

In accordance with the DTSC guidance, leak testing was performed during sampling. Helium was used as the leak check compound to evaluate if significant ambient air was entering the canisters during sampling. To perform the leak testing, a plastic shroud was placed over the sampling apparatus and wellhead and was filled with helium during sample collection. The helium concentration within the shroud was monitored using a helium detector and was maintained between 10 and 20 percent. Copies of the vapor sampling field data sheets are included in Attachment D.

The soil vapor samples were kept at ambient temperature and submitted under chain-of-custody to Air Toxics Ltd. in Folsom, California, for analysis. The three 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, carbon dioxide, and methane by ASTM Method D-1946.

***Investigation-Derived Waste***

Soil cuttings and decontamination rinsate generated during drilling activities were temporarily stored in a 55-gallon steel drum, and sampled for disposal purposes. On October 19, 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 the soil samples collected from borings VP-2 and VP-3. TPHg (16 mg/kg) and benzene (0.0008 mg/kg) were only detected in the sample collected at 10 fbg from boring VP-1. Trace concentrations of MTBE (0.0006 mg/kg or 0.0007 mg/kg) were detected in all three of the samples collected from boring VP-1. The soil sample analytical results are presented in Table 1. Please note that errors were found in the cumulative soil table previously submitted with the February 8, 2008 *Case Closure Request*; therefore, Table 1 includes all (corrected) historical soil sample analytical results. A copy of the laboratory report and chain-of-custody documentation is included as Attachment E.

## SOIL VAPOR SAMPLE ANALYTICAL RESULTS

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

TPHg was detected in the samples collected from VP-1 through VP-3 at concentrations of 440 micrograms per cubic meter (µg/$m^3$), 20,000 µg/$m^3$, and 1,400 µg/$m^3$, respectively. BTEX and MTBE generally were not detected in the samples with the exception of benzene at 4.8 µg/$m^3$ in the sample collected from VP-1.

No helium or methane 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 commercial or industrial sites (Table E); established by the San Francisco Bay Regional Water Quality Control Board (RWQCB) in May 2008. The ESLs are for use as screening levels in determining if further evaluation is warranted, in prioritizing areas of concern, in establishing cleanup goals, and in estimation of potential health risks. As stated by the RWQCB, the ESLs are considered to be conservative. The presence of a chemical at a concentration above an ESL does not necessarily indicate that adverse impacts to human health or the environment are occurring; exceeding ESLs indicates that the potential for impacts may exist and that additional evaluation may be needed. 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 29,000 µg/m$^3$, and the benzene concentration detected in VP-1 was well below the ESL of 280 µg/m$^3$. 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 wells VP-1 through VP-3 to evaluate soil vapor quality and potential vapor intrusion issues at the site. Deeper soil samples were also collected from boring VP-1 to further evaluate the vertical extent of impacted soil in the area of previous sample OX-25-10'. Only a low concentration of TPHg and trace concentrations of benzene and MTBE were detected in the soil sample collected at 10 fbg from boring VP-1. Petroleum hydrocarbons generally were not detected in the deeper soil samples collected at 12.5 fbg and 15 fbg from boring VP-1 with the exception of trace concentrations of MTBE. Therefore, based on the analytical results, the vertical extent of hydrocarbons in soil in this area has been adequately defined. No further investigation appears warranted.

TPHg was detected in all the soil vapor samples; and a low concentration of benzene was detected in the sample collected from VP-1. The detected concentrations did not exceed the

respective commercial ESLs and therefore do not appear to pose a significant threat to human health. No further investigation appears warranted.

Based on the results of this investigation and the discussion of the site conditions and the RWQCB low-risk criteria previously presented in the February 8, 2008 *Case Closure Request*, this site still qualifies as a low-risk groundwater case. Please note that in previous correspondence (letter to Chevron dated January 11, 2006 and e-mail to Cambria Environmental Technology, Inc. [now CRA] on April 14, 2005), ACEH concurred that no further investigation and case closure were warranted. 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

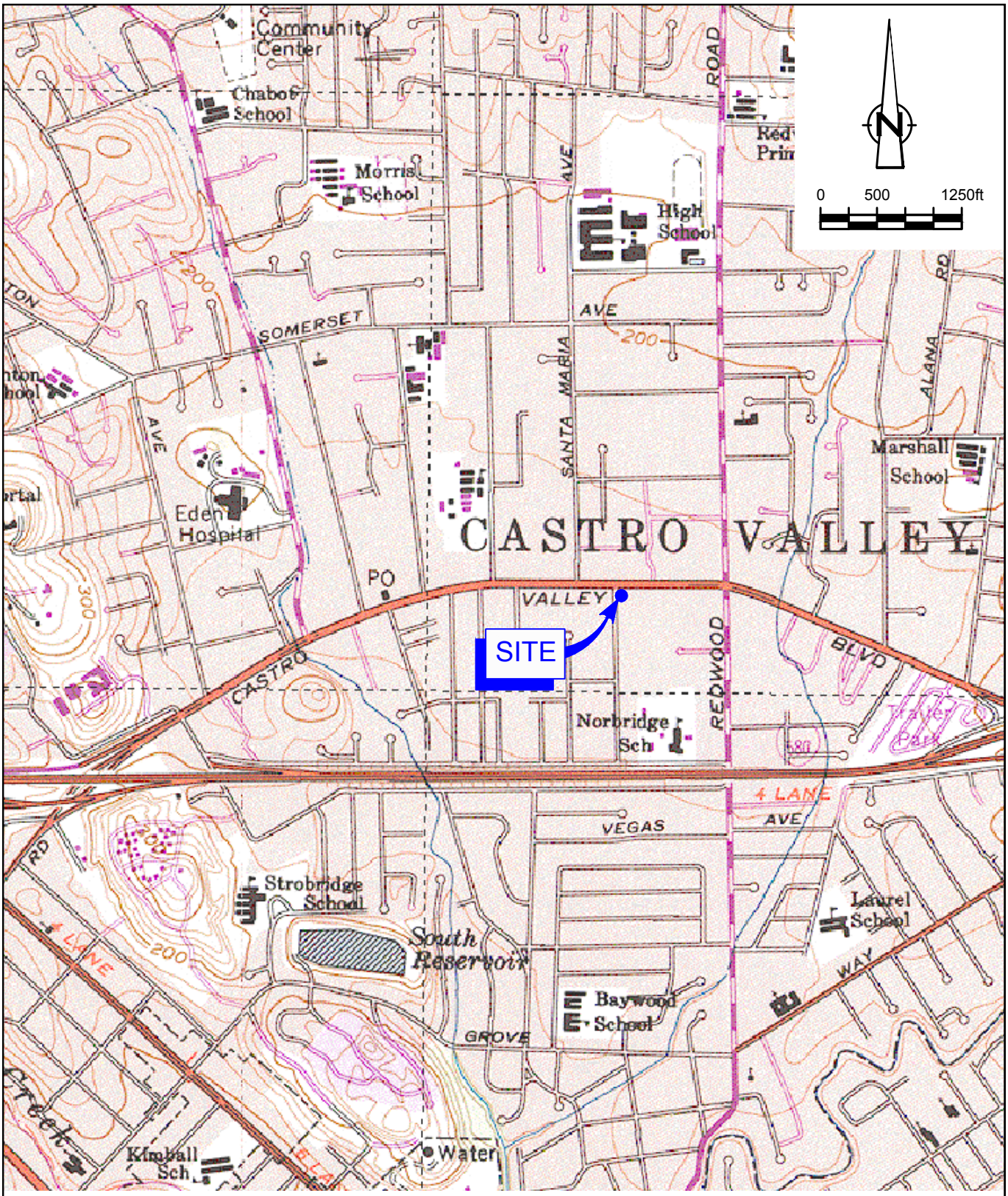

Christopher J. Benedict James P. Kiernan, P.E.

CB/jm/3
Encl.

| | |
|---|---|
| Figure 1 | Vicinity Map |
| Figure 2 | Site Plan |
| Figure 3 | Extended Site Plan |
| Table 1 | Current and Historical Soil Sample Analytical Results |
| Table 2 | Soil Vapor Sample Analytical Results |
| Attachment A | ACEH Letter Dated January 26, 2009 |
| Attachment B | Summary of 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*)
Ms. Anna Counelis and Ms. Tula Gallanes c/o Mr. Robert Young, Esq., Berding & Weil LLP

# FIGURES




SOURCE: TOPO! MAPS.

figure 1

VICINITY MAP
CHEVRON SERVICE STATION 9-4930
3369 CASTRO VALLEY BOULEVARD
*Castro Valley, California*

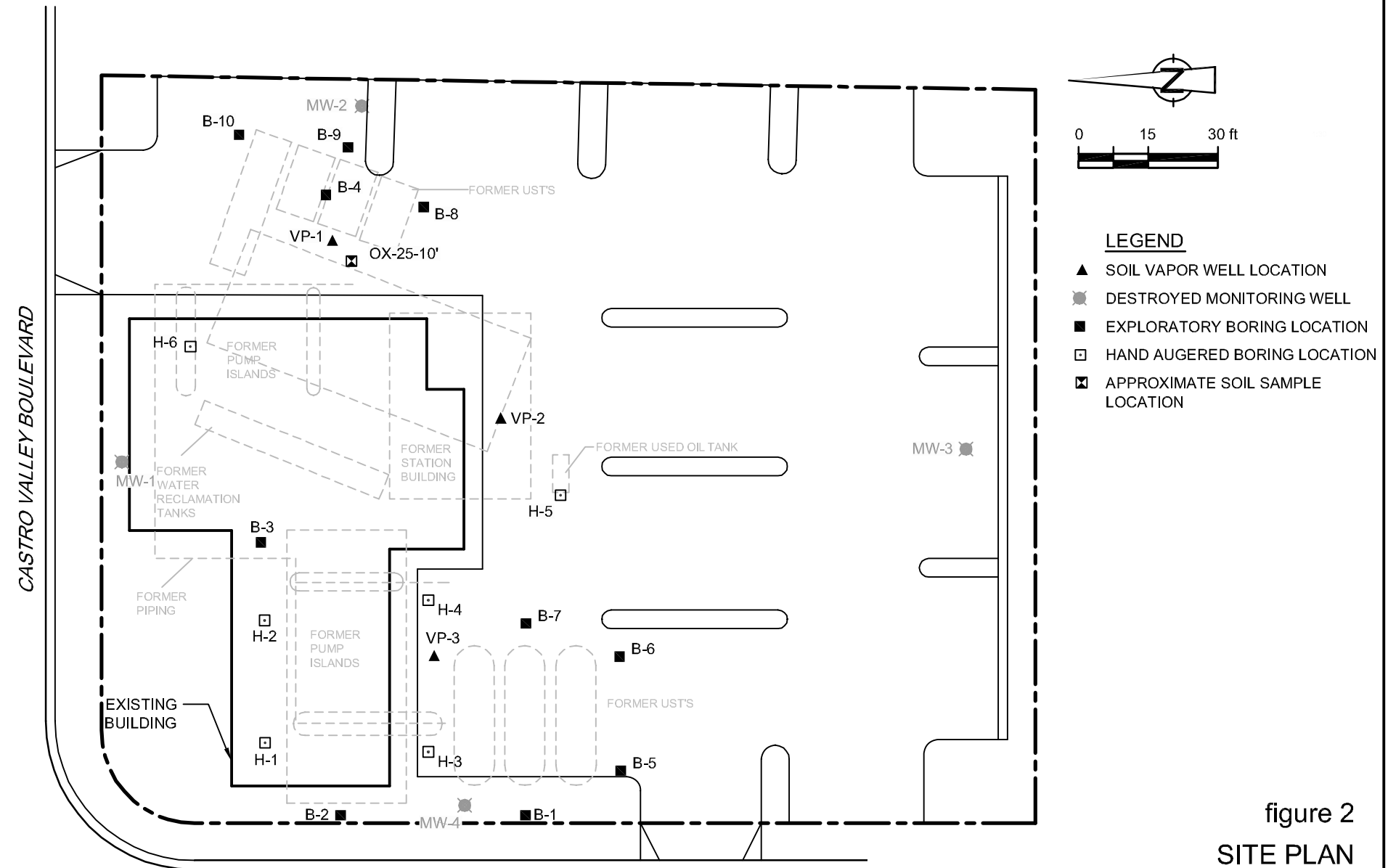



figure 2

SITE PLAN
FORMER CHEVRON STATION 9-4930
3369 CASTRO VALLEY BOULEVARD
*Castro Valley, California*

BASEMAP MODIFIED FROM DRAWING PROVIDED BY TOUCHSTONE DEVELOPMENTS, RESNA AND GETTLER-RYAN INC.

611967-2010(003)GN-WA002 NOV 30/2010

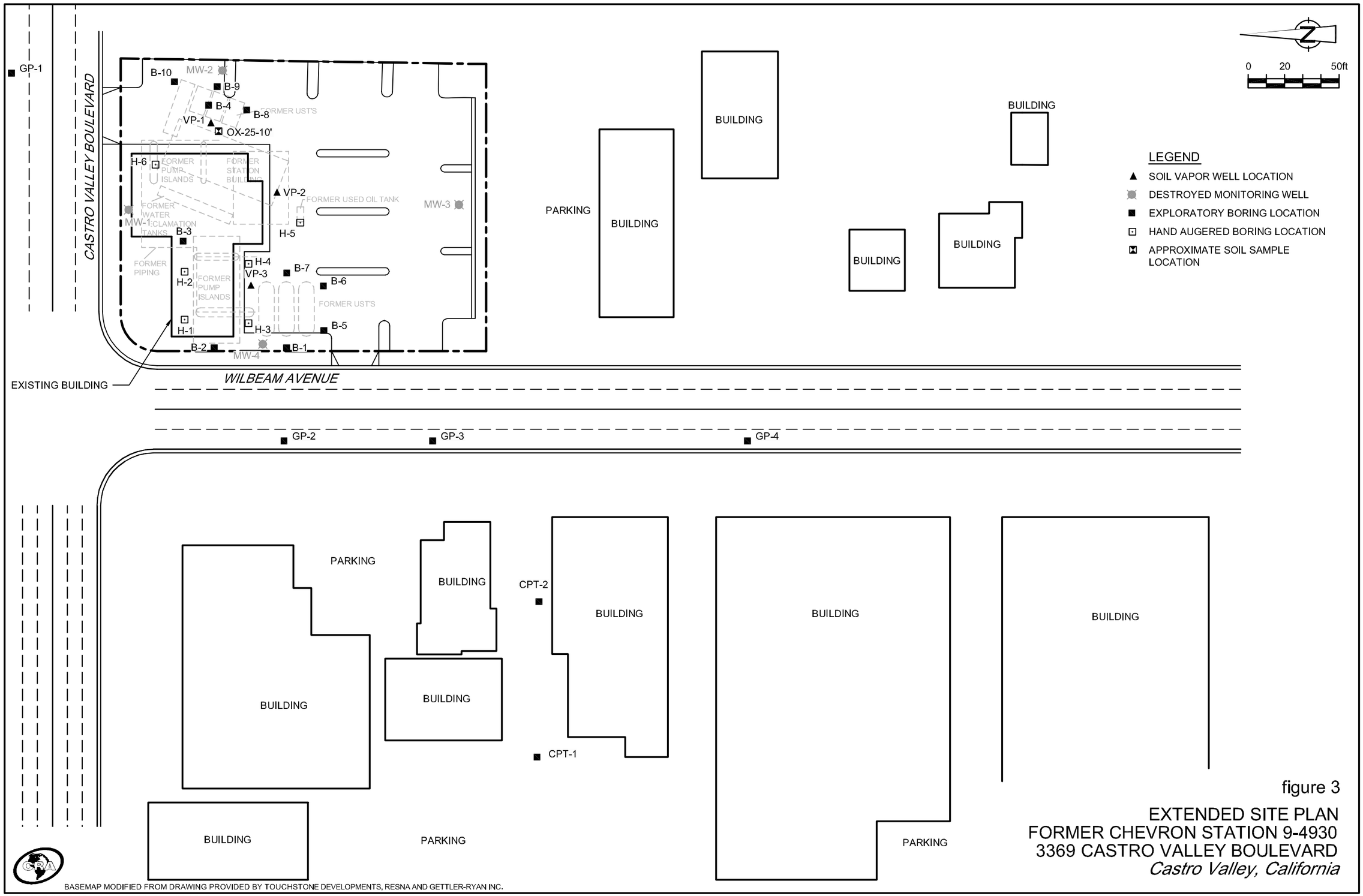



figure 3

EXTENDED SITE PLAN
FORMER CHEVRON STATION 9-4930
3369 CASTRO VALLEY BOULEVARD
*Castro Valley, California*

BASEMAP MODIFIED FROM DRAWING PROVIDED BY TOUCHSTONE DEVELOPMENTS, RESNA AND GETTLER-RYAN INC.

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TABLES

**TABLE 1**

**CURRENT AND HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS**
**FORMER CHEVRON STATION 9-4930**
**3369 CASTRO VALLEY BOULEVARD**
**CASTRO VALLEY, CALIFORNIA**

| *Boring/ Sample ID* | *Sample Depth (fbg)* | *Sample Date* | *TOG* | *TPHd* | *TPHg* | *Benzene* | *Toluene* | *Ethylbenzene* | *Xylenes* | *MTBE* | *HVOCs* | *SVOCs* | *Lead* | *Cd* | *Cr* | *Ni* | *Zn* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ← Concentrations reported in milligrams per kilogram (mg/kg) → | | | | | | | | | | | | | | |
| **UST Removal Confirmation Samples** | | | | | | | | | | | | | | | | | |
| SE-9' | 9 | 3/10/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| SW-6' | 6 | 3/10/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| WS-9' | 9 | 3/10/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| ES-6' | 6 | 3/10/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| EN-9' | 9 | 3/10/93 | -- | -- | <1 | <0.005 | <0.005 | **0.014** | **0.024** | -- | -- | -- | -- | -- | -- | -- | -- |
| NE-6' | 6 | 3/10/93 | -- | -- | **430** | **0.056** | **0.64** | **7.7** | **33** | -- | -- | -- | -- | -- | -- | -- | -- |
| NW-8' | 8 | 3/10/93 | -- | -- | **620** | **0.15** | **0.75** | **11** | **53** | -- | -- | -- | <5 | -- | -- | -- | -- |
| WN-6' | 6 | 3/10/93 | -- | -- | **240** | <0.05 | **0.57** | **4.9** | **4** | -- | -- | -- | -- | -- | -- | -- | -- |
| **Pipe Trench Confirmation Samples** | | | | | | | | | | | | | | | | | |
| V-1 | 2 | 3/10/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| P-1 | 2.5 | 3/10/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| P-2 | 2.5 | 3/10/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| P-3 | 2.5 | 3/10/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| P-4 | 2.5 | 3/10/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| P-5 | 3 | 3/10/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | **0.014** | -- | -- | -- | -- | -- | -- | -- | -- |
| P-6 | 3 | 3/10/93 | -- | -- | <1 | **0.02** | **0.02** | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| P-7 | 3 | 3/10/93 | -- | -- | <1 | <0.005 | **0.018** | <0.005 | **0.019** | -- | -- | -- | -- | -- | -- | -- | -- |
| P-8 | 3 | 3/10/93 | -- | -- | **14** | **0.39** | **2.3** | **0.32** | **1.8** | -- | -- | -- | -- | -- | -- | -- | -- |
| P-9-5' | 5 | 3/10/93 | -- | -- | **1.5** | **0.074** | **0.007** | **0.007** | **0.011** | -- | -- | -- | **7** | -- | -- | -- | -- |
| P-10-4.5' | 4.5 | 3/10/93 | -- | -- | **720** | **2.3** | **17** | **9** | **49** | -- | -- | -- | **6** | -- | -- | -- | -- |
| P-11-5' | 5 | 3/10/93 | -- | -- | **3.0** | **0.079** | **0.01** | **0.025** | **0.03** | -- | -- | -- | **6** | -- | -- | -- | -- |
| P-12-6' | 6 | 3/10/93 | -- | -- | **1.6** | <0.005 | **0.011** | **0.036** | **0.007** | -- | -- | -- | **6** | -- | -- | -- | -- |
| **Waste Water Reclaim Tank Confirmation Samples** | | | | | | | | | | | | | | | | | |
| WWR-1-9' | 9 | 3/15/93 | <50 | <10 | **8** | <0.003 | **0.019** | **0.078** | **0.36** | -- | ND | -- | **10** | <1 | **28** | **29** | **48** |
| WWR-2-9' | 9 | 3/15/93 | <50 | <10 | **230** | <0.05 | **0.17** | **2.2** | **4.5** | -- | ND | -- | **5** | <1 | **31** | **31** | **100** |
| WWR-3-12' | 12 | 3/15/93 | <50 | <10 | <1 | <0.005 | <0.005 | <0.005 | <0.009 | -- | ND | -- | **5** | <1 | **26** | **32** | **41** |
| WWR-4-12' | 12 | 3/15/93 | <50 | <10 | <1 | <0.005 | <0.005 | <0.005 | <0.009 | -- | ND | -- | **6** | <1 | **33** | **28** | **46** |

**TABLE 1**

**CURRENT AND HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS**
**FORMER CHEVRON STATION 9-4930**
**3369 CASTRO VALLEY BOULEVARD**
**CASTRO VALLEY, CALIFORNIA**

| *Boring/ Sample ID* | *Sample Depth (fbg)* | *Sample Date* | *TOG* | *TPHd* | *TPHg* | *Benzene* | *Toluene* | *Ethylbenzene* | *Xylenes* | *MTBE* | *HVOCs* | *SVOCs* | *Lead* | *Cd* | *Cr* | *Ni* | *Zn* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ← Concentrations reported in milligrams per kilogram (mg/kg) → | | | | | | | | | | | | | | |
| **UST Over-Excavation Confirmation Samples** | | | | | | | | | | | | | | | | | |
| OX-1-6' | 6 | 3/19/93 | -- | -- | **340** | <0.25 | **0.33** | **4.4** | **15** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-2-9' | 9 | 3/19/93 | -- | -- | **97** | <0.10 | <0.10 | **1.8** | **9** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-3-11' | 11 | 3/22/93 | -- | -- | <1 | **0.026** | <0.005 | **0.006** | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-4-11' | 11 | 3/22/93 | -- | -- | **11** | **0.38** | **0.30** | **0.31** | **1.0** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-5-5' | 5 | 3/22/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-6-10.5' | 10.5 | 3/22/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-7-7' | 7 | 3/22/93 | -- | -- | **11** | <0.025 | **0.045** | <0.025 | **0.083** | -- | ND | -- | -- | -- | | | |
| OX-8-2' | 2 | 3/25/93 | -- | -- | **4** | **0.01** | **0.006** | **0.031** | **0.36** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-9-7' | 7 | 3/25/93 | <50 | -- | **990** | <0.1 | **2.1** | **8** | **43** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-10-8' | 8 | 3/26/93 | -- | -- | **110** | <0.025 | **0.14** | **0.39** | **1.3** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-11-13' | 13 | 3/26/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-12-9' | 9 | 3/26/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-13-13' | 13 | 3/30/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-14-9' | 9 | 4/2/93 | -- | -- | **340** | <0.05 | **0.18** | **5.8** | **28** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-15-5' | 5 | 4/2/93 | <50 | **2** | <1 | <0.005 | **0.008** | <0.005 | <0.015 | -- | ND | ND[a] | **6** | <1 | **22** | **21** | **39** |
| OX-16-5' | 5 | 4/7/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-17-10' | 10 | 4/7/93 | -- | -- | **290** | <0.1 | **0.65** | **4.6** | **21** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-18-15' | 15 | 4/9/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-19-8' | 8 | 4/9/93 | -- | -- | **760** | **0.5** | **4** | **17** | **76** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-20-10' | 10 | 4/9/93 | -- | -- | **74** | **0.032** | **0.18** | **2.2** | **1.8** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-21-12' | 12 | 4/9/93 | -- | -- | **850** | **2.6** | **14** | **17** | **80** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-22-15' | 15 | 4/19/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-23-8' | 8 | 4/19/93 | -- | -- | **160** | <0.025 | **0.29** | **2.2** | **4.2** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-24-13' | 13 | 4/19/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-25-10' | 10 | 4/19/93 | -- | -- | **5,100** | **3.9** | **6.6** | **77** | **360** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-26-11' | 11 | 4/20/93 | -- | -- | **510** | **0.59** | **3.6** | **9.7** | **51** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-27-11' | 11 | 4/20/93 | -- | -- | **310** | **0.3** | **0.98** | **4.9** | **18** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-28-14' | 14 | 4/22/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-29-13' | 13 | 4/22/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-30-10' | 10 | 4/22/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-31-13' | 13 | 4/22/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-32-10' | 10 | 4/22/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-33-13' | 13 | 4/22/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-34-8' | 8 | 4/28/93 | -- | -- | **89** | <0.005 | **0.15** | **1.5** | **3.1** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-35-11' | 11 | 4/28/93 | -- | -- | **8** | <0.005 | **0.011** | **0.15** | **0.31** | -- | -- | -- | -- | -- | -- | -- | -- |

**TABLE 1**

**CURRENT AND HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS**
**FORMER CHEVRON STATION 9-4930**
**3369 CASTRO VALLEY BOULEVARD**
**CASTRO VALLEY, CALIFORNIA**

| *Boring/ Sample ID* | *Sample Depth (fbg)* | *Sample Date* | *TOG* | *TPHd* | *TPHg* | *Benzene* | *Toluene* | *Ethylbenzene* | *Xylenes* | *MTBE* | *HVOCs* | *SVOCs* | *Lead* | *Cd* | *Cr* | *Ni* | *Zn* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ← Concentrations reported in milligrams per kilogram (mg/kg) → | | | | | | | | | | | | | | |
| OX-36-8' | 8 | 4/28/93 | -- | -- | **18** | <0.005 | **0.065** | **0.34** | **0.86** | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-37-11' | 11 | 4/28/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-38-6' | 6 | 4/28/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-39-4' | 4 | 4/30/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-40-8' | 8 | 4/30/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-41-14' | 14 | 4/30/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-42-14' | 14 | 4/30/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| OX-44-8' | 8 | 5/3/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| T-1-13' | 13 | 4/20/93 | -- | -- | **1,600** | **0.98** | **18** | **34** | **140** | -- | -- | -- | -- | -- | -- | -- | -- |
| **Stockpile Sample Results (Re-Used as Backfill)** | | | | | | | | | | | | | | | | | |
| CSP-1A-D | -- | 3/24/93 | -- | -- | <1 | <0.005 | <0.005 | **0.006** | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| CSP-2A-D | -- | 3/24/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| CSP-3A-D | -- | 3/24/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| CSP-4A-D | -- | 4/13/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| CSP-5A-D | -- | 4/13/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| CSP-6A-D | -- | 4/13/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| CSP-7A-D | -- | 5/3/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| CSP-8A-D | -- | 5/3/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| CSP-9A-D | -- | 5/3/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| CSP-10A-D | -- | 5/3/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| CSP-11A-D | -- | 5/4/93 | -- | -- | <1 | <0.005 | <0.02 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| CSP-12A-D | -- | 5/4/93 | -- | -- | <1 | <0.005 | <0.02 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| **Exploratory and Well Borings** | | | | | | | | | | | | | | | | | |
| B-1 | 6 | 11/24/92 | -- | -- | **79** | <0.1 | **0.087** | **1.0** | **1.9** | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11.25 | 11/24/92 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| B-2 | 11.25 | 11/24/92 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| B-3 | 10.25 | 11/24/92 | -- | -- | **96** | <0.025 | <0.025 | **0.063** | **3.5** | -- | -- | -- | -- | -- | -- | -- | -- |
| B-4 | 11.5 | 11/24/92 | -- | -- | **2,500** | <0.5 | **5.1** | **20** | **130** | -- | -- | -- | -- | -- | -- | -- | -- |
| B-5 | 10.75 | 11/24/92 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| B-6 | 10.6 | 11/24/92 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |

**TABLE 1**

**CURRENT AND HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS**
**FORMER CHEVRON STATION 9-4930**
**3369 CASTRO VALLEY BOULEVARD**
**CASTRO VALLEY, CALIFORNIA**

| *Boring/ Sample ID* | *Sample Depth (fbg)* | *Sample Date* | *TOG* | *TPHd* | *TPHg* | *Benzene* | *Toluene* | *Ethylbenzene* | *Xylenes* | *MTBE* | *HVOCs* | *SVOCs* | *Lead* | *Cd* | *Cr* | *Ni* | *Zn* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ← Concentrations reported in milligrams per kilogram (mg/kg) → | | | | | | | | | | | | | | |
| B-7 | 10.75 | 11/24/92 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| B-8 | 10.5 | 11/24/92 | -- | -- | **36** | <0.05 | **0.056** | **0.47** | **1.4** | -- | -- | -- | -- | -- | -- | -- | -- |
| B-9 | 5.5 | 11/24/92 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | **0.01** | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11 | 11/24/92 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| B-10 | 11.5 | 11/24/92 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| H-1 | 5.5 | 11/24/92 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| H-2 | 5.5 | 11/24/92 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| H-3 | 5.5 | 11/24/92 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| H-4 | 1 | 11/24/92 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| H-5 | 5.5 | 11/24/92 | **57** | <10 | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 10.5 | 11/24/92 | <50 | <10 | **15** | <0.005 | **0.014** | **0.043** | **0.027** | -- | ND | -- | -- | -- | | | |
| H-6 | 5.5 | 11/24/92 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| B-11 (MW-1) | 6 | 10/25/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| B-12 (MW-2) | 5.8 | 10/25/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 10/25/93 | -- | -- | **100** | <0.05 | **0.18** | **0.45** | **3.6** | -- | -- | -- | -- | -- | -- | -- | -- |
| B-13 (MW-3) | 5.8 | 10/25/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 10/25/93 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.015 | -- | -- | -- | -- | -- | -- | -- | -- |
| B-14 (MW-4) | 6 | 10/25/93 | -- | -- | **530** | <0.25 | **0.48** | **4.5** | **18** | -- | -- | -- | -- | -- | -- | -- | -- |
| GP-3 | 5 | 1/25/96 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 10 | 1/25/96 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 15 | 1/25/96 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |

**TABLE 1**

**CURRENT AND HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS**
**FORMER CHEVRON STATION 9-4930**
**3369 CASTRO VALLEY BOULEVARD**
**CASTRO VALLEY, CALIFORNIA**

| *Boring/ Sample ID* | *Sample Depth (fbg)* | *Sample Date* | *TOG* | *TPHd* | *TPHg* | *Benzene* | *Toluene* | *Ethylbenzene* | *Xylenes* | *MTBE* | *HVOCs* | *SVOCs* | *Lead* | *Cd* | *Cr* | *Ni* | *Zn* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ← Concentrations reported in milligrams per kilogram (mg/kg) → | | | | | | | | | | | | | | |
| GP-4 | 5 | 1/25/96 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 10 | 1/25/96 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 15 | 1/25/96 | -- | -- | <1 | <0.005 | <0.005 | <0.005 | <0.005 | -- | -- | -- | -- | -- | -- | -- | -- |
| VP-1 | 10 | 10/18/10 | -- | -- | **16** | **0.0008** | <0.001 | <0.001 | <0.001 | **0.0007** | -- | -- | -- | -- | -- | -- | -- |
| | 12.5 | 10/18/10 | -- | -- | <1 | <0.0005 | <0.001 | <0.001 | <0.001 | **0.0006** | -- | -- | -- | -- | -- | -- | -- |
| | 15 | 10/18/10 | -- | -- | <1 | <0.0005 | <0.001 | <0.001 | <0.001 | **0.0007** | -- | -- | -- | -- | -- | -- | -- |
| VP-2 | 5.5 | 10/19/10 | -- | -- | <1 | <0.0005 | <0.001 | <0.001 | <0.001 | <0.0005 | -- | -- | -- | -- | -- | -- | -- |
| VP-3 | 5.5 | 10/19/10 | -- | -- | <1 | <0.0005 | <0.001 | <0.001 | <0.001 | <0.0005 | -- | -- | -- | -- | -- | -- | -- |

**Abbreviations/Notes:**
fbg = feet below grade
TOG = Total oil and grease
TPHd/TPHg = Total petroleum hydrocarbons as diesel and gasoline, respectively
MTBE = Methyl tertiary butyl ether
HVOCs = Halogenated volatile organic compounds
SVOCs = Semi-volatile organic compounds
Cd = Cadmium
Cr = Chromium
Ni = Nickel
Zn = Zinc
-- = Not analyzed
< = Not detected at or above stated laboratory reporting limit
ND = Not detected (reporting limits vary)
a = 2-Methylnaphthalene detected at 0.28 mg/kg
Note: Shaded samples were collected from soil that was later over-excavated

**TABLE 2**

**SOIL VAPOR SAMPLE ANALYTICAL RESULTS**
**FORMER CHEVRON STATION 9-4930**
**3369 CASTRO VALLEY BOULEVARD**
**CASTRO VALLEY, CALIFORNIA**

| *Sample ID* | *Date Sampled* | *TPHg* | *Benzene* | *Toluene* | *Ethylbenzene* | *m,p-Xylenes* | *o-Xylenes* | *MTBE* | *Oxygen* | *Helium* | *Carbon Dioxide* | *Methane* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ← Concentrations reported in micrograms per cubic meter (µg/m$^3$) → | | | | | | | ← Reported in percent → | | | |
| VP-1 | 10/27/10 | 440 | 4.8 | <4.6 | <5.2 | <5.2 | <5.2 | <4.4 | 17 | <0.12 | 2.8 | <0.00024 |
| VP-2 | 10/27/10 | 20,000 | <43 | <51 | <58 | <58 | <58 | <48 | 16 | <0.13 | 4.3 | <0.00027 |
| VP-3 | 10/27/10 | 1,400 | <4.0 | <4.7 | <5.5 | <5.5 | <5.5 | <4.5 | 19 | <0.13 | 1.9 | <0.00025 |
| Dupe | 10/27/10 | 21,000 | <43 | <51 | <58 | <58 | <58 | <48 | 16 | <0.13 | 4.4 | <0.00027 |
| Commercial ESL | | 29,000 | 280 | 180,000 | 3,300 | 58,000[a] | | 31,000 | | | | |

**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, carbon dioxide and methane by ASTM Method D-1946
< = Not detected at or above stated laboratory reporting limit
Dupe = Field duplicate sample of VP-2
ESL = Environmental Screening Level for shallow soil gas associated with vapor intrusion concerns at commercial/industrial sites-RWQCB May 2008 (Table E)
a = ESL is for total xylenes

ATTACHMENT A

ACEH LETTER DATED JANUARY 26, 2009

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



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

January 26, 2009

Stacie Hartung-Frerichs
Chevron Environmental Management Company
6001 Bollinger Canyon Road, K-2200
San Ramon, CA 94583

Subject: Fuel Leak Case No. RO0000416 and GeoTracker Global ID T0600100137, Chevron #9-4930 / Valley Car Wash, 3369 Castro Valley Boulevard, Castro Valley, CA 94546

Dear Ms. Hartung-Frerichs:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted document entitled, "Subsurface Investigation Report and Closure Request," dated December 3, 2007, which was prepared by Conestoga-Rovers & Associates (CRA) for the subject site. According to CRA, two (CPT-1 and CPT-2) of the proposed three borings were advanced to delineate the petroleum hydrocarbon contaminant plume off-site. Total petroleum hydrocarbons (TPH) as gasoline (g) and methyl tertiary butyl ether (MTBE) were detected at maximum concentrations of 140 µg/L and 17 µg/L, respectively in "grab" groundwater samples collected from CPT-2. Based on the analytical results from the off-site borings and historical groundwater monitoring data collected from site monitoring wells, CRA has requested case closure for the subject site.

In March 1993, three 10,000-gallon underground storage tanks (USTs) were removed from the site. Approximately 7,500 cubic yards of soil was disposed of off-site to Redwood Landfill, Inc. in Novato, California. The excavation was backfilled with 800 cubic yards of segregated "clean" stockpiled soil with the remainder of the excavation backfilled with 2-inch drain rock and aggregate base rock. Over-excavation confirmation soil samples detected a maximum TPH-g and benzene concentration of 5,100 mg/kg and 3.9 mg/kg, respectively in soil sample OX-25-10', collected at 10 feet bgs, immediately southwest of the former USTs. These concentrations are significantly above the Regional Water Quality Control Board's (RWQCB) Environmental Screening Levels (ESLs) for TPH-g and benzene of 83 mg/kg and 0.044 mg/kg, respectively, indicating that the site poses a potential risk to human health and the environment. ACEH is aware that a RBCA evaluation was conducted for the site with 0.6 mg/kg as an upper 95% confidence limit concentration for benzene. However, ACEH is concerned that porous material was used to backfill the excavation increasing the potential for contaminant volatilization to indoor air, especially since the SSTL is above the ESL, which recommends collection of subsurface or sub-slab vapor samples to evaluate such risk. Therefore, ACEH cannot consider case closure for the subject site 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.

ACEH request that you address the following technical comments and send us the technical work plan and reports requested below.

## TECHNICAL COMMENTS

1. **Contaminant Source Area Characterization** – As mentioned above, TPH-g and benzene were detected at concentrations of 5,100 mg/kg and 3.9 mg/kg, respectively in soil sample OX-25-10', collected at 10 feet bgs, immediately southwest of the former USTs. Although the lateral extent of soil contamination appears delineated by the confirmation sidewall soil samples, the vertical extent of the soil contamination appears uncharacterized at this time. Please propose a scope of work to address the above-mentioned concerns and submit a work plan, due by the date specified below.

2. **Potential Contaminant Volatilization to Indoor Air** – Significantly elevated concentration of TPH-g (5,100 mg/kg) and benzene (3.9 mg/kg) remain in place at the subject site. These concentrations are significantly above the RWQCB's ESL for TPH-g and benzene of 83 mg/kg and 0.044 mg/kg, respectively, indicating that the site poses a potential risk to human health and the environment. Furthermore, porous materials (i.e. 2-inch drain rock and aggregate base rock) were used to backfill the majority of the excavation. Please propose a scope of work to address the above-mentioned concerns and submit a work plan, due by the date specified below. Also include figures that illustrate previous sampling locations and site features (i.e. location of both generations of USTs, piping runs, station building, etc.) in relation to current site structures.

Once all data gaps have been addressed, the case closure evaluation for the site can proceed forward.

## TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Steven Plunkett), according to the following schedule:

- **March 27, 2009** – Soil and Water Investigation Work Plan

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

## ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental

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) 777-2478 or send me an electronic mail message at paresh.khatri@acgov.org.

Sincerely,

Paresh C. Khatri
Hazardous Materials Specialist

Steven Plunkett
Hazardous Materials Specialist

Donna L. Drogos, PE
Supervising Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Brian P. Carey, Conestoga-Rovers & Associates, 2000 Opportunity Drive, Suite 110, Roseville, CA 95678
Donna Drogos, ACEH
Steven Plunkett, ACEH
File

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

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

**REQUIREMENTS**

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection.** (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

**Additional Recommendations**

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

**Submission Instructions**

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
         or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for.**

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name at acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload)

# ATTACHMENT B

# SUMMARY OF ENVIRONMENTAL INVESTIGATION AND REMEDIATION

**SUMMARY OF ENVIRONMENTAL INVESTIGATION AND REMEDIATION**
**FORMER CHEVRON STATION 9-4930**

***November 1992 Subsurface Investigation and Area Well Survey***

In November 1992, RESNA Industries, Inc. (RESNA) advanced exploratory borings B-1 through B-10 to depths of 11 or 15 feet below grade (fbg) and hand-augered borings H-1 through H-6 at the site to evaluate soil and groundwater quality. Groundwater was encountered in the borings at depths of 11 to 12 fbg. One or two soil samples were collected at various depths from each boring and analyzed for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and xylenes (BTEX). Low concentrations of TPHg (up to 96 milligrams per kilogram [mg/kg]) were detected in soil samples collected from borings B-1, B-3, B-8, and H-5; low concentrations of toluene, ethylbenzene, and xylenes (up to 3.5 mg/kg) were also detected. An elevated concentration of TPHg (2,500 mg/kg) was detected in the soil sample collected at 11.5 fbg from boring B-4 drilled in the former location of the first-generation underground storage tanks (USTs); toluene, ethylbenzene, and xylenes (up to 130 mg/kg) were also detected. Benzene was not detected in any of the soil samples. The soil samples collected at 5.5 and 10.5 fbg from H-5, located adjacent to a former used-oil UST, were additionally analyzed for TPH as diesel (TPHd) and total oil and grease (TOG); the sample collected at 10.5 fbg was also analyzed for halogenated volatile organic compounds (HVOCs). TOG was detected at 57 mg/kg in the sample collected at 5.5 fbg; TPHd was not detected in either of the samples, and HVOCs were not detected in the 10.5 fbg sample. Groundwater samples were also collected from borings B-1 through B-4 and analyzed for TPHg and BTEX. Elevated concentrations of TPHg (ranging from 2,700 [B-1] to 23,000 micrograms per liter [µg/L] [B-3]) and lower concentrations of benzene (ranging from 23 [B-2] to 800 µg/L [B-3]) were detected in the four groundwater samples. Toluene (up to 120 µg/L), ethylbenzene (up to 1,000 µg/L), and xylenes (up to 2,000 µg/L) were also detected in all four of the samples.

RESNA also conducted a well survey that identified 58 wells within a ½-mile radius of the site. The closest identified domestic water supply well was located approximately 1,500 feet west of the site. Two other facilities with known leaking USTs were also identified between the site and the domestic well. No municipal water wells were identified within the search radius. Further details of the investigation were presented in RESNA's December 16, 1992 *Report-Subsurface Environmental Investigation*.

***February to May 1993 Station Demolition***

In February 1993, the service station building and car wash facility were demolished. In March 1993, three 10,000-gallon, fiberglass, gasoline USTs, associated piping, and the car wash waste water reclamation tanks (WWRTs) were removed. Eight soil samples were collected by Touchstone Developments (Touchstone) at depths of 6 to 9 fbg from the sidewalls of the UST excavation and analyzed for TPHg and BTEX. TPHg (up to 620 mg/kg) was only detected in three of the samples; low concentrations of BTEX (up to 53 mg/kg) were detected in four of the samples. A groundwater sample collected from the UST excavation (H2O-PIT) contained TPHg and benzene at 3,900 µg/L and 180 µg/L, respectively; low concentrations of toluene, ethylbenzene, and xylenes (up to 380 µg/L) were also detected; lead was not detected. Thirteen soil samples (P-1 through P-12 and V-1) were collected at depths of 2 to 6 fbg beneath the product piping; TPHg (up to 720 mg/kg) and BTEX (up to 49 mg/kg) were detected in several of the samples. Four soil samples (WWR-1 through WWR-4) were also collected at depths of

9 or 12 fbg from the WWRT excavation and analyzed for TPHg, TPHd, BTEX, TOG, HVOCs, and metals. TPHg (up to 230 mg/kg) and BTEX (up to 4.5 mg/kg) were only detected in two of the samples; benzene, TOG, TPHd, and HVOCs were not detected in any of the samples; and the detected metals concentrations were consistent with background levels. Several rounds of over-excavation and confirmation soil sampling were performed from March to May 1993 to remove impacted soil. As a result, the majority of the site was excavated to depths ranging from 11 to 15 fbg. Approximately 7,500 cubic yards of soil were excavated and disposed offsite during the work. The final confirmation soil samples collected from the over-excavation indicated that no significant hydrocarbon mass remained in soil. Approximately 800 cubic yards of excavated soil that did not contain any contamination was used as backfill; and approximately 500 cubic yards of soil was transported offsite and used as fill material. The remainder of the excavation was backfilled with drain rock and aggregate base. Further details of the work were presented in Touchstone's *Tank/Line Removal and Over-excavation Report* dated June 5, 1993.

***October 1993 Subsurface Investigation***

In October 1993, RESNA installed monitoring wells MW-1 through MW-4 (borings B-11 through B-14) to a maximum depth of 21.5 fbg. One or two soil samples were collected at various depths from each well boring and analyzed for TPHg and BTEX. TPHg was only detected in the soil samples collected at 8 fbg from the boring for well MW-2 (100 mg/kg) and at 6 fbg from the boring for well MW-4 (530 mg/kg); low concentrations of toluene, ethylbenzene, and xylenes (up to 18 mg/kg) were also detected. The initial groundwater samples collected from wells MW-1 through MW-4 contained TPHg at 1,000 µg/L, 5,600 µg/L, 110 µg/L, and 640 µg/L, respectively; benzene was only detected in the groundwater samples collected from wells MW-1 (11 µg/L), MW-2 (140 µg/L), and MW-4 (6.7 µg/L). Further details of the investigation were presented in RESNA's December 13, 1993 *Report-Additional Subsurface Environmental Investigation.*

***February 1994 Well Sampling***

In February 1994, wells MW-1 through MW-4 were re-sampled. TPHg and benzene were detected in wells MW-1, MW-2, and MW-4 at concentrations up to 820 µg/L and 41 µg/L, respectively. The samples were also analyzed for HVOCs. Tetrachloroethene (PCE) was detected in all the wells at concentrations up to 400 µg/L; trichloroethene (TCE) was detected in wells MW-1, MW-3, and MW-4 at concentrations up to 51 µg/L; and 1,2-Dichloroethene (1,2-DCE) was detected in wells MW-1 (0.8 µg/L) and MW-4 (13 µg/L).

***January 1996 Subsurface Investigation***

In January 1996, Pacific Environmental Group, Inc. (PEG) advanced offsite borings GP-1 through GP-4 to further evaluate the extent of petroleum hydrocarbons in groundwater. Boring GP-1 was located in Castro Valley Boulevard and borings GP-2 through GP-4 were located in Wilbeam Avenue. Soil samples were collected at depths of 5, 10, and 15 fbg from borings GP-3 and GP-4 and analyzed for TPHg and BTEX, which were not detected. Groundwater samples were also collected from borings GP-1 and GP-2 and analyzed for TPHg and BTEX. The groundwater sample collected from boring GP-2 contained TPHg at 1,600 µg/L, benzene at 9.6 µg/L, and low concentrations of toluene, ethylbenzene, and xylenes (up to 190 µg/L). TPHg and BTEX were not detected in the groundwater sample collected from boring GP-1. Further details of this investigation were presented in PEG's April 18, 1996 *Soil and Groundwater*

*Investigation* report.

***July 1996 Tier 2 Risk-Based Corrective Action (RBCA) Analysis***
In July 1996, Chevron Research and Technology Company (CRTC) performed a Tier 2 RBCA evaluation for the site. The results indicated that the estimated risks for potential future onsite workers and residents were within the acceptable range of $1 \times 10^{-6}$ to $1 \times 10^{-4}$, and the representative concentrations for the chemicals of concern were all less than the estimated site-specific target levels (SSTLs), with the exception of benzene in soil (potential exposure by future onsite residents to indoor air).

***May 2001 Confirmation Groundwater Sampling***
In May 2001, Gettler-Ryan Inc. (G-R) performed a confirmation groundwater sampling event at the site to confirm the dissolved petroleum hydrocarbon plume was limited, adequately defined, stable, and concentrations had shown a general decreasing trend over time. Groundwater samples were collected from wells MW-1 through MW-4 and analyzed for TPHg, BTEX, the five fuel oxygenates, 1,2-Dichloroethane (1,2-DCA), ethylene dibromide (EDB), methanol, and ethanol. TPHg was only detected in wells MW-1 through MW-3 (up to 230 µg/L). Benzene was only detected in wells MW-1 (1.5 µg/L), MW-2 (3 µg/L), and MW-4 (0.63 µg/L). Methyl tertiary butyl ether (MTBE) was also only detected in wells MW-1 (2.1 µg/L), MW-2 (26 µg/L), and MW-3 (2.4 µg/L). Toluene, ethylbenzene, xylenes, the remaining fuel oxygenates, 1,2-DCA, EDB, methanol, and ethanol were not detected in any of the wells.

***September 2006 Well Destruction***
In September 2006, Cambria Environmental Technology, Inc. (Cambria [now CRA]) destroyed wells MW-1 through MW-4 with Alameda County Environmental Health (ACEH) approval.

***September 2007 Subsurface Investigation***
In September 2007, CRA supervised the drilling of cone penetrometer test (CPT) borings CPT-1 and CPT-2 offsite to evaluate the downgradient (southwest) extent of petroleum hydrocarbons in groundwater. The borings were drilled to approximately 35 fbg. Groundwater samples were collected at depths of 15 fbg and 32 fbg from CPT-1 and 15 fbg, 21 fbg, and 34 fbg from CPT-2 and analyzed for TPHg, BTEX, fuel oxygenates, 1,2-DCA, and EDB. No soil samples were collected for laboratory analysis. TPHg was only detected in the samples collected at 21 fbg and 34 fbg from CPT-2 (130 µg/L and 140 µg/L, respectively). MTBE was detected in the samples collected at 32 fbg from CPT-1 (6 µg/L), and at 15, 21, and 34 fbg from CPT-2 (2 µg/L, 17 µg/L, and 17 µg/L, respectively). BTEX, other fuel oxygenates, 1,2-DCA, and EDB were not detected in any of the groundwater samples. Based on the analytical results, the downgradient extent of impacted groundwater appeared to have been adequately defined. Further details of the investigation were presented in CRA's December 3, 2007 *Subsurface Investigation Report and Closure Request*.

# 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: 10/07/2010 By jamesy**

**Permit Numbers: W2010-0727**
**Permits Valid from 10/18/2010 to 10/20/2010**

**Application Id:** 1286484326778 **City of Project Site:** Castro Valley
**Site Location:** 3369 Castro Valley Blvd, Castro Valley, CA
**Project Start Date:** 10/18/2010 **Completion Date:** 10/20/2010
**Assigned Inspector:** Contact John Shouldice at (510) 670-5424 or johns@acpwa.org

**Applicant:** Conestoga-Rovers Associates - Chris Benedict **Phone:** 916-889-8900
10969 Trade Center Dr, Ste 107, Rancho Cordova, CA 95670
**Property Owner:** Tula Gallanes & Anna Counelis **Phone:** --
109 Casa Vieja Place, Orinda, CA 94563
**Client:** Chevron Gas Sta. **Phone:** --
6001 Bollinger Canyon Rd, San Ramon, CA 94583

**Total Due:** $265.00
**Receipt Number: WR2010-0337** **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 - 3 Wells
Driller: Penecore - Lic #: 906899 - Method: Hand **Work Total: $265.00**

**Specifications**

| Permit # | Issued Date | Expire Date | Owner Well Id | Hole Diam. | Casing Diam. | Seal Depth | Max. Depth |
|---|---|---|---|---|---|---|---|
| W2010-0727 | 10/07/2010 | 01/16/2011 | VP1 | 3.25 in. | 0.25 in. | 0.50 ft | 6.00 ft |
| W2010-0727 | 10/07/2010 | 01/16/2011 | VP2 | 3.25 in. | 0.25 in. | 0.50 ft | 6.00 ft |
| W2010-0727 | 10/07/2010 | 01/16/2011 | VP3 | 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 number and site map.

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

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

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

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

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

9. Applicant shall contact John Shouldice for an inspection time at 510-670-5424 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.

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** | 9-4930 | **DRILLING STARTED** | 18-Oct-10 |
| **LOCATION** | 3369 Castro Valley Boulevard, Castro Valley, CA | **DRILLING COMPLETED** | 18-Oct-10 |
| **PROJECT NUMBER** | 611967 | **WELL DEVELOPMENT DATE (YIELD)** | NA |
| **DRILLER** | PeneCore Drilling | **GROUND SURFACE ELEVATION** | Not Surveyed |
| **DRILLING METHOD** | Hand-Auger/Direct Push | **TOP OF CASING ELEVATION** | Not Surveyed |
| **BORING DIAMETER** | 3.25 inch/2 inch | **SCREENED INTERVAL** | 5.375 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 | | | **3" Asphalt** | 0.3 | Concrete |
| | | | | | | | **FILL:** Silty GRAVEL with sand; brown; dry. | | Portland Type I/II |
| | | | | 1 | | | Color change to grey at 1.25 fbg. | | 1/4"-inner diam. Nylaflow® tubing |
| | | | | 2 | | | | | Hydrated Bentonite Gel |
| | | | | 3 | | | | | 3" Dry Granular Bentonite |
| | | | | 4 | | | | | 1 1/2" stainless steel diffuser |
| | | | | 5 | | | | | Monterey Sand #2/12 |
| | | | | 6 | | | | | |
| | | | | 7 | | | | | |
| | | | | 8 | | | | | |

*Continued Next Page*

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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** | 9-4930 | **DRILLING STARTED** | 18-Oct-10 |
| **LOCATION** | 3369 Castro Valley Boulevard, Castro Valley, CA | **DRILLING COMPLETED** | 18-Oct-10 |

*Continued from Previous Page*

| PID (ppm) | BLOW COUNTS | SAMPLE ID | EXTENT | DEPTH (fbg) | U.S.C.S. | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | CONTACT DEPTH (fbg) | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 9 | | | **CLAY:** Grey; moist; medium estimated plasticity; very fine sand. | 9.0 | |
| 2.0 | | VP-1- 10 | | 10 | | | | | Hydrated Bentonite Chips |
| | | | | 11 | | | | | |
| | | | | 12 | CL | | | | |
| 19.5 | | VP-1- 12.5 | | 13 | | | | | |
| | | | | 14 | | | | | |
| 5.0 | | VP-1- 15 | | 15 | | | | 15.0 | Bottom of Boring @ 15 fbg |

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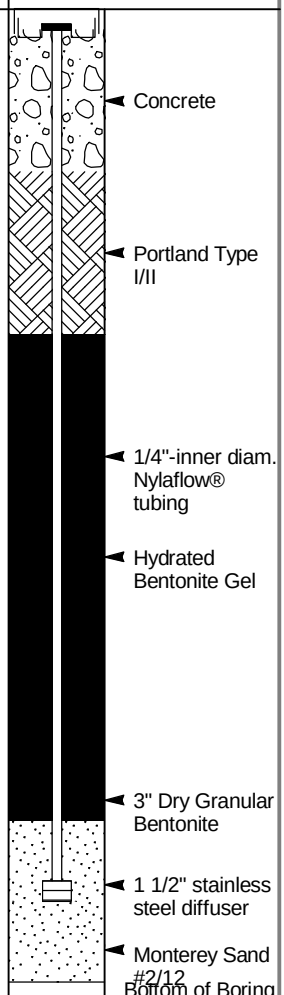
# BORING/WELL LOG

| | | | |
|---|---|---|---|
| **CLIENT NAME** | Chevron Environmental Management Co. | **BORING/WELL NAME** | VP-2 |
| **JOB/SITE NAME** | 9-4930 | **DRILLING STARTED** | 19-Oct-10 |
| **LOCATION** | 3369 Castro Valley Boulevard, Castro Valley, CA | **DRILLING COMPLETED** | 19-Oct-10 |
| **PROJECT NUMBER** | 611967 | **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** | 5.375 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) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | **3" Asphalt** | 0.3 |
| | | | | | | | **FILL:** GRAVEL with silt and sand; brown; moist. | |
| 0 | | VP-2- 5.5 | | 1 2 3 4 5 6 | | | | 6.0 |

WELL DIAGRAM




WELL LOG (PID) I:\PROJEC~2\6-CHAR\61---\6119--\611967\611967~3\611967~1\611967-BORING LOGS.GPJ DEFAULT.GDT 11/15/10

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# BORING/WELL LOG

| | | | |
|---|---|---|---|
| **CLIENT NAME** | Chevron Environmental Management Co. | **BORING/WELL NAME** | VP-3 |
| **JOB/SITE NAME** | 9-4930 | **DRILLING STARTED** | 19-Oct-10 |
| **LOCATION** | 3369 Castro Valley Boulevard, Castro Valley, CA | **DRILLING COMPLETED** | 19-Oct-10 |
| **PROJECT NUMBER** | 611967 | **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** | 5.375 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 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | **3" Asphalt** | 0.3 | Concrete |
| | | | | | | | **FILL:** GRAVEL with sand; light brown; moist. | | Portland Type I/II |
| | | | | 1 | | | | | |
| | | | | 2 | | | | | 1/4"-inner diam. Nylaflow® tubing |
| | | | | 3 | | | | | Hydrated Bentonite Gel |
| | | | | 4 | | | | | |
| | | | | 5 | | | | | 3" Dry Granular Bentonite |
| 0 | | VP-3- 5.5 | | | | | | | 1 1/2" stainless steel diffuser |
| | | | | 6 | | | | 6.0 | Monterey Sand #2/12 |
| | | | | | | | | | Bottom of Boring @ 6 fbg |

WELL LOG (PID) I:\PROJEC~2\6-CHAR\61---\6119--\611967\611967~3\611967~1\611967-BORING LOGS.GPJ DEFAULT.GDT 11/15/10

# ATTACHMENT D

# STANDARD FIELD PROCEDURES AND VAPOR SAMPLING FIELD DATA SHEETS

# Conestoga-Rovers & Associates

## STANDARD FIELD PROCEDURES FOR HAND-AUGER SOIL BORINGS

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

### Objectives

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

### Soil Classification/Logging

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

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

### Soil Boring and Sampling

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

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

### Sample Storage, Handling and Transport

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

### Field Screening

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

### Water Sampling

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

### Duplicates and Blanks

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

### Grouting

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

### Waste Handling and Disposal

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

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

# Conestoga-Rovers & Associates

## STANDARD FIELD PROCEDURES FOR SOIL VAPOR PROBE INSTALLATION AND SAMPLING

## VAPOR POINT METHODS

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

### Objectives

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

### Shallow Soil Vapor Point Installation

The shallow soil vapor point method for soil vapor sampling utilizes a hand auger or drill rig to advance a boring for the installation of a soil vapor sampling point. Once the boring is hand augered to the final depth, a probe, connected with Swagelok fittings to nylon or Teflon tubing of ¼-inch outer-diameter, is placed within 12-inches of number 2/16 filter sand (Figure A). A 12-inch layer of dry granular bentonite is placed on top of the filter pack. Pre-hydrated granular bentonite is then poured to fill the borehole. The tube is coiled and placed within a wellbox finished flush to the surface. Soil vapor samples will be collected no sooner than 48 hours after installation of the soil vapor points to allow adequate time for representative soil vapors to accumulate. Soil vapor sample collection will not be scheduled until after a minimum of three consecutive precipitation-free days and irrigation onsite has ceased. Figure B shows the soil vapor sampling apparatus. A measured volume of air will be purged from the tubing using a different Summa purge canister. Immediately after purging, soil vapor samples will be collected using the appropriate size Summa canister with attached flow regulator and sediment filter. The soil vapor points will be preserved until they are no longer needed for risk evaluation purposes. At that time, they will be destroyed by extracting the tubing, hand augering to remove the sand and bentonite, and backfilling the boring with neat cement. The boring will be patched with asphalt or concrete, as appropriate.

### Sampling of Soil Vapor Points

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

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

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

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

### Vapor Sample Storage, Handling, and Transport

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

# Conestoga-Rovers & Associates

## STANDARD FIELD PROCEDURES FOR SOIL BORING AND MONITORING WELL INSTALLATION

This document presents standard field methods for drilling and sampling soil borings and installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

## SOIL BORINGS

### Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Professional Geologist (PG).

### Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments at the bottom of the borehole.

Drilling 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 Analysis

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$^{o}$ C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

### Field Screening

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

### Water Sampling

Water samples, if they are collected from the boring, are either collected using a driven Hydropunch® type sampler or are collected from the open borehole using bailers. The groundwater 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. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

### Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

## MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

### Well Construction and Surveying

Groundwater monitoring wells are installed to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 feet below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two feet above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I, II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

## Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

## Groundwater Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and 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. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

## Waste Handling and Disposal

Soil cuttings from drilling activities are usually stockpiled onsite and covered by plastic sheeting. At least three individual soil samples are collected from the stockpiles and composited at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples in addition to any analytes required by the receiving disposal facility. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Groundwater removed during development and sampling is typically 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. Upon receipt of analytic results, 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

## SOIL VAPOR SAMPLING DATA SHEET

**Soil Vapor Sampling Point ID:** VP-1 **Date:** 10/27/10

**Job/Site Name:** 9-4930 CASTROVALLEY **Technician:** C. Benedict

**Project No.** 61967 **PM:** J. Kiernan

**Site Address:** 3369 CASTROVALLEY BLVD.

**Vapor Sampling Apparatus Pressure Testing**

| Time | Vacuum Reading | Unit | Comments |
|---|---|---|---|
| 823 | -29 | in/Hg | FAIL |
| 830 | -29 | in/Hg | FAIL |
| 854 | -28 | | |
| 904 | -28 | | PASS |
| | | | |
| | | | |

**Purge Volume**

Calculated Purge Volume: ~100mL

| Time | Flow | Volume | PID Reading |
|---|---|---|---|
| 905 | 167 mL/min | ~100mL | |
| | | | |
| | | | |
| | | | |
| | | | |

**Sample Collection**

Flow Control Orifice Setting: 167 mL/min Summa Canister ID: 9516

Summa Canister Size: 1L Analysis:

| Time - Begin Sampling | Canister Vacuum | Time - End Sampling | Canister Vacuum |
|---|---|---|---|
| 906 | -29 | 912 | -7 |

Notes: He % ~ 18%

# Conestoga-Rovers & Associates

## SOIL VAPOR SAMPLING DATA SHEET

**Soil Vapor Sampling Point ID:** VP-2/DUP2 **Date:** 10/27/10

**Job/Site Name:** 9-4930 CASTRO VALLEY **Technician:** C. Benedict

**Project No.** 111967 **PM:** J. Kiernan

**Site Address:** 3369 CASTRO VALLEY BLVD.

**Vapor Sampling Apparatus Pressure Testing**

| Time | Vacuum Reading | Unit | Comments |
|---|---|---|---|
| 921 | -28 | in/Hg | |
| 931 | -28" | | PASS |
| | | | |
| | | | |
| | | | |
| | | | |

**Purge Volume**

Calculated Purge Volume: ~100mL

| Time | Flow | Volume | PID Reading |
|---|---|---|---|
| 932 | 167 mL/min | 100mL | |
| | | | |
| | | | |
| | | | |
| | | | |

**Sample Collection**

Flow Control Orifice Setting: 167 mL/min Summa Canister ID: 11834/36414

Summa Canister Size: 1L Analysis:

| Time - Begin Sampling | Canister Vacuum | Time - End Sampling | Canister Vacuum |
|---|---|---|---|
| 935 | -29 in/Hg | 947 | -8 in/Hg |

**Notes:** He% ≈ 15%

# Conestoga-Rovers & Associates

## SOIL VAPOR SAMPLING DATA SHEET

**Soil Vapor Sampling Point ID:** VP-3 **Date:** 10/27/10

**Job/Site Name:** 9-4930 CASTROVALLEY **Technician:** C. Benedict

**Project No.** 611967 **PM:** J. Kiernan

**Site Address:** 3364 CASTROVALLEY BLVD.

**Vapor Sampling Apparatus Pressure Testing**

| Time | Vacuum Reading | Unit | Comments |
|---|---|---|---|
| 952 | -27.5 | in/Hg | |
| ~~953~~ 1003 | -27.5 | in/Hg | PASS |
| | | | |
| | | | |
| | | | |
| | | | |

**Purge Volume**

Calculated Purge Volume: ~100mL

| Time | Flow | Volume | PID Reading |
|---|---|---|---|
| 1005 | 167 mL/min | 100 mL | |
| | | | |
| | | | |
| | | | |
| | | | |

**Sample Collection**

Flow Control Orifice Setting: 167 mL/min Summa Canister ID: 1371

Summa Canister Size: 1L Analysis:

| Time - Begin Sampling | Canister Vacuum | Time - End Sampling | Canister Vacuum |
|---|---|---|---|
| 1006 | -29 | 1015 | -7 |

**Notes:** 44% ≈ 18"Hg

# ATTACHMENT E

# LABORATORY REPORTS

Lancaster Laboratories
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# Analysis Report

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

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

October 29, 2010

Project: 94930

Submittal Date: 10/21/2010
Group Number: 1217434
PO Number: 94930
Release Number: MTI
State of Sample Origin: CA

| Client Sample Description | Lancaster Labs (LLI) # |
|---|---|
| VP-1-S-10-101018 Grab Soil | 6118636 |
| VP-1-S-12.5-101018 Grab Soil | 6118637 |
| VP-1-S-15-101018 Grab Soil | 6118638 |
| VP-2-S-5.5-101019 Grab Soil | 6118639 |
| VP-3-S-5.5-101019 Grab Soil | 6118640 |

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

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

Lancaster Laboratories

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# Analysis Report

Questions? Contact your Client Services Representative
Natalie R Luciano at (717) 656-2300 Ext. 1881

Respectfully Submitted,

Tracy A. Cole
Senior Specialist

Lancaster Laboratories

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# Analysis Report



**Sample Description:** VP-1-S-10-101018 Grab Soil
Facility# 94930 MTI# 611967 CRAW
3369 Castro Valley-Castro Valley T0600100137 VP-1

**LLI Sample #** SW 6118636
**LLI Group #** 1217434
**Account #** 11997

**Project Name:** 94930

Collected: 10/18/2010 08:35 by CB

Submitted: 10/21/2010 08:50
Reported: 10/29/2010 14:40

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

CV110

| CAT No. | Analysis Name | CAS Number | As Received Result | As Received Method Detection Limit* | As Received Limit of Quantitation | Dilution Factor |
|---|---|---|---|---|---|---|
| **GC/MS Volatiles** | **SW-846 8260B** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 10950 | Benzene | 71-43-2 | 0.0008 | 0.0005 | 0.005 | 1.01 |
| 10950 | Ethylbenzene | 100-41-4 | N.D. | 0.001 | 0.005 | 1.01 |
| 10950 | Methyl Tertiary Butyl Ether | 1634-04-4 | 0.0007 | 0.0005 | 0.005 | 1.01 |
| 10950 | Toluene | 108-88-3 | N.D. | 0.001 | 0.005 | 1.01 |
| 10950 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.005 | 1.01 |
| **GC Volatiles** | **SW-846 8015B modified** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01725 | TPH-GRO N. CA soil C6-C12 | n.a. | 16 | 1 | 1 | 24.85 |

## General Sample Comments

State of California Lab Certification No. 2501

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

## Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 00374 | GC/MS - Bulk Sample Prep | SW-846 5030A | 1 | 201029522681 | 10/22/2010 11:00 | Larry E Bevins | n.a. |
| 00374 | GC/MS - Bulk Sample Prep | SW-846 5030A | 2 | 201029522681 | 10/22/2010 11:00 | Larry E Bevins | n.a. |
| 06646 | GC/MS HL Bulk Sample Prep | SW-846 5030A | 1 | 201029522681 | 10/22/2010 10:45 | Larry E Bevins | n.a. |
| 10950 | BTEX/MTBE 8260 Soil | SW-846 8260B | 1 | B103011AA | 10/28/2010 09:20 | Kathrine K Muramatsu | 1.01 |
| 01150 | GC - Bulk Soil Prep | SW-846 5030A | 1 | 201029522681 | 10/22/2010 10:45 | Larry E Bevins | n.a. |
| 01725 | TPH-GRO N. CA soil C6-C12 | SW-846 8015B modified | 1 | 10295A33A | 10/22/2010 22:38 | Marie D John | 24.85 |

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

Lancaster Laboratories

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# Analysis Report



**Sample Description:** VP-1-S-12.5-101018 Grab Soil
Facility# 94930 MTI# 611967 CRAW
3369 Castro Valley-Castro Valley T0600100137 VP-1

**LLI Sample #** SW 6118637
**LLI Group #** 1217434
**Account #** 11997

**Project Name: 94930**

Collected: 10/18/2010 08:36 by CB

Submitted: 10/21/2010 08:50
Reported: 10/29/2010 14:40

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

CV112

| 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 | 0.99 |
| 10950 | Ethylbenzene | 100-41-4 | N.D. | 0.001 | 0.005 | 0.99 |
| 10950 | Methyl Tertiary Butyl Ether | 1634-04-4 | 0.0006 | 0.0005 | 0.005 | 0.99 |
| 10950 | Toluene | 108-88-3 | N.D. | 0.001 | 0.005 | 0.99 |
| 10950 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.005 | 0.99 |
| **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 | 24.53 |

## 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 | 201029522681 | 10/22/2010 11:00 | Larry E Bevins | n.a. |
| 00374 | GC/MS - Bulk Sample Prep | SW-846 5030A | 2 | 201029522681 | 10/22/2010 11:00 | Larry E Bevins | n.a. |
| 06646 | GC/MS HL Bulk Sample Prep | SW-846 5030A | 1 | 201029522681 | 10/22/2010 10:48 | Larry E Bevins | n.a. |
| 10950 | BTEX/MTBE 8260 Soil | SW-846 8260B | 1 | B103011AA | 10/28/2010 04:50 | Kathrine K Muramatsu | 0.99 |
| 01150 | GC - Bulk Soil Prep | SW-846 5030A | 1 | 201029522681 | 10/22/2010 10:49 | Larry E Bevins | n.a. |
| 01725 | TPH-GRO N. CA soil C6-C12 | SW-846 8015B modified | 1 | 10295A33A | 10/22/2010 23:15 | Marie D John | 24.53 |

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

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# Analysis Report



**Sample Description:** VP-1-S-15-101018 Grab Soil
Facility# 94930 MTI# 611967 CRAW
3369 Castro Valley-Castro Valley T0600100137 VP-1

**LLI Sample #** SW 6118638
**LLI Group #** 1217434
**Account #** 11997

**Project Name:** 94930

Collected: 10/18/2010 08:37 by CB

Submitted: 10/21/2010 08:50
Reported: 10/29/2010 14:40

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

CV115

| 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 | 0.0007 | 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. | 1.0 | 1.0 | 25.77 |

## 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 | 201029522681 | 10/22/2010 11:00 | Larry E Bevins | n.a. |
| 00374 | GC/MS - Bulk Sample Prep | SW-846 5030A | 2 | 201029522681 | 10/22/2010 11:00 | Larry E Bevins | n.a. |
| 06646 | GC/MS HL Bulk Sample Prep | SW-846 5030A | 1 | 201029522681 | 10/22/2010 10:51 | Larry E Bevins | n.a. |
| 10950 | BTEX/MTBE 8260 Soil | SW-846 8260B | 1 | B103011AA | 10/28/2010 05:13 | Kathrine K Muramatsu | 0.97 |
| 01150 | GC - Bulk Soil Prep | SW-846 5030A | 1 | 201029522681 | 10/22/2010 10:51 | Larry E Bevins | n.a. |
| 01725 | TPH-GRO N. CA soil C6-C12 | SW-846 8015B modified | 1 | 10295A33A | 10/22/2010 23:52 | Marie D John | 25.77 |

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

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# Analysis Report



**Sample Description:** VP-2-S-5.5-101019 Grab Soil
Facility# 94930 MTI# 611967 CRAW
3369 Castro Valley-Castro Valley T0600100137 VP-2

**LLI Sample #** SW 6118639
**LLI Group #** 1217434
**Account #** 11997

**Project Name: 94930**

Collected: 10/19/2010 08:30 by CB

Submitted: 10/21/2010 08:50
Reported: 10/29/2010 14:40

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

CV2-5

| 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 | 0.96 |
| 10950 | Ethylbenzene | 100-41-4 | N.D. | 0.001 | 0.005 | 0.96 |
| 10950 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.0005 | 0.005 | 0.96 |
| 10950 | Toluene | 108-88-3 | N.D. | 0.001 | 0.005 | 0.96 |
| 10950 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.005 | 0.96 |
| **GC Volatiles** | **SW-846 8015B modified** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01725 | TPH-GRO N. CA soil C6-C12 | n.a. | N.D. | 1.0 | 1.0 | 25.88 |

## 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 | 201029522681 | 10/22/2010 11:00 | Larry E Bevins | n.a. |
| 00374 | GC/MS - Bulk Sample Prep | SW-846 5030A | 2 | 201029522681 | 10/22/2010 11:00 | Larry E Bevins | n.a. |
| 06646 | GC/MS HL Bulk Sample Prep | SW-846 5030A | 1 | 201029522681 | 10/22/2010 10:54 | Larry E Bevins | n.a. |
| 10950 | BTEX/MTBE 8260 Soil | SW-846 8260B | 1 | B103011AA | 10/28/2010 05:36 | Kathrine K Muramatsu | 0.96 |
| 01150 | GC - Bulk Soil Prep | SW-846 5030A | 1 | 201029522681 | 10/22/2010 10:54 | Larry E Bevins | n.a. |
| 01725 | TPH-GRO N. CA soil C6-C12 | SW-846 8015B modified | 1 | 10295A33A | 10/23/2010 00:29 | Marie D John | 25.88 |

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

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# Analysis Report



**Sample Description:** VP-3-S-5.5-101019 Grab Soil
Facility# 94930 MTI# 611967 CRAW
3369 Castro Valley-Castro Valley T0600100137 VP-3

**LLI Sample # SW 6118640**
**LLI Group # 1217434**
**Account # 11997**

**Project Name: 94930**

Collected: 10/19/2010 07:55 by CB

Submitted: 10/21/2010 08:50
Reported: 10/29/2010 14:40

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

CV3-5

| 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 | 1 |
| 10950 | Ethylbenzene | 100-41-4 | N.D. | 0.001 | 0.005 | 1 |
| 10950 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.0005 | 0.005 | 1 |
| 10950 | Toluene | 108-88-3 | N.D. | 0.001 | 0.005 | 1 |
| 10950 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.005 | 1 |
| **GC Volatiles** | **SW-846 8015B modified** | | **mg/kg** | **mg/kg** | **mg/kg** | |
| 01725 | TPH-GRO N. CA soil C6-C12 | n.a. | N.D. | 1.0 | 1.0 | 25.25 |

## 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 | 201029522681 | 10/22/2010 11:00 | Larry E Bevins | n.a. |
| 00374 | GC/MS - Bulk Sample Prep | SW-846 5030A | 2 | 201029522681 | 10/22/2010 11:00 | Larry E Bevins | n.a. |
| 06646 | GC/MS HL Bulk Sample Prep | SW-846 5030A | 1 | 201029522681 | 10/22/2010 10:57 | Larry E Bevins | n.a. |
| 10950 | BTEX/MTBE 8260 Soil | SW-846 8260B | 1 | B103011AA | 10/28/2010 05:58 | Kathrine K Muramatsu | 1 |
| 01150 | GC - Bulk Soil Prep | SW-846 5030A | 1 | 201029522681 | 10/22/2010 10:57 | Larry E Bevins | n.a. |
| 01725 | TPH-GRO N. CA soil C6-C12 | SW-846 8015B modified | 1 | 10295A33A | 10/23/2010 01:06 | Marie D John | 25.25 |

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

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# Analysis Report



## Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1217434
Reported: 10/29/10 at 02:40 PM

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

## Laboratory Compliance Quality Control

| Analysis Name | Blank Result | Blank MDL** | Blank LOQ | Report Units | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B103011AA | Sample number(s): 6118636-6118640 | | | | | | | | |
| Benzene | N.D. | 0.0005 | 0.005 | mg/kg | 91 | 89 | 80-120 | 2 | 30 |
| Ethylbenzene | N.D. | 0.001 | 0.005 | mg/kg | 92 | 93 | 80-120 | 0 | 30 |
| Methyl Tertiary Butyl Ether | N.D. | 0.0005 | 0.005 | mg/kg | 97 | 97 | 74-121 | 1 | 30 |
| Toluene | N.D. | 0.001 | 0.005 | mg/kg | 89 | 89 | 80-120 | 0 | 30 |
| Xylene (Total) | N.D. | 0.001 | 0.005 | mg/kg | 93 | 94 | 80-120 | 1 | 30 |
| Batch number: 10295A33A | Sample number(s): 6118636-6118640 | | | | | | | | |
| TPH-GRO N. CA soil C6-C12 | N.D. | 1.0 | 1.0 | mg/kg | 89 | 78 | 67-119 | 14 | 30 |

## Sample Matrix Quality Control

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

| Analysis Name | MS %REC | MSD %REC | MS/MSD Limits | RPD | RPD MAX | BKG Conc | DUP Conc | DUP RPD | Dup RPD Max |
|---|---|---|---|---|---|---|---|---|---|
| Batch number: B103011AA | Sample number(s): 6118636-6118640 UNSPK: 6118637 | | | | | | | | |
| Benzene | 94 | | 55-143 | | | | | | |
| Ethylbenzene | 102 | | 44-141 | | | | | | |
| Methyl Tertiary Butyl Ether | 89 | | 55-129 | | | | | | |
| Toluene | 100 | | 50-146 | | | | | | |
| Xylene (Total) | 99 | | 44-136 | | | | | | |

## Surrogate Quality Control

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

Analysis Name: VOCs by 8260B - Solid
Batch number: B103011AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---|---|---|---|---|
| 6118636 | 98 | 94 | 100 | 94 |
| 6118637 | 104 | 99 | 99 | 87 |
| 6118638 | 105 | 99 | 98 | 86 |
| 6118639 | 107 | 105 | 94 | 85 |
| 6118640 | 108 | 102 | 99 | 85 |
| Blank | 104 | 104 | 96 | 90 |
| LCS | 102 | 105 | 99 | 99 |

*- 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.

Lancaster Laboratories

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

# Analysis Report



## Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1217434
Reported: 10/29/10 at 02:40 PM

### Surrogate Quality Control

| | | | | |
|---|---|---|---|---|
| LCSD | 101 | 101 | 100 | 99 |
| MS | 98 | 94 | 104 | 95 |
| Limits: | 71-114 | 70-109 | 70-123 | 70-111 |

Analysis Name: TPH-GRO N. CA soil C6-C12
Batch number: 10295A33A

| | Trifluorotoluene-F |
|---|---|
| 6118636 | 80 |
| 6118637 | 76 |
| 6118638 | 77 |
| 6118639 | 73 |
| 6118640 | 75 |
| Blank | 81 |
| LCS | 89 |
| LCSD | 78 |
| Limits: | 61-122 |

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

# Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories
Where quality is a science.

Acct. #: 11991 For Lancaster Laboratories use only Sample #: 611860 36-40 SCR#: 248594

MT: 614967

C# 1217434

Facility #: 9-4930
Site Address: 3369 CASTRO VALLEY BLVD. CASTRO VALLEY, CA
Chevron PM: R SPEER Lead Consultant: CRA
Consultant/Office: RANCHO CORDOVA
Consultant Prj. Mgr.: J. KIERNAN
Consultant Phone #: 916 638 8500 Fax #: 916 638 8999
Sampler: C. BENEDICT
Service Order #: ☐ Non SAR:

**Analyses Requested**

**Preservation Codes**

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

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

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

| Field Point Name | Matrix | Repeat Sample | Top Depth | Year Month Day | Time Collected | New Field Pt. | Grab | Composite | Total Number of Containers | BTEX + MTBE 8260 ☒ 8021 ☐ | TPH 8015 MOD GRO | TPH 8015 MOD DRO ☐ Silica Gel Cleanup | 8260 full scan | Oxygenates ___ | Lead 7420 ☐ 7421 ☐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VP-1-10 | SOIL | | 10 | 10 10 18 | 835 | | X | | 1 | X | X | | | | |
| VP-1-12.5 | | | 12.5 | | 836 | | X | | 1 | X | X | | | | |
| VP-1-15 | | | 15 | | 837 | | X | | 1 | X | X | | | | |
| VP-2-5.5 | | | 5.5 | 10 10 19 | 830 | | X | | 1 | X | X | | | | |
| VP-3-5.5 | | | 5.5 | | 755 | | X | | 1 | X | X | | | | |
| WASTE SCB | | | | | | | | X | 1 | 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: | Date | Time | Received by: | Date | Time |
|---|---|---|---|---|---|
| C. Benedict | 10/20/10 | 1230 | | | |
| Relinquished by: | Date | Time | Received by: | Date | Time |
| | | | | | |
| Relinquished by: | Date | Time | Received by: | Date | Time |
| | | | | | |
| Relinquished by Commercial Carrier: UPS (FedEx) Other ____ | | | Received by: | Date 10/21/10 | Time 850 |
| Temperature Upon Receipt 1.8°C C° | | | Custody Seals Intact? (Yes) No | | |

# Explanation of Symbols and Abbreviations

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

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

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

**>** greater than

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

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

**ppb** parts per billion

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

*U.S. EPA CLP Data Qualifiers:*

**Organic Qualifiers**

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

**Inorganic Qualifiers**

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

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

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

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

Air Toxics LTD.
Laboratory Services Since 1989

11/9/2010
Mr. Chris Benedict
Conestoga-Rovers Associates (CRA)
10969 Trade Center Dr
Suite 107
Rancho Cordova CA 95670

Project Name: 9-4930 Castro Valley
Project #: 611967
Workorder #: 1010577C

Dear Mr. Chris Benedict

The following report includes the data for the above referenced project for sample(s) received on 10/27/2010 at Air Toxics Ltd.

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

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

Regards,

Karen Lopez

Project Manager

Air Toxics LTD.
Laboratory Services Since 1989

# WORK ORDER #: 1010577C

Work Order Summary

| | | | |
|---|---|---|---|
| **CLIENT:** | Mr. Chris Benedict<br>Conestoga-Rovers Associates (CRA)<br>10969 Trade Center Dr<br>Suite 107<br>Rancho Cordova, CA 95670 | **BILL TO:** | Mr. Chris Benedict<br>Conestoga-Rovers Associates (CRA)<br>10969 Trade Center Dr<br>Suite 107<br>Rancho Cordova, CA 95670 |
| **PHONE:** | 916-889-8925 | **P.O. #** | 611967-299 |
| **FAX:** | 916-889-8999 | **PROJECT #** | 611967 9-4930 Castro Valley |
| **DATE RECEIVED:** | 10/27/2010 | **CONTACT:** | Karen Lopez |
| **DATE COMPLETED:** | 11/01/2010 | | |

| FRACTION # | NAME | TEST | RECEIPT VAC./PRES. | FINAL PRESSURE |
|---|---|---|---|---|
| 01A | VP-1 | Modified TO-3 | 5.0 "Hg | 15 psi |
| 02A | VP-2 | Modified TO-3 | 7.5 "Hg | 15 psi |
| 03A | VP-3 | Modified TO-3 | 6.0 "Hg | 15 psi |
| 04A | DUPE | Modified TO-3 | 7.5 "Hg | 15 psi |
| 05A | Lab Blank | Modified TO-3 | NA | NA |
| 06A | LCS | Modified TO-3 | NA | NA |
| 06AA | LCSD | Modified TO-3 | NA | NA |

CERTIFIED BY: Linda D. Frumarn DATE: 11/09/10

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763,
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/11
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards



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

**LABORATORY NARRATIVE**
**Modified TO-3**
**Conestoga-Rovers Associates (CRA)**
**Workorder# 1010577C**

Four 1 Liter Summa Canister (100% Certified) samples were received on October 27, 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.

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

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Gasoline range hydrocarbons reported in the samples VP-2 and DUPE were quantified by a response factor derived from a commercial Gasoline standard. A single peak in the associated samples elutes in the TPH gasoline Range between C8 to C9 range and contributes to the TPH Gasoline results.

**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

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

**Client Sample ID: VP-1**

**Lab ID#: 1010577C-01A**

| Compound | Rpt. Limit (ppmv) | Amount (ppmv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| TPH (Gasoline Range) | 0.060 | 0.11 | 250 | 440 |

**Client Sample ID: VP-2**

**Lab ID#: 1010577C-02A**

| Compound | Rpt. Limit (ppmv) | Amount (ppmv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| TPH (Gasoline Range) | 0.067 | 5.0 | 280 | 20000 |

**Client Sample ID: VP-3**

**Lab ID#: 1010577C-03A**

| Compound | Rpt. Limit (ppmv) | Amount (ppmv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| TPH (Gasoline Range) | 0.063 | 0.35 | 260 | 1400 |

**Client Sample ID: DUPE**

**Lab ID#: 1010577C-04A**

| Compound | Rpt. Limit (ppmv) | Amount (ppmv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| TPH (Gasoline Range) | 0.067 | 5.2 | 280 | 21000 |

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**Client Sample ID: VP-1**

**Lab ID#: 1010577C-01A**

**MODIFIED EPA METHOD TO-3 GC/FID**

| | | | |
|---|---|---|---|
| **File Name:** | **d102915** | **Date of Collection: 10/27/10 9:12:00 AM** | |
| **Dil. Factor:** | **2.42** | **Date of Analysis: 10/29/10 05:19 PM** | |

| Compound | Rpt. Limit (ppmv) | Amount (ppmv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| TPH (Gasoline Range) | 0.060 | 0.11 | 250 | 440 |

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

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

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**Client Sample ID: VP-2**

**Lab ID#: 1010577C-02A**

**MODIFIED EPA METHOD TO-3 GC/FID**

| | | | |
|---|---|---|---|
| **File Name:** | **d102916** | **Date of Collection: 10/27/10 9:47:00 AM** | |
| **Dil. Factor:** | **2.69** | **Date of Analysis: 10/29/10 05:55 PM** | |

| Compound | Rpt. Limit (ppmv) | Amount (ppmv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| TPH (Gasoline Range) | 0.067 | 5.0 | 280 | 20000 |

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

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

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Laboratory Services Since 1989

**Client Sample ID: VP-3**

**Lab ID#: 1010577C-03A**

**MODIFIED EPA METHOD TO-3 GC/FID**

| | | | |
|---|---|---|---|
| **File Name:** | **d102917** | **Date of Collection: 10/27/10 10:15:00 A** | |
| **Dil. Factor:** | **2.52** | **Date of Analysis: 10/29/10 06:28 PM** | |

| **Compound** | **Rpt. Limit (ppmv)** | **Amount (ppmv)** | **Rpt. Limit (ug/m3)** | **Amount (ug/m3)** |
|---|---|---|---|---|
| TPH (Gasoline Range) | 0.063 | 0.35 | 260 | 1400 |

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

| **Surrogates** | **%Recovery** | **Method Limits** |
|---|---|---|
| Fluorobenzene (FID) | 101 | 75-150 |

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Laboratory Services Since 1989

**Client Sample ID: DUPE**

**Lab ID#: 1010577C-04A**

**MODIFIED EPA METHOD TO-3 GC/FID**

| | | | |
|---|---|---|---|
| **File Name:** | **d102918** | **Date of Collection: 10/27/10** | |
| **Dil. Factor:** | **2.69** | **Date of Analysis: 10/29/10 07:01 PM** | |

| Compound | Rpt. Limit (ppmv) | Amount (ppmv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| TPH (Gasoline Range) | 0.067 | 5.2 | 280 | 21000 |

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

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

Air Toxics LTD.
Laboratory Services Since 1989

**Client Sample ID: Lab Blank**

**Lab ID#: 1010577C-05A**

**MODIFIED EPA METHOD TO-3 GC/FID**

| | | | |
|---|---|---|---|
| **File Name:** | **d102904** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/29/10 09:24 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) | 106 | 75-150 |

Air Toxics LTD.
Laboratory Services Since 1989

**Client Sample ID: LCS**

**Lab ID#: 1010577C-06A**

**MODIFIED EPA METHOD TO-3 GC/FID**

| | | | |
|---|---|---|---|
| **File Name:** | **d102903** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/29/10 08:38 AM** | |

| **Compound** | **%Recovery** |
|---|---|
| TPH (Gasoline Range) | 91 |

**Container Type: NA - Not Applicable**

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

Air Toxics LTD.
Laboratory Services Since 1989

**Client Sample ID: LCSD**

**Lab ID#: 1010577C-06AA**

**MODIFIED EPA METHOD TO-3 GC/FID**

| | | | |
|---|---|---|---|
| **File Name:** | **d102919** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/29/10 07:55 PM** | |

| **Compound** | **%Recovery** |
|---|---|
| TPH (Gasoline Range) | 93 |

**Container Type: NA - Not Applicable**

| **Surrogates** | **%Recovery** | **Method Limits** |
|---|---|---|
| Fluorobenzene (FID) | 110 | 75-150 |

Air Toxics LTD.
Laboratory Services Since 1989

11/9/2010
Mr. Chris Benedict
Conestoga-Rovers Associates (CRA)
10969 Trade Center Dr
Suite 107
Rancho Cordova CA 95670

Project Name: 9-4930 Castro Valley
Project #: 611967
Workorder #: 1010577A

Dear Mr. Chris Benedict

The following report includes the data for the above referenced project for sample(s) received on 10/27/2010 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

Air Toxics LTD.
Laboratory Services Since 1989

# WORK ORDER #: 1010577A

Work Order Summary

| | | | |
|---|---|---|---|
| **CLIENT:** | Mr. Chris Benedict<br>Conestoga-Rovers Associates (CRA)<br>10969 Trade Center Dr<br>Suite 107<br>Rancho Cordova, CA 95670 | **BILL TO:** | Mr. Chris Benedict<br>Conestoga-Rovers Associates (CRA)<br>10969 Trade Center Dr<br>Suite 107<br>Rancho Cordova, CA 95670 |
| **PHONE:** | 916-889-8925 | **P.O. #** | 611967-299 |
| **FAX:** | 916-889-8999 | **PROJECT #** | 611967 9-4930 Castro Valley |
| **DATE RECEIVED:** | 10/27/2010 | **CONTACT:** | Karen Lopez |
| **DATE COMPLETED:** | 11/09/2010 | | |

| FRACTION # | NAME | TEST | RECEIPT VAC./PRES. | FINAL PRESSURE |
|---|---|---|---|---|
| 01A | VP-1 | Modified TO-15 | 5.0 "Hg | 15 psi |
| 02A | VP-2 | Modified TO-15 | 7.5 "Hg | 15 psi |
| 03A | VP-3 | Modified TO-15 | 6.0 "Hg | 15 psi |
| 04A | DUPE | Modified TO-15 | 7.5 "Hg | 15 psi |
| 05A | Lab Blank | Modified TO-15 | NA | NA |
| 05B | Lab Blank | Modified TO-15 | NA | NA |
| 05C | Lab Blank | Modified TO-15 | NA | NA |
| 06A | CCV | Modified TO-15 | NA | NA |
| 06B | CCV | Modified TO-15 | NA | NA |
| 06C | CCV | Modified TO-15 | NA | NA |
| 07A | LCS | Modified TO-15 | NA | NA |
| 07AA | LCSD | Modified TO-15 | NA | NA |
| 07B | LCS | Modified TO-15 | NA | NA |
| 07BB | LCSD | Modified TO-15 | NA | NA |
| 07C | LCS | Modified TO-15 | NA | NA |
| 07CC | LCSD | Modified TO-15 | NA | NA |

CERTIFIED BY: Linda D. Frumarn DATE: 11/09/10

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763,
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/11
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards



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

**LABORATORY NARRATIVE**
**EPA Method TO-15**
**Conestoga-Rovers Associates (CRA)**
**Workorder# 1010577A**

Four 1 Liter Summa Canister (100% Certified) samples were received on October 27, 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.

## Receiving Notes

There were no receiving discrepancies.

## Analytical Notes

Dilution was performed on samples VP-2 and DUPE due to the presence of high level non-target species.

## Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

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

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

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Air Toxics LTD.
Laboratory Services Since 1989

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

**Client Sample ID: VP-1**

**Lab ID#: 1010577A-01A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Benzene | 1.2 | 1.5 | 3.9 | 4.8 |

**Client Sample ID: VP-2**

**Lab ID#: 1010577A-02A**

No Detections Were Found.

**Client Sample ID: VP-3**

**Lab ID#: 1010577A-03A**

No Detections Were Found.

**Client Sample ID: DUPE**

**Lab ID#: 1010577A-04A**

No Detections Were Found.

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**Client Sample ID: VP-1**

**Lab ID#: 1010577A-01A**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3102930** | **Date of Collection: 10/27/10 9:12:00 AM** | |
| **Dil. Factor:** | **2.42** | **Date of Analysis: 10/29/10 10:53 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Methyl tert-butyl ether | 1.2 | Not Detected | 4.4 | Not Detected |
| Benzene | 1.2 | 1.5 | 3.9 | 4.8 |
| Toluene | 1.2 | Not Detected | 4.6 | Not Detected |
| Ethyl Benzene | 1.2 | Not Detected | 5.2 | Not Detected |
| m,p-Xylene | 1.2 | Not Detected | 5.2 | Not Detected |
| o-Xylene | 1.2 | Not Detected | 5.2 | Not Detected |

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

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

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**Client Sample ID: VP-2**

**Lab ID#: 1010577A-02A**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **6110207** | **Date of Collection:** | **10/27/10 9:47:00 AM** |
| **Dil. Factor:** | **26.9** | **Date of Analysis:** | **11/2/10 01:03 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Methyl tert-butyl ether | 13 | Not Detected | 48 | Not Detected |
| Benzene | 13 | Not Detected | 43 | Not Detected |
| Toluene | 13 | Not Detected | 51 | Not Detected |
| Ethyl Benzene | 13 | Not Detected | 58 | Not Detected |
| m,p-Xylene | 13 | Not Detected | 58 | Not Detected |
| o-Xylene | 13 | Not Detected | 58 | Not Detected |

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

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 94 | 70-130 |
| 1,2-Dichloroethane-d4 | 100 | 70-130 |
| 4-Bromofluorobenzene | 103 | 70-130 |

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**Client Sample ID: VP-3**

**Lab ID#: 1010577A-03A**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3110112** | **Date of Collection:** | **10/27/10 10:15:00 A** |
| **Dil. Factor:** | **2.52** | **Date of Analysis:** | **11/1/10 02:27 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Methyl tert-butyl ether | 1.3 | Not Detected | 4.5 | Not Detected |
| Benzene | 1.3 | Not Detected | 4.0 | Not Detected |
| Toluene | 1.3 | Not Detected | 4.7 | Not Detected |
| Ethyl Benzene | 1.3 | Not Detected | 5.5 | Not Detected |
| m,p-Xylene | 1.3 | Not Detected | 5.5 | Not Detected |
| o-Xylene | 1.3 | Not Detected | 5.5 | Not Detected |

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

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 99 | 70-130 |
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |

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**Client Sample ID: DUPE**

**Lab ID#: 1010577A-04A**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **6110208** | **Date of Collection: 10/27/10** | |
| **Dil. Factor:** | **26.9** | **Date of Analysis: 11/2/10 01:36 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Methyl tert-butyl ether | 13 | Not Detected | 48 | Not Detected |
| Benzene | 13 | Not Detected | 43 | Not Detected |
| Toluene | 13 | Not Detected | 51 | Not Detected |
| Ethyl Benzene | 13 | Not Detected | 58 | Not Detected |
| m,p-Xylene | 13 | Not Detected | 58 | Not Detected |
| o-Xylene | 13 | Not Detected | 58 | Not Detected |

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

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 95 | 70-130 |
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |

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**Client Sample ID: Lab Blank**

**Lab ID#: 1010577A-05A**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3102907d** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/29/10 10:51 AM** | |

| 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 | 99 | 70-130 |
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |

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**Client Sample ID: Lab Blank**

**Lab ID#: 1010577A-05B**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3110107** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/1/10 11:32 AM** | |

| 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 | 98 | 70-130 |
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| 4-Bromofluorobenzene | 103 | 70-130 |

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Laboratory Services Since 1989

**Client Sample ID: Lab Blank**

**Lab ID#: 1010577A-05C**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **6110206** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/2/10 12:19 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 | 101 | 70-130 |
| 4-Bromofluorobenzene | 104 | 70-130 |

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Laboratory Services Since 1989

**Client Sample ID: CCV**

**Lab ID#: 1010577A-06A**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3102902** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/29/10 08:46 AM** | |

| Compound | %Recovery |
|---|---|
| Methyl tert-butyl ether | 92 |
| Benzene | 101 |
| Toluene | 98 |
| Ethyl Benzene | 102 |
| m,p-Xylene | 105 |
| o-Xylene | 101 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 106 | 70-130 |
| 1,2-Dichloroethane-d4 | 102 | 70-130 |
| 4-Bromofluorobenzene | 112 | 70-130 |

Air Toxics LTD.
Laboratory Services Since 1989

**Client Sample ID: CCV**

**Lab ID#: 1010577A-06B**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3110102** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/1/10 08:58 AM** | |

| Compound | %Recovery |
|---|---|
| Methyl tert-butyl ether | 100 |
| Benzene | 108 |
| Toluene | 106 |
| Ethyl Benzene | 110 |
| m,p-Xylene | 112 |
| o-Xylene | 111 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 107 | 70-130 |
| 1,2-Dichloroethane-d4 | 102 | 70-130 |
| 4-Bromofluorobenzene | 107 | 70-130 |

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**Client Sample ID: CCV**

**Lab ID#: 1010577A-06C**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **6110202** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/2/10 10:08 AM** | |

| Compound | %Recovery |
|---|---|
| Methyl tert-butyl ether | 84 |
| Benzene | 105 |
| Toluene | 101 |
| Ethyl Benzene | 103 |
| m,p-Xylene | 104 |
| o-Xylene | 105 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 100 | 70-130 |
| 1,2-Dichloroethane-d4 | 98 | 70-130 |
| 4-Bromofluorobenzene | 109 | 70-130 |

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**Client Sample ID: LCS**

**Lab ID#: 1010577A-07A**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3102903** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/29/10 09:16 AM** | |

| Compound | %Recovery |
|---|---|
| Methyl tert-butyl ether | 94 |
| Benzene | 100 |
| Toluene | 95 |
| Ethyl Benzene | 106 |
| m,p-Xylene | 109 |
| o-Xylene | 105 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 104 | 70-130 |
| 1,2-Dichloroethane-d4 | 99 | 70-130 |
| 4-Bromofluorobenzene | 110 | 70-130 |

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**Client Sample ID: LCSD**

**Lab ID#: 1010577A-07AA**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3102904** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/29/10 09:39 AM** | |

| Compound | %Recovery |
|---|---|
| Methyl tert-butyl ether | 100 |
| Benzene | 101 |
| Toluene | 97 |
| Ethyl Benzene | 107 |
| m,p-Xylene | 111 |
| o-Xylene | 107 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 105 | 70-130 |
| 1,2-Dichloroethane-d4 | 100 | 70-130 |
| 4-Bromofluorobenzene | 109 | 70-130 |

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**Client Sample ID: LCS**

**Lab ID#: 1010577A-07B**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3110103** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/1/10 09:34 AM** | |

| Compound | %Recovery |
|---|---|
| Methyl tert-butyl ether | 96 |
| Benzene | 100 |
| Toluene | 95 |
| Ethyl Benzene | 107 |
| m,p-Xylene | 110 |
| o-Xylene | 107 |

**Container Type: NA - Not Applicable**

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

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**Client Sample ID: LCSD**

**Lab ID#: 1010577A-07BB**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3110104** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/1/10 09:57 AM** | |

| Compound | %Recovery |
|---|---|
| Methyl tert-butyl ether | 103 |
| Benzene | 99 |
| Toluene | 96 |
| Ethyl Benzene | 107 |
| m,p-Xylene | 111 |
| o-Xylene | 107 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 105 | 70-130 |
| 1,2-Dichloroethane-d4 | 104 | 70-130 |
| 4-Bromofluorobenzene | 109 | 70-130 |

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**Client Sample ID: LCS**

**Lab ID#: 1010577A-07C**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **6110203** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/2/10 10:44 AM** | |

| Compound | %Recovery |
|---|---|
| Methyl tert-butyl ether | 85 |
| Benzene | 106 |
| Toluene | 100 |
| Ethyl Benzene | 108 |
| m,p-Xylene | 109 |
| o-Xylene | 108 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 102 | 70-130 |
| 1,2-Dichloroethane-d4 | 99 | 70-130 |
| 4-Bromofluorobenzene | 109 | 70-130 |

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**Client Sample ID: LCSD**

**Lab ID#: 1010577A-07CC**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **6110204** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/2/10 11:10 AM** | |

| Compound | %Recovery |
|---|---|
| Methyl tert-butyl ether | 84 |
| Benzene | 105 |
| Toluene | 97 |
| Ethyl Benzene | 105 |
| m,p-Xylene | 105 |
| o-Xylene | 106 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 100 | 70-130 |
| 1,2-Dichloroethane-d4 | 100 | 70-130 |
| 4-Bromofluorobenzene | 107 | 70-130 |

Air Toxics LTD.
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11/9/2010
Mr. Chris Benedict
Conestoga-Rovers Associates (CRA)
10969 Trade Center Dr
Suite 107
Rancho Cordova CA 95670

Project Name: 9-4930 Castro Valley
Project #: 611967
Workorder #: 1010577B

Dear Mr. Chris Benedict

The following report includes the data for the above referenced project for sample(s) received on 10/27/2010 at Air Toxics Ltd.

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

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

Regards,

Karen Lopez

Project Manager

Air Toxics LTD.
Laboratory Services Since 1989

# WORK ORDER #: 1010577B

Work Order Summary

| | | | |
|---|---|---|---|
| **CLIENT:** | Mr. Chris Benedict<br>Conestoga-Rovers Associates (CRA)<br>10969 Trade Center Dr<br>Suite 107<br>Rancho Cordova, CA 95670 | **BILL TO:** | Mr. Chris Benedict<br>Conestoga-Rovers Associates (CRA)<br>10969 Trade Center Dr<br>Suite 107<br>Rancho Cordova, CA 95670 |
| **PHONE:** | 916-889-8925 | **P.O. #** | 611967-299 |
| **FAX:** | 916-889-8999 | **PROJECT #** | 611967 9-4930 Castro Valley |
| **DATE RECEIVED:** | 10/27/2010 | **CONTACT:** | Karen Lopez |
| **DATE COMPLETED:** | 11/09/2010 | | |

| FRACTION # | NAME | TEST | RECEIPT VAC./PRES. | FINAL PRESSURE |
|---|---|---|---|---|
| 01A | VP-1 | Modified ASTM D-1946 | 5.0 "Hg | 15 psi |
| 02A | VP-2 | Modified ASTM D-1946 | 7.5 "Hg | 15 psi |
| 03A | VP-3 | Modified ASTM D-1946 | 6.0 "Hg | 15 psi |
| 04A | DUPE | Modified ASTM D-1946 | 7.5 "Hg | 15 psi |
| 05A | Lab Blank | Modified ASTM D-1946 | NA | NA |
| 05B | Lab Blank | Modified ASTM D-1946 | NA | NA |
| 06A | LCS | Modified ASTM D-1946 | NA | NA |
| 06AA | LCSD | Modified ASTM D-1946 | NA | NA |

CERTIFIED BY: Linda D. Frumarn DATE: 11/09/10

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763,
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/11
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards



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

**LABORATORY NARRATIVE**
**Modified ASTM D-1946**
**Conestoga-Rovers Associates (CRA)**
**Workorder# 1010577B**

Four 1 Liter Summa Canister (100% Certified) samples were received on October 27, 2010. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

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

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

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

**Receiving Notes**

There were no receiving discrepancies.

## Analytical Notes

There were no analytical discrepancies.

## Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Air Toxics LTD.
Laboratory Services Since 1989

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

**Client Sample ID: VP-1**

**Lab ID#: 1010577B-01A**

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.24 | 17 |
| Carbon Dioxide | 0.024 | 2.8 |

**Client Sample ID: VP-2**

**Lab ID#: 1010577B-02A**

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.27 | 16 |
| Carbon Dioxide | 0.027 | 4.3 |

**Client Sample ID: VP-3**

**Lab ID#: 1010577B-03A**

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.25 | 19 |
| Carbon Dioxide | 0.025 | 1.9 |

**Client Sample ID: DUPE**

**Lab ID#: 1010577B-04A**

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.27 | 16 |
| Carbon Dioxide | 0.027 | 4.4 |

Air Toxics LTD.
Laboratory Services Since 1989

**Client Sample ID: VP-1**

**Lab ID#: 1010577B-01A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **9102812** | **Date of Collection: 10/27/10 9:12:00 AM** | |
| **Dil. Factor:** | **2.42** | **Date of Analysis: 10/28/10 01:35 PM** | |

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.24 | 17 |
| Methane | 0.00024 | Not Detected |
| Carbon Dioxide | 0.024 | 2.8 |
| Helium | 0.12 | Not Detected |

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

Air Toxics LTD.
Laboratory Services Since 1989

**Client Sample ID: VP-2**

**Lab ID#: 1010577B-02A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **9102813** | **Date of Collection:** | **10/27/10 9:47:00 AM** |
| **Dil. Factor:** | **2.69** | **Date of Analysis:** | **10/28/10 02:08 PM** |

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.27 | 16 |
| Methane | 0.00027 | Not Detected |
| Carbon Dioxide | 0.027 | 4.3 |
| Helium | 0.13 | Not Detected |

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

Air Toxics LTD.
Laboratory Services Since 1989

**Client Sample ID: VP-3**

**Lab ID#: 1010577B-03A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **9102814** | **Date of Collection:** | **10/27/10 10:15:00 A** |
| **Dil. Factor:** | **2.52** | **Date of Analysis:** | **10/28/10 02:37 PM** |

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.25 | 19 |
| Methane | 0.00025 | Not Detected |
| Carbon Dioxide | 0.025 | 1.9 |
| Helium | 0.13 | Not Detected |

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

Air Toxics LTD.
Laboratory Services Since 1989

**Client Sample ID: DUPE**

**Lab ID#: 1010577B-04A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **9102815** | **Date of Collection: 10/27/10** | |
| **Dil. Factor:** | **2.69** | **Date of Analysis: 10/28/10 03:25 PM** | |

| Compound | Rpt. Limit (%) | Amount (%) |
|---|---|---|
| Oxygen | 0.27 | 16 |
| Methane | 0.00027 | Not Detected |
| Carbon Dioxide | 0.027 | 4.4 |
| Helium | 0.13 | Not Detected |

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

Air Toxics LTD.
Laboratory Services Since 1989

**Client Sample ID: Lab Blank**

**Lab ID#: 1010577B-05A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **9102804** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/28/10 09:22 AM** | |

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

**Container Type: NA - Not Applicable**

Air Toxics LTD.
Laboratory Services Since 1989

**Client Sample ID: Lab Blank**

**Lab ID#: 1010577B-05B**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **9102803b** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/28/10 08:50 AM** | |

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

**Container Type: NA - Not Applicable**

Air Toxics LTD.
Laboratory Services Since 1989

**Client Sample ID: LCS**

**Lab ID#: 1010577B-06A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **9102802** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/28/10 07:58 AM** | |

| Compound | %Recovery |
|---|---|
| Oxygen | 100 |
| Methane | 97 |
| Carbon Dioxide | 98 |
| Helium | 95 |

**Container Type: NA - Not Applicable**

Air Toxics LTD.
Laboratory Services Since 1989

**Client Sample ID: LCSD**

**Lab ID#: 1010577B-06AA**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

| | | | |
|---|---|---|---|
| **File Name:** | **9102826** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/28/10 08:54 PM** | |

| Compound | %Recovery |
|---|---|
| Oxygen | 99 |
| Methane | 95 |
| Carbon Dioxide | 99 |
| Helium | 96 |

**Container Type: NA - Not Applicable**

ATTACHMENT B

UPDATED LABORATORY ANALYTICAL REPORT

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11/8/2012
Mr. Chris Benedict
Conestoga-Rovers Associates (CRA)
10969 Trade Center Dr
Suite 107
Rancho Cordova CA 95670

Project Name: 9-4930 Castro Valley
Project #: 611967
Workorder #: 1010577AR1

Dear Mr. Chris Benedict

The following report includes the data for the above referenced project for sample(s) received on 10/27/2010 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: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner

Project Manager

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# WORK ORDER #: 1010577AR1

Work Order Summary

| | | | |
|---|---|---|---|
| **CLIENT:** | Mr. Chris Benedict<br>Conestoga-Rovers Associates (CRA)<br>10969 Trade Center Dr<br>Suite 107<br>Rancho Cordova, CA 95670 | **BILL TO:** | Mr. Chris Benedict<br>Conestoga-Rovers Associates (CRA)<br>10969 Trade Center Dr<br>Suite 107<br>Rancho Cordova, CA 95670 |
| **PHONE:** | 916-889-8925 | **P.O. #** | 611967-299 |
| **FAX:** | 916-889-8999 | **PROJECT #** | 611967 9-4930 Castro Valley |
| **DATE RECEIVED:** | 10/27/2010 | **CONTACT:** | Kelly Buettner |
| **DATE COMPLETED:** | 11/09/2010 | | |
| **DATE REISSUED:** | 11/08/2012 | | |

| FRACTION # | NAME | TEST | RECEIPT VAC./PRES. | FINAL PRESSURE |
|---|---|---|---|---|
| 01A | VP-1 | Modified TO-15 | 5.0 "Hg | 15 psi |
| 02A | VP-2 | Modified TO-15 | 7.5 "Hg | 15 psi |
| 03A | VP-3 | Modified TO-15 | 6.0 "Hg | 15 psi |
| 04A | DUPE | Modified TO-15 | 7.5 "Hg | 15 psi |
| 05A | Lab Blank | Modified TO-15 | NA | NA |
| 05B | Lab Blank | Modified TO-15 | NA | NA |
| 05C | Lab Blank | Modified TO-15 | NA | NA |
| 06A | CCV | Modified TO-15 | NA | NA |
| 06B | CCV | Modified TO-15 | NA | NA |
| 06C | CCV | Modified TO-15 | NA | NA |
| 07A | LCS | Modified TO-15 | NA | NA |
| 07AA | LCSD | Modified TO-15 | NA | NA |
| 07B | LCS | Modified TO-15 | NA | NA |
| 07BB | LCSD | Modified TO-15 | NA | NA |
| 07C | LCS | Modified TO-15 | NA | NA |
| 07CC | LCSD | Modified TO-15 | NA | NA |

CERTIFIED BY: Heidi Mayo DATE: 11/08/12

Technical Director

Certfication numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,
TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.
Eurofins Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards



180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**
**EPA Method TO-15**
**Conestoga-Rovers Associates (CRA)**
**Workorder# 1010577AR1**

Four 1 Liter Summa Canister (100% Certified) samples were received on October 27, 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.

## Receiving Notes

There were no receiving discrepancies.

## Analytical Notes

Dilution was performed on samples VP-2 and DUPE due to the presence of high level non-target species.

THE WORKORDER WAS REISSUED ON NOVEMBER 08, 2012 TO REPORT NAPHTHALENE PER CLIENT'S REQUEST.

## 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 and/or LCS.
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

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

**Client Sample ID: VP-1**

**Lab ID#: 1010577AR1-01A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Benzene | 1.2 | 1.5 | 3.9 | 4.8 |

**Client Sample ID: VP-2**

**Lab ID#: 1010577AR1-02A**

No Detections Were Found.

**Client Sample ID: VP-3**

**Lab ID#: 1010577AR1-03A**

No Detections Were Found.

**Client Sample ID: DUPE**

**Lab ID#: 1010577AR1-04A**

No Detections Were Found.

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**Client Sample ID: VP-1**

**Lab ID#: 1010577AR1-01A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3102930r1** | **Date of Collection: 10/27/10 9:12:00 AM** | |
| **Dil. Factor:** | **2.42** | **Date of Analysis: 10/29/10 10:53 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Benzene | 1.2 | 1.5 | 3.9 | 4.8 |
| Ethyl Benzene | 1.2 | Not Detected | 5.2 | Not Detected |
| Toluene | 1.2 | Not Detected | 4.6 | Not Detected |
| m,p-Xylene | 1.2 | Not Detected | 5.2 | Not Detected |
| o-Xylene | 1.2 | Not Detected | 5.2 | Not Detected |
| Methyl tert-butyl ether | 1.2 | Not Detected | 4.4 | Not Detected |
| Naphthalene | 4.8 | Not Detected | 25 | Not Detected |

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

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

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**Client Sample ID: VP-2**

**Lab ID#: 1010577AR1-02A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **6110207r1** | **Date of Collection: 10/27/10 9:47:00 AM** | |
| **Dil. Factor:** | **26.9** | **Date of Analysis: 11/2/10 01:03 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Benzene | 13 | Not Detected | 43 | Not Detected |
| Ethyl Benzene | 13 | Not Detected | 58 | Not Detected |
| Toluene | 13 | Not Detected | 51 | Not Detected |
| m,p-Xylene | 13 | Not Detected | 58 | Not Detected |
| o-Xylene | 13 | Not Detected | 58 | Not Detected |
| Methyl tert-butyl ether | 13 | Not Detected | 48 | Not Detected |
| Naphthalene | 54 | Not Detected | 280 | Not Detected |

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

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 70-130 |
| Toluene-d8 | 94 | 70-130 |
| 4-Bromofluorobenzene | 103 | 70-130 |

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**Client Sample ID: VP-3**

**Lab ID#: 1010577AR1-03A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3110112r1** | **Date of Collection:** | **10/27/10 10:15:00 A** |
| **Dil. Factor:** | **2.52** | **Date of Analysis:** | **11/1/10 02:27 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Benzene | 1.3 | Not Detected | 4.0 | Not Detected |
| Ethyl Benzene | 1.3 | Not Detected | 5.5 | Not Detected |
| Toluene | 1.3 | Not Detected | 4.7 | Not Detected |
| m,p-Xylene | 1.3 | Not Detected | 5.5 | Not Detected |
| o-Xylene | 1.3 | Not Detected | 5.5 | Not Detected |
| Methyl tert-butyl ether | 1.3 | Not Detected | 4.5 | Not Detected |
| Naphthalene | 5.0 | Not Detected | 26 | Not Detected |

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

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| Toluene-d8 | 99 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |

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**Client Sample ID: DUPE**

**Lab ID#: 1010577AR1-04A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **6110208r1** | **Date of Collection: 10/27/10** | |
| **Dil. Factor:** | **26.9** | **Date of Analysis: 11/2/10 01:36 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Benzene | 13 | Not Detected | 43 | Not Detected |
| Ethyl Benzene | 13 | Not Detected | 58 | Not Detected |
| Toluene | 13 | Not Detected | 51 | Not Detected |
| m,p-Xylene | 13 | Not Detected | 58 | Not Detected |
| o-Xylene | 13 | Not Detected | 58 | Not Detected |
| Methyl tert-butyl ether | 13 | Not Detected | 48 | Not Detected |
| Naphthalene | 54 | Not Detected | 280 | Not Detected |

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

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| Toluene-d8 | 95 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |

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**Client Sample ID: Lab Blank**

**Lab ID#: 1010577AR1-05A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3102907** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/29/10 10:51 AM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Benzene | 0.50 | Not Detected | 1.6 | Not Detected |
| Ethyl Benzene | 0.50 | Not Detected | 2.2 | Not Detected |
| Toluene | 0.50 | Not Detected | 1.9 | Not Detected |
| m,p-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| o-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| Methyl tert-butyl ether | 0.50 | Not Detected | 1.8 | Not Detected |
| Naphthalene | 2.0 | Not Detected | 10 | Not Detected |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| Toluene-d8 | 99 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |

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**Client Sample ID: Lab Blank**

**Lab ID#: 1010577AR1-05B**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3110107** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/1/10 11:32 AM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Benzene | 0.50 | Not Detected | 1.6 | Not Detected |
| Ethyl Benzene | 0.50 | Not Detected | 2.2 | Not Detected |
| Toluene | 0.50 | Not Detected | 1.9 | Not Detected |
| m,p-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| o-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| Methyl tert-butyl ether | 0.50 | Not Detected | 1.8 | Not Detected |
| Naphthalene | 2.0 | Not Detected | 10 | Not Detected |

**Container Type: NA - Not Applicable**

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

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**Client Sample ID: Lab Blank**

**Lab ID#: 1010577AR1-05C**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **6110206** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/2/10 12:19 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Benzene | 0.50 | Not Detected | 1.6 | Not Detected |
| Ethyl Benzene | 0.50 | Not Detected | 2.2 | Not Detected |
| Toluene | 0.50 | Not Detected | 1.9 | Not Detected |
| m,p-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| o-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| Methyl tert-butyl ether | 0.50 | Not Detected | 1.8 | Not Detected |
| Naphthalene | 2.0 | Not Detected | 10 | Not Detected |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| Toluene-d8 | 97 | 70-130 |
| 4-Bromofluorobenzene | 104 | 70-130 |

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**Client Sample ID: CCV**

**Lab ID#: 1010577AR1-06A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3102902** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/29/10 08:46 AM** | |

| Compound | %Recovery |
|---|---|
| Benzene | 101 |
| Ethyl Benzene | 102 |
| Toluene | 98 |
| m,p-Xylene | 105 |
| o-Xylene | 101 |
| Methyl tert-butyl ether | 92 |
| Naphthalene | 108 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 102 | 70-130 |
| Toluene-d8 | 106 | 70-130 |
| 4-Bromofluorobenzene | 112 | 70-130 |

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**Client Sample ID: CCV**

**Lab ID#: 1010577AR1-06B**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3110102** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/1/10 08:58 AM** | |

| Compound | %Recovery |
|---|---|
| Benzene | 108 |
| Ethyl Benzene | 110 |
| Toluene | 106 |
| m,p-Xylene | 112 |
| o-Xylene | 111 |
| Methyl tert-butyl ether | 100 |
| Naphthalene | 126 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 102 | 70-130 |
| Toluene-d8 | 107 | 70-130 |
| 4-Bromofluorobenzene | 107 | 70-130 |

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**Client Sample ID: CCV**

**Lab ID#: 1010577AR1-06C**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **6110202** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/2/10 10:08 AM** | |

| Compound | %Recovery |
|---|---|
| Benzene | 105 |
| Ethyl Benzene | 103 |
| Toluene | 101 |
| m,p-Xylene | 104 |
| o-Xylene | 105 |
| Methyl tert-butyl ether | 84 |
| Naphthalene | 89 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 109 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCS**

**Lab ID#: 1010577AR1-07A**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3102903** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/29/10 09:16 AM** | |

| **Compound** | **%Recovery** |
|---|---|
| Benzene | 100 |
| Ethyl Benzene | 106 |
| Toluene | 95 |
| m,p-Xylene | 109 |
| o-Xylene | 105 |
| Methyl tert-butyl ether | 94 |
| Naphthalene | 96 |

**Container Type: NA - Not Applicable**

| **Surrogates** | **%Recovery** | **Method Limits** |
|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 70-130 |
| Toluene-d8 | 104 | 70-130 |
| 4-Bromofluorobenzene | 110 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCSD**

**Lab ID#: 1010577AR1-07AA**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3102904** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 10/29/10 09:39 AM** | |

| Compound | %Recovery |
|---|---|
| Benzene | 101 |
| Ethyl Benzene | 107 |
| Toluene | 97 |
| m,p-Xylene | 111 |
| o-Xylene | 107 |
| Methyl tert-butyl ether | 100 |
| Naphthalene | 98 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 70-130 |
| Toluene-d8 | 105 | 70-130 |
| 4-Bromofluorobenzene | 109 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCS**

**Lab ID#: 1010577AR1-07B**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3110103** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/1/10 09:34 AM** | |

| **Compound** | **%Recovery** |
|---|---|
| Benzene | 100 |
| Ethyl Benzene | 107 |
| Toluene | 95 |
| m,p-Xylene | 110 |
| o-Xylene | 107 |
| Methyl tert-butyl ether | 96 |
| Naphthalene | 108 |

**Container Type: NA - Not Applicable**

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

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**Client Sample ID: LCSD**

**Lab ID#: 1010577AR1-07BB**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **3110104** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/1/10 09:57 AM** | |

| Compound | %Recovery |
|---|---|
| Benzene | 99 |
| Ethyl Benzene | 107 |
| Toluene | 96 |
| m,p-Xylene | 111 |
| o-Xylene | 107 |
| Methyl tert-butyl ether | 103 |
| Naphthalene | 113 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 104 | 70-130 |
| Toluene-d8 | 105 | 70-130 |
| 4-Bromofluorobenzene | 109 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCS**

**Lab ID#: 1010577AR1-07C**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **6110203** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/2/10 10:44 AM** | |

| **Compound** | **%Recovery** |
|---|---|
| Benzene | 106 |
| Ethyl Benzene | 108 |
| Toluene | 100 |
| m,p-Xylene | 109 |
| o-Xylene | 108 |
| Methyl tert-butyl ether | 85 |
| Naphthalene | 88 |

**Container Type: NA - Not Applicable**

| **Surrogates** | **%Recovery** | **Method Limits** |
|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 70-130 |
| Toluene-d8 | 102 | 70-130 |
| 4-Bromofluorobenzene | 109 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: LCSD**

**Lab ID#: 1010577AR1-07CC**

**EPA METHOD TO-15 GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **6110204** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 11/2/10 11:10 AM** | |

| **Compound** | **%Recovery** |
|---|---|
| Benzene | 105 |
| Ethyl Benzene | 105 |
| Toluene | 97 |
| m,p-Xylene | 105 |
| o-Xylene | 106 |
| Methyl tert-butyl ether | 84 |
| Naphthalene | 84 |

**Container Type: NA - Not Applicable**

| **Surrogates** | **%Recovery** | **Method Limits** |
|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 107 | 70-130 |

ATTACHMENT C

LOW-THREAT CHECKLIST

Site Name: Chevron #9-4930 / Valley Car Wash
Site Address: 3369 Castro Valley Blvd, Castro Valley

**Site meets the criteria of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.[1]**

| | |
|---|---|
| **General Criteria**<br>General criteria that must be satisfied by all candidate sites: | |
| **Is the unauthorized release located within the service area of a public water system?** | ☒Yes ☐ No |
| **Does the unauthorized release consist only of petroleum?** | ☒ Yes ☐ No |
| **Has the unauthorized ("primary") release from the UST system been stopped?** | ☒ Yes ☐ No |
| **Has free product been removed to the maximum extent practicable?** | ☐ Yes ☐ No ☒NA |
| **Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?** | ☒ Yes ☐ No |
| **Has secondary source been removed to the extent practicable?** | ☒ Yes ☐ No |
| **Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?** | ☒ Yes ☐ No |
| **Does nuisance as defined by Water Code section 13050 exist at the site?** | ☐ Yes ☒ No |
| **Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?** | ☐ Yes ☒ No |
| **Media-Specific Criteria**<br>Candidate sites must satisfy all three of these media-specific criteria:<br><br>**1. Groundwater:**<br>To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites: | |
| **Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?** | ☒ Yes ☐ No ☐ NA |
| **Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites?**<br><br>If YES, check applicable class: ☐ **1** ☐ **2** ☐ **3** ☒ **4** ☐ **5** | ☒ Yes ☐ No ☐ NA |

[1] Refer to the Low-Threat Underground Storage Tank Case Closure Policy for closure criteria for low-threat petroleum UST sites.

| | |
|---|---|
| **For sites with releases that have not affected groundwater, do mobile constituents (leachate, vapors, or light non-aqueous phase liquids) contain sufficient mobile constituents to cause groundwater to exceed the groundwater criteria?** | ☐ Yes ☐ No ☒ NA |
| **2. Petroleum Vapor Intrusion to Indoor Air:**<br>The site is considered low-threat for vapor intrusion to indoor air if site-specific conditions satisfy all of the characteristics of one of the three classes of sites (a through c) or if the exception for active commercial fueling facilities applies.<br><br>**Is the site an active commercial petroleum fueling facility?**<br>Exception: Satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk.<br><br>**a. Do site-specific conditions at the release site satisfy all of the applicable characteristics and criteria of scenarios 1 through 3 or all of the applicable characteristics and criteria of scenario 4?**<br>If YES, check applicable scenarios: ☐ **1** ☐ **2** ☐ **3** ☒ **4**<br><br>**b. Has a site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?**<br><br>**c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?** | ☐ Yes ☒ No<br><br>☒Yes ☐ No ☐ NA<br><br>☐ Yes ☐ No ☒ NA<br><br>☐ Yes ☐ No ☒ NA |
| **3. Direct Contact and Outdoor Air Exposure:**<br>The site is considered low-threat for direct contact and outdoor air exposure if site-specific conditions satisfy one of the three classes of sites (a through c).<br><br>**a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs)?**<br><br>**b. Are maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health?**<br><br>**c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?** | ☒ Yes ☐ No ☐ NA<br><br>☐ Yes ☐ No ☒ NA<br><br>☐ Yes ☐ No ☒ NA |