Brian Waite
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November 16, 2012

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

Re: Chevron Facility # 98341

Address: 3530 MacArthur Boulevard, Oakland, CA

I have reviewed the attached report titled *Addendum to Case Closure Request* 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 11:51:50 -08'00'

Brian Waite
Project Manager

Enclosure: Report

CONESTOGA-ROVERS & ASSOCIATES

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November 16, 2012 Reference No. 611650D

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 Case Closure Request
Former Chevron Service Station 98341
3530 MacArthur Boulevard
Oakland, California
Case No. RO0000405

Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA) is submitting this *Addendum to Case Closure Request* for the site referenced above (Figure 1) on behalf of Chevron Environmental Management Company (Chevron). CRA previously submitted the September 15, 2010 *Additional Site Investigation Report and Case Closure Request* (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).

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

Satisfied: Petroleum storage and handling facilities that were the source of the release (first-generation fuel dispensers, product piping, and USTs) have been removed from the site and replaced.

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

Satisfied: No light non-aqueous phase liquid (LNAPL) has been observed at the site.

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

Satisfied: The *Site Conceptual Model and Work Plan for Additional Investigation* (SCM/Work Plan) was submitted on April 29, 2009.

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

Satisfied: Remedial excavation in 1994 removed approximately 285 cubic yards of impacted soil from the piping and dispenser island area; the extent was limited at the time due to the presence of canopy footings (Figure 2). It is not known if any soil was removed during first-generation gasoline UST replacement activities in 1984; however, based on decreasing

concentrations in groundwater, there does not appear to be any significant secondary source material in this area.

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 1 above. The petroleum hydrocarbon plume that exceeds WQOs (Environmental Screening Levels [ESLs]) is less than 100 feet in length, there is no LNAPL, and the nearest identified water supply well and surface water body are greater than 250 feet from the defined plume boundary.

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 feet below grade (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. However, for active commercial petroleum fueling facilities, satisfaction of these criteria is not required, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk.

Satisfied: As the site is an active commercial fueling station (Valero), satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required. However, to further support the case of no significant vapor intrusion risk, benzene generally has not been detected in groundwater and it was not detected in the wells during the last monitoring event in August 2010.

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.

	Residential		*Commercial/Industrial*		*Utility Worker*
Constituent	*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 and Table 2 of the SCM/Work Plan). As no total oil and grease (TOG) was detected in the two soil samples collected at 6 fbg beneath the former used-oil UST, soil at the site does not appear to have been impacted by waste oil and therefore, the PAH screening levels do not apply. Even so, no naphthalene or PAHs were detected in these soil samples. Given these results and as this area was excavated to approximately 6 fbg, no naphthalene is expected to be present in soil from 0 to 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 B. 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.

CONESTOGA-ROVERS & ASSOCIATES

November 16, 2012 Reference No. 611650D

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

William T. Martinez James P. Kiernan, P.E.

WM/de/11
Encl.

Figure 1 Vicinity Map
Figure 2 Site Plan

Attachment A September 15, 2010 *Additional Site Investigation Report and Case Closure Request*
Attachment B Low-Threat Checklist

cc: Mr. Brian Waite, Chevron *(electronic copy)*
Mr. Hai Pham, 3530 MacArthur Blvd Gas Station, Inc.

FIGURES

SOURCE: TOPO! MAPS.

figure 1

VICINITY MAP
FORMER CHEVRON SERVICE STATION 98341
3530 MACARTHUR BOULEVARD
Oakland, California

DRIVEWAY

PLANTER

B-11

FORMER WASTE OIL TANK

WO-N-6'

WO-S-6'

C.B.

STATION BUILDING (VALERO)

USTS

B-3

MW-3

C.B.

PLANTER

MAGEE AVENUE

FORMER SCOOTER WILSON AUTO REPAIR (VACANT)

FORMER 8,000-GAL. GASOLINE USTS

FORMER WASTE OIL TANK EXCAVATION

B5

B4/MW-3

B3/MW-2

USED OIL TANK

B-6

B-8

P-4-4.5'

P-5-2'

P-6-3'

P-3-4.5'

B-5

APPROXIMATE EXTENT OF EXCAVATION 3.5 TO 5.5 FBG

PX-5

PX-10

PX-11

PX-2

DISPENSER ISLANDS

PX-4

PX-3

PX-7

PX-1

PX-9

B-16

B-1

PX-8

P-2-3.5'

PX-6

P-1-2.5'

B-4

MW-2

TR-1

TR-2

TR-3

B-9

B-7

MW-1

FORMER 6,000-GAL. DIESEL UST

FORMER PRODUCT LINES

FORMER DISPENSER ISLAND

B1

B2/MW-1

PARKING LANE

C.B.

STM

MacARTHUR BOULEVARD

M.H.

PARKING LANE

B-12

B-13

B-14

B-15

PARKING LANE

DRIVEWAY

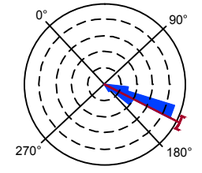
COMMERCIAL BUILDING

PARKING LOT

0 10 30ft

LEGEND

- B-7 ■ BORING LOCATION
- MW-1 ● MONITORING WELL LOCATION
- TR-1 ⊡ SOIL SAMPLE LOCATION
- B2/MW-1 ◔ GROUNDWATER MONITORING WELL (SCOOTER WILSON)
- B1 ⊠ SOIL BORING (SCOOTER WILSON)
- E — ELECTRIC LINE
- STM — STORM DRAIN LINE
- SAN — SANITARY SEWER LINE
- W — WATER LINE
- G — GAS LINE
- T — CABLE LINE



HISTORICAL GROUNDWATER FLOW DIRECTION

figure 2

SITE PLAN
FORMER CHEVRON SERVICE STATION 98341
3530 MACARTHUR BOULEVARD
Oakland, California

CRA

ATTACHMENT A

SEPTEMBER 15, 2010 ADDITIONAL SITE INVESTIGATION REPORT AND CASE CLOSURE REQUEST

Stacie H. Frerichs
Team Lead
Marketing Business Unit

Chevron Environmental Management Company
6001 Bollinger Canyon Road
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Tel (925) 842-9655
Fax (925) 842-8370

September 15, 2010

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

Re: Chevron Facility #_9-8341_____

Address: 3530 MacArthur Boulevard, Oakland, California_____

I have reviewed the attached report titled *Additional Site Investigation Report and Case Closure Request* and dated September 15, 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,

SHFrerichs

Stacie H. Frerichs
Project Manager

Enclosure: Report

CONESTOGA-ROVERS
& ASSOCIATES

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September 15, 2010 Reference No. 611650

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

Re: Additional Site Investigation Report and Case Closure Request
Former Chevron Station 9-8341
3530 MacArthur Boulevard
Oakland, California
LOP Case RO0000405

Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA) has prepared this *Additional Site Investigation Report and Case Closure Request* 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 28, 2009 (Attachment A), Alameda County Environmental Health (ACEH) requested preparation of a site conceptual model (SCM) to establish site conditions and evaluate if any data gaps exist. CRA subsequently prepared and submitted the April 29, 2009 *Site Conceptual Model and Work Plan for Additional Subsurface Investigation* (SCM/Work Plan). In the SCM/Work Plan, the vertical extent of impacted soil in the area of previous excavation soil sample PX-8 and the lateral extent of impacted groundwater were identified as data gaps that warranted further investigation. To assess these data gaps, exploratory borings B-12 through B-15 were drilled offsite and boring B-16 was drilled onsite. The work was performed in general accordance with the SCM/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 service station (currently a Valero service station) located on the northern corner of the intersection of MacArthur Boulevard and Magee Avenue in Oakland, California (Figure 1). The Chevron station reportedly was constructed in 1963. Original station facilities included a station building with two hydraulic hoists in the service area, two 7,500-gallon and one 3,000-gallon, steel gasoline underground storage tanks (USTs) located on the northwest side of the site, a 1,000-gallon steel used-oil UST adjacent to the northeast side of the building, and two dispenser islands on the southwest side of the site. In 1984, the steel gasoline USTs were replaced with three 10,000-gallon, single-walled fiberglass tanks, and the

steel used-oil UST was replaced with a 1,000-gallon, single-walled fiberglass tank. The station was again renovated in 1994. As part of the renovation activities, the used-oil UST was removed and replaced with one adjacent to the southwest side of the building; the gasoline USTs were also upgraded and the product lines replaced. The site was occupied by a Chevron station until 2004 when it was de-branded. The site was then occupied by a United Gasoline service station, and later a Valero service station. The property owner is 3530 MacArthur Blvd Gas Station, Inc.

Surrounding land use is mixed commercial and residential. The site is bounded by MacArthur Boulevard to the southwest, a small commercial building with accompanying residence behind the building to the northwest, an alleyway to the northeast, and Magee Avenue to the southeast. An open fuel (gasoline and diesel) release case (Scooter Wilson at 3600 MacArthur Boulevard; a former service station and auto repair facility) is present across Magee Avenue to the southeast; this facility is currently vacant and investigation to evaluate the extent of contamination is ongoing. However, it appears that no work has been performed since 2006 due to a recalcitrant property owner. Based on historical aerial photographs, a service station has been located on this property since at least 1946. Current and former site facilities and the adjacent facility are shown on Figure 2.

Environmental investigation at the subject site has been ongoing since 1993. Prior to the current investigation, groundwater monitoring wells MW-1 through MW-3 have been installed, and borings B-1, B-3 through B-9, and B-11 have been drilled. Remedial activities have included over-excavation of impacted soil (approximately 285 cubic yards), and the removal of approximately 25,000 gallons of impacted groundwater during the 1994 UST system upgrade. A summary of the previous environmental work is included as Attachment B. The approximate well, boring, and soil sample locations are presented on Figure 2.

As stated in Technical Comment No. 3 of the January 28, 2009 letter, no soil or groundwater samples had been collected offsite; thus the lateral extent of petroleum hydrocarbons had not been adequately evaluated and therefore this was identified as a data gap in the SCM/Work Plan. As stated in Technical Comment No. 4, previous excavation sample PX-8, collected at 5 feet below grade (fbg) adjacent to the southwest dispenser island during the 1994 product line replacement, contained total petroleum hydrocarbons as gasoline (TPHg) at 1,300 milligrams per kilogram (mg/kg); low concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) (benzene at 6 mg/kg) were also detected. Further over-excavation in this area was limited due to the adjacent canopy footings. Since no deeper samples were collected in this area, the vertical extent of petroleum hydrocarbons in soil had not been adequately evaluated and this was also identified as a data gap. The current investigation was proposed in the SCM/Work Plan to address these data gaps. The remaining Technical Comments in the letter (Nos. 1, 2, and 5) were also addressed in the SCM/Work Plan and thus are not discussed herein.

INVESTIGATION ACTIVITIES

Borings B-12 through B-15 were drilled in MacArthur Boulevard to the southwest/south of the site to further evaluate the extent of petroleum hydrocarbons in soil and groundwater. Boring B-16 was drilled onsite near previous sample PX-8 (as close as possible due to product piping) to evaluate the vertical extent of petroleum hydrocarbons in soil. The approximate boring locations are shown on Figure 2. The details of the investigation are presented in the following sections. Fieldwork was performed by CRA Staff Scientist Chris Benedict under the supervision of James Kiernan, P.E.

Drilling Activities

The borings were drilled under Permit No. 2010-0287 from Alameda County Public Works Agency. 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.

Drilling was performed on May 11 and 12, 2010. Borings B-12 through B-16 were advanced to total depths of approximately 9 fbg, 6 fbg, 8 fbg, 7.5 fbg, and 8 fbg, respectively. The borings were drilled using a hand auger due to nearby underground utility lines or product piping. Soil samples were obtained continuously from the borings for logging and observation purposes. The soil encountered in the borings was logged in accordance with American Society for Testing and Materials (ASTM) D-2488 protocols, and generally consisted of a small amount of fill material (generally less than 1 foot) beneath the concrete, followed by clay with varying amounts of sand and gravel; some clayey sand was also observed. Groundwater was encountered in the borings at depths ranging from approximately 5.5 to 8.5 fbg. 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 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 field or PID evidence of petroleum hydrocarbon impact was observed in borings B-12 through B-14 or B-16; therefore, soil samples collected just above groundwater (approximate depths of 8, 5, 7, and 7 fbg, respectively) were retained for laboratory analysis. In boring B-15, the sample collected just above groundwater (approximate depth of 7 fbg) was retained for laboratory analysis as a PID measurement of 374 parts per million by volume (ppmv) was observed.

The samples were collected using the hand auger and were placed in stainless-steel liners, capped using Teflon tape and plastic end caps, labeled, placed in an ice-chilled cooler, and

transported under chain-of-custody (COC) to Lancaster Laboratories, Inc. (Lancaster) in Lancaster, Pennsylvania, for analysis. The soil samples were analyzed for the following constituents:

- TPHg by EPA Method 8015B
- BTEX and the five fuel oxygenates (methyl tertiary butyl ether [MTBE], tertiary amyl methyl ether [TAME], tertiary butyl alcohol [TBA], ethyl tertiary butyl ether [ETBE], and di-isopropyl ether [DIPE]) by EPA Method 8260B

Groundwater Sampling and Laboratory Analysis

Groundwater samples were also collected from borings B-12 through B-16 by placing temporary slotted PVC casing in the boreholes to allow for the infiltration of groundwater. The samples were then collected by lowering a disposable Teflon bailer down the PVC casing to the screen zone. The groundwater samples were collected in the appropriate laboratory-supplied containers, placed in an ice-chilled cooler, and transported under COC to Lancaster for analysis.

The groundwater samples were analyzed for the same constituents as the soil samples; the samples collected from borings B-12, B-13, and B-15 were additionally analyzed for TPH as diesel (TPHd) by EPA Method 8015B to evaluate potential contributions from the Scooter Wilson facility.

Investigation-Derived Waste

Soil cuttings and decontamination rinsate generated during drilling activities were temporarily stored onsite in a 55-gallon steel drum, and sampled for disposal purposes. Once profiled, the drum was removed from the site by Integrated Wastestream Management (IWM) of San Jose, California, and transported to an appropriately-permitted facility for disposal.

SOIL SAMPLE ANALYTICAL RESULTS

No TPHg, BTEX, or fuel oxygenates were detected in the soil samples collected from borings B-12, B-13, B-14, or B-16. TPHg (56 mg/kg) and BTEX (0.004 mg/kg, 0.003 mg/kg, 0.27 mg/kg, and 0.019 mg/kg, respectively) were detected in the soil sample collected from boring B-15; fuel oxygenates were not detected. The soil sample analytical results are presented in Table 1. A copy of the laboratory report and chain-of-custody documentation is included as Attachment E.

GROUNDWATER SAMPLE ANALYTICAL RESULTS

TPHg (17,000 micrograms per liter [µg/L]) and BTEX (34 µg/L, 17 µg/L, 490 µg/L, and 65 µg/L, respectively) were only detected in the groundwater sample collected from boring B-15. Fuel oxygenates were not detected in any of the groundwater samples with the exception of MTBE at 0.6 µg/L in the sample collected from boring B-14. TPHd was detected in the groundwater samples collected from borings B-12 (230 µg/L), B-13 (220 µg/L), and B-15 (40,000 µg/L). The groundwater sample analytical results are presented in Table 2. A copy of the laboratory report and chain-of-custody documentation is included as Attachment E.

CONCLUSIONS AND RECOMMENDATIONS

During this investigation, borings B-12 through B-15 were drilled to the southwest/south of the site to further evaluate the lateral extent of petroleum hydrocarbons in soil and groundwater and boring B-16 was drilled onsite near previous excavation sample PX-8 to evaluate the vertical extent of petroleum hydrocarbons in soil in this area.

No TPHg, BTEX, or fuel oxygenates were detected in the soil sample collected at 7 fbg from boring B-16. Based on the analytical results, the vertical extent of impacted soil in the area of previous sample PX-8 (collected at 5 fbg) has been defined; thus addressing the previous data gap.

Petroleum hydrocarbons generally were not detected in the soil samples collected from the offsite borings with the exception of low concentrations of TPHg (56 mg/kg) and BTEX (up to 0.27 mg/kg) in the sample collected at 7 fbg from B-15. The detections are likely due to contact with impacted groundwater.

Petroleum hydrocarbons generally were not detected in the groundwater samples collected from borings B-12 through B-14 with the exception of low concentrations of TPHd (up to 230 µg/L) in those collected from B-12 and B-13. As diesel fuel does not appear to have been dispensed at the site, the detected TPHd appears to be from an offsite source or based on these low concentrations, may also be due to the presence of natural organic matter. A low concentration of MTBE (0.6 µg/L) was detected in the sample collected from boring B-14. Based on the analytical results, groundwater in the area of these borings is not significantly impacted. Petroleum hydrocarbons were not detected in the groundwater sample collected from onsite boring B-16, confirming the historical monitoring results in nearby well MW-1 which is not impacted.

Elevated concentrations of TPHd (40,000 µg/L) and TPHg (17,000 µg/L) were detected in the groundwater sample collected from boring B-15; only low to relatively low concentrations of BTEX (benzene at 34 µg/L) were detected and MTBE was not detected. As previously mentioned, diesel does not appear to have been dispensed at the site and the groundwater sample collected from the used-oil UST excavation at the subject site did not contain TPHd. Conversely, the Scooter Wilson facility formerly had a 6,000-gallon diesel UST (Figure 2), and based on the long use of the property as a service station (since at least 1946), likely had previous USTs. A diesel release is documented at this facility as significantly elevated concentrations of TPHd were detected in the groundwater samples collected from the fuel UST (75,000 µg/L) and used-oil UST (69,000 µg/L) excavations in 1994. The groundwater flow direction at this facility has ranged from west-northwest to south-southeast.

Based on the above information and the analytical results, the petroleum hydrocarbons in groundwater in boring B-15 appear to be from the Scooter Wilson facility. Monitoring results indicate that only MTBE remains in groundwater at the subject site (up to 500 µg/L during the most recent event in August 2010) and elevated concentrations have historically been detected in well MW-2; TPHg and BTEX generally have not been detected throughout the course of monitoring. As MTBE exhibits greater mobility in the subsurface than TPHg or TPHd, if the impacts in B-15 were at least partially from the subject site, we would expect MTBE to be present in this area; but it was not detected in soil or groundwater. MTBE has not been detected in soil or groundwater at the Scooter Wilson facility. Therefore, there appears to be some variation in the groundwater flow direction downgradient of the subject site and it may flow more to the southwest towards San Francisco Bay in this area. As the Scooter Wilson property has been occupied by a service station since at least 1946 and likely earlier, it appears groundwater with elevated concentrations of TPH has migrated across MacArthur Boulevard over the years.

As only a low concentration of MTBE was detected in B-14, the extent of petroleum hydrocarbons in groundwater from the Chevron site appears to have been adequately evaluated. With regards to underground utility lines in MacArthur Boulevard potentially acting as preferential pathways, given the high concentrations in B-15 on the far side of the street, it does not appear this is a concern. Therefore, all the data gaps identified in the SCM/Work Plan have been addressed and no further investigation pertaining to the Chevron site appears warranted.

Based on the results of the current investigation and the information previously presented in the SCM/Work Plan, this site meets low-risk criteria and does not pose a significant threat to human health or the environment. Therefore, on behalf of Chevron, CRA respectfully requests that the site be granted low-risk 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.

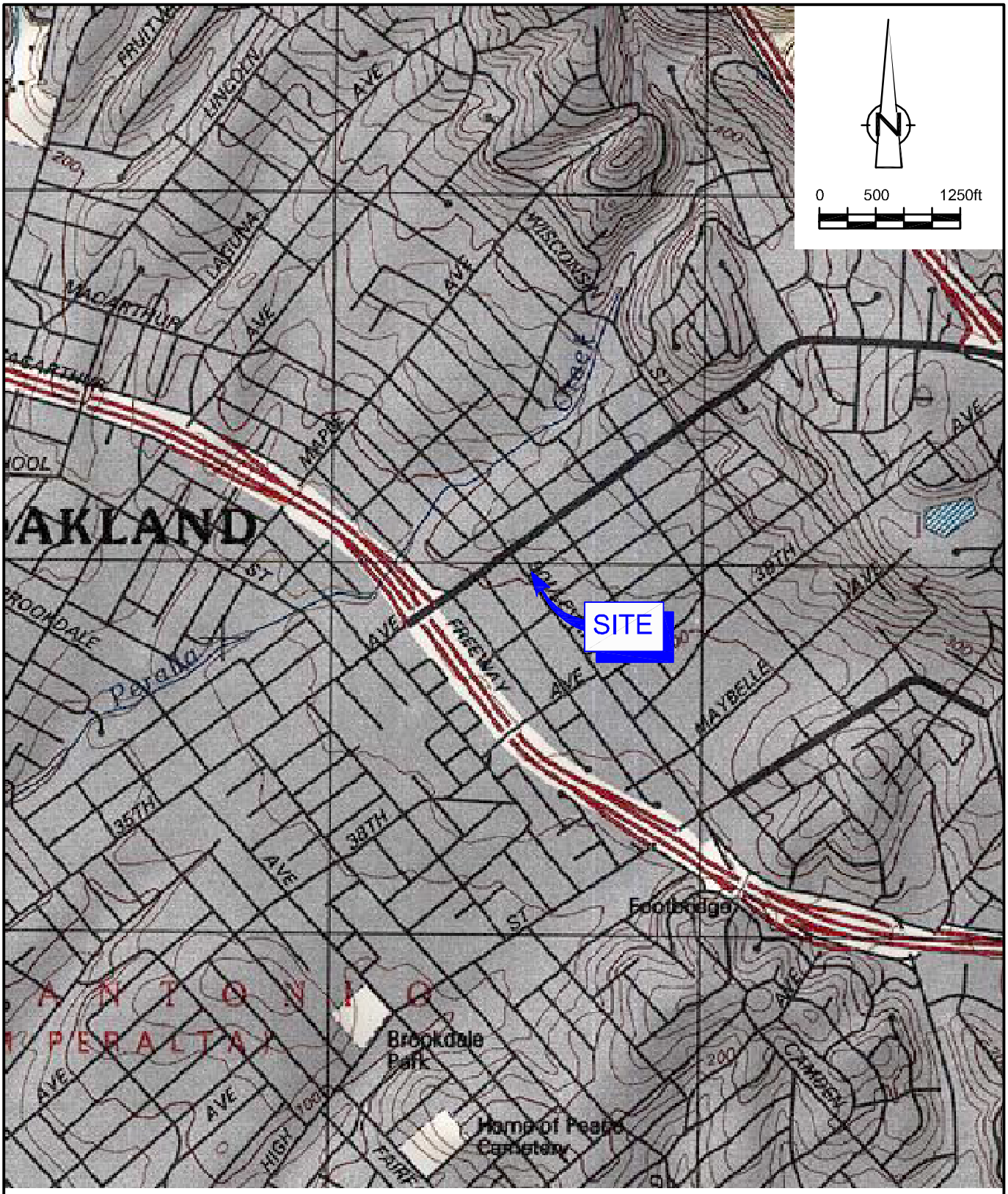
REGISTERED PROFESSIONAL ENGINEER
JAMES P. KIERNAN
No. 68498
Exp. 9/30/11
CIVIL
STATE OF CALIFORNIA

CB/jm/9
Encl.

Figure 1	Vicinity Map
Figure 2	Site Plan
Table 1	Soil Sample Analytical Results
Table 2	Groundwater Sample Analytical Results
Attachment A	ACEH Letter Dated January 28, 2009
Attachment B	Summary of Previous Environmental Investigation and Remediation
Attachment C	Drilling Permit and Boring Logs
Attachment D	Standard Field Procedures
Attachment E	Laboratory Report

cc: Ms. Stacie Frerichs, Chevron (electronic copy only)
Mr. Hai Pham, 3530 MacArthur Blvd Gas Station, Inc.

FIGURES



SOURCE: TOPO! MAPS.

figure 1

VICINITY MAP
CHEVRON SERVICE STATION 9-8341
3530 MACARTHUR BOULEVARD
Oakland, California

DRIVEWAY

PLANTER

B-11

FORMER WASTE OIL TANK

WO-N-6'

WO-S-6'

C.B.

STATION BUILDING

USTS

B-3

MW-3

C.B.

PLANTER

MAGEE AVENUE

USED OIL TANK

B-6

P-4-4.5'

B-8

P-5-2'

P-6-3'

P-3-4.5'

APPROXIMATE EXTENT OF EXCAVATION 3.5 TO 5.5 FBG

B-5

PX-5

PX-10

PX-11

PX-2

DISPENSER ISLANDS

MW-1

PX-4

PX-7

PX-1

PX-3

PX-9

B-9

B-7

B-16

B-1

PX-8

P-2-3.5'

PX-6

P-1-2.5'

B-4

MW-2

TR-1

TR-2

TR-3

FORMER SCOOTER WILSON AUTO REPAIR (VACANT)

FORMER UST

FORMER WASTE OIL TANK EXCAVATION

B4/MW-3

B5

B3/MW-2

FORMER 6,000-GAL. DIESEL UST

FORMER PRODUCT LINES

FORMER DISPENSER ISLAND

B1

B2/MW-1

0 10 30ft

LEGEND

- B-7 ■ BORING LOCATION
- MW-1 ● MONITORING WELL LOCATION
- TR-1 ⊡ SOIL SAMPLE LOCATION
- B2/MW-1 ◒ GROUNDWATER MONITORING WELL (SCOOTER WILSON)
- B1 ⊠ SOIL BORING (SCOOTER WILSON)
- E ELECTRIC LINE
- STM STORM DRAIN LINE
- SAN SANITARY SEWER LINE
- W WATER LINE
- G GAS LINE
- T CABLE LINE

0° 90° 180° 270°

HISTORICAL GROUNDWATER FLOW DIRECTION

PARKING LANE

MacARTHUR BOULEVARD

PARKING LANE

M.H.

PARKING LANE

B-12

B-13

B-14

B-15

PARKING LANE

DRIVEWAY

COMMERCIAL BUILDING

PARKING LOT

figure 2

SITE PLAN
FORMER CHEVRON SERVICE STATION 9-8341
3530 MACARTHUR BOULEVARD
Oakland, California

TABLES

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON STATION 9-8341
3530 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

Boring ID	*Sample Depth (fbg)*	*Sample Date*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*TAME*	*TBA*	*ETBE*	*DIPE*
			← Concentrations reported in milligrams per kilogram (mg/kg) →									
B-12	8	5/11/10	<1	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.022	<0.001	<0.001
B-13	5	5/11/10	<1	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.020	<0.001	<0.001
B-14	7	5/12/10	<1	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.020	<0.001	<0.001
B-15	7	5/12/10	56	0.004	0.003	0.27	0.019	<0.0005	<0.001	<0.020	<0.001	<0.001
B-16	7	5/12/10	<1	<0.0006	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.022	<0.001	<0.001

Abbreviations/Notes:
fbg = feet below grade
TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015
Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8260B
MTBE = Methyl tertiary butyl ether by EPA Method 8260B
TAME = Tertiary amyl methyl ether by EPA Method 8260B
TBA = Tertiary butyl alcohol by EPA Method 8260B
ETBE = Ethyl tertiary butyl ether by EPA Method 8260B
DIPE = Di-isopropyl ether by EPA Method 8260B
<x = Not detected at or above stated laboratory reporting limits

TABLE 2

GROUNDWATER SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON STATION 9-8341
3530 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

Boring ID	*Sample Date*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*TAME*	*TBA*	*ETBE*	*DIPE*
		← Concentrations reported in micrograms per liter (µg/L) →										
B-12	5/11/10	**230**	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5
B-13	5/11/10	**220**	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5
B-14	5/12/10	--	<50	<0.5	<0.5	<0.5	<0.5	**0.6**	<0.5	<2	<0.5	<0.5
B-15	5/12/10	**40,000**	**17,000**	**34**	**17**	**490**	**65**	<1	<1	<5	<1	<1
B-16	5/12/10	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5

Abbreviations/Notes:

TPHd = Total petroleum hydrocarbons as diesel by EPA Method 8015
TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015
Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8260B
MTBE = Methyl tertiary butyl ether by EPA Method 8260B
TAME = Tertiary amyl methyl ether by EPA Method 8260B
TBA = Tertiary butyl alcohol by EPA Method 8260B
ETBE = Ethyl tertiary butyl ether by EPA Method 8260B
DIPE = Di-isopropyl ether by EPA Method 8260B
<x = Not detected at or above stated laboratory reporting limits
-- = Not analyzed

ATTACHMENT A

ACEH LETTER DATED JANUARY 28, 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 28, 2009

Stacie Harting-Frerichs
Chevron Corporation
6111 Bollinger Canyon Rd, RM 3596
San Ramon, CA 94583

Hai Pham
3530 Macarthur Blvd Gas Station, Inc.
3530 Macarthur Boulevard
Oakland, CA 94619

Subject: Fuel Leak Case No. RO0000405 and GeoTracker Global ID T0600101790, Chevron #9-8341, 3530 Macarthur Boulevard, Oakland, CA 94619

Dear Ms. Harting-Frerichs and Mr. Pham:

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," dated March 28, 2008, which was prepared by Conestoga-Rovers & Associates for the subject site. The approved scope of work consisted of installing six borings to delineate the vertical and lateral extent of soil and groundwater contamination. However, CRA stated that only one boring was installed. According to CRA, the remaining five borings could not be installed since multiple subsurface utilities are on Magee Avenue and Macarthur Boulevard, private property owners denied access to their properties, and the City of Oakland does not allow soil borings in the sidewalk. Please note that ACEH oversees several leaking underground storage tank cases in Oakland, and Responsible Parties have been able to obtain necessary permits/access agreements and complete the required site assessment work.

At this time, ACEH requests that you address the following technical comments and send us the technical work plans and reports requested below.

TECHNICAL COMMENTS

1. **Monitoring Well Construction and Hydrogeologic Setting** – Currently, there are three groundwater monitoring wells (MW-1, MW-2 and MW-3) at the site. Groundwater monitoring well MW-1 is screened from 7 to 27 feet below the ground surface (bgs), and MW-2 and MW-3 are screened from 7 to 32 feet bgs. Depth to water (DTW) typically ranges from approximately 2 to 4 feet bgs. According to the boring log for MW-1, saturated medium dense sand is encountered from approximately 1 to approximately 7.5 feet bgs, underlain by sandy clay to a depth of approximately 12.5 feet bgs. Silty sand is encountered from approximately 12.5 to 17 feet bgs, underlain by silt to an approximately depth of 27 feet bgs. The boring log for MW-3 indicates a sandy clay from approximately 1 to 4 feet bgs, underlain by a clayey sand to approximately 13.25 feet bgs. Sandy silt is encountered from approximately 13.25 feet bgs to 17.25 feet bgs, underlain by gravel with clay and sand to approximately 26.75 feet bgs. From 26.75 feet bgs to 32 feet bgs, silty sand is encountered, underlain by clay to approximately 40 feet bgs, the maximum depth explored.

ACEH has two concerns regarding monitoring well construction at the site. The first concern is that the DTW at the site is above the screened interval of the monitoring wells. Since groundwater elevation is above the screened interval for site monitoring wells and petroleum hydrocarbons have a specific gravity that is lower than water (therefore, float on water); concentrations of contaminants detected may not be representative of actual site conditions. Therefore, the monitoring wells appear to be incorrectly constructed, which may affect the contaminant concentrations detected in groundwater. The second concern is that the existing groundwater monitoring wells appear to have excessively lengthy screened intervals over what appear to be multiple coarse-grained units or water-bearing zones that are separated by fine-grained units. Please evaluate and discuss the effect that groundwater elevations rising above monitoring well screens have on hydrocarbon concentrations for each monitoring well at the site, as well as the fact that the screened intervals appear to intersect multiple water-bearing zones. Please address the above-mentioned concerns and include your analysis in the Site Conceptual Model (SCM) and Data Gap Work Plan requested below. Also please construct the proposed monitoring wells so that accurate groundwater concentrations, indicative of actual site conditions can be collected. It may be advantageous to propose depth-discrete groundwater samples or installing multi-level monitoring wells, monitoring well clusters, or systems capable of monitoring multiple depths.

2. **Preferential Pathway Study** – Depth to groundwater at the site has ranged between approximately 2 to 4 feet bgs. Since groundwater is relatively shallow at the site, a preferential pathway evaluation appears prudent. The purpose of the preferential pathway study is to locate potential migration pathways and conduits and determine the probability of the NAPL and/or dissolved-phase plume encountering preferential pathways and conduits that could spread contamination. We request that you perform a preferential pathway study that details the potential migration pathways and potential conduits (wells, utilities, pipelines, etc.) for vertical and lateral migration that may be present in the vicinity of the site.

   Discuss your analysis and interpretation of the results of the preferential pathway study (including the well survey and utility survey requested below) and report your results in the SCM and Data Gap Work Plan requested below. The results of your study shall contain all information required by California Code of Regulations, Title 23, Division 3, Chapter 16, §2654(b).

   a. Utility Survey

   An evaluation of all utility lines and trenches (including sewers, storm drains, pipelines, trench backfill, etc.) within and near the site and plume area(s) is required as part of your study. Please include maps and cross-sections illustrating the location and depth of all utility lines and trenches within and near the site and plume areas(s) as part of your study.

   b. Well Survey

   The preferential pathway study shall include a well survey of all wells (monitoring and production wells: active, inactive, standby, decommissioned (sealed with concrete), abandoned (improperly decommissioned or lost); and dewatering, drainage, and cathodic protection wells) within a ¼ mile radius of the subject site. Use the results of your background study to determine the existence of unrecorded/unknown (abandoned) wells,

which can act as contaminant migration pathways at or from your site. Please review and submit copies of historical maps, such as Sanborn maps, aerial photographs, etc., when conducting the background study.

3. **Soil and Groundwater Characterization** – Currently, the extent of soil and groundwater contamination appears undefined and the most recent subsurface investigation failed to address the data gap. As mentioned above, ACEH oversees several leaking underground storage tank cases in Oakland, and Responsible Parties have been able to obtain necessary permits/access agreement and complete the required site assessment work. For all future correspondences sent to the City of Oakland for permits or private property owners for access agreements, please copy ACEH so that we may assist in should permitting or access issues arise. Please propose a scope of work to address the above-mentioned concerns and submit a work plan due by the date specified below.

4. **Contaminant Source Area Characterization** – In May 1994, one 1,000-gallon waste oil UST was removed from the site as well as the product piping lines. Soil sample P-3 near the north side of the western most dispenser island detected TPH-g and benzene at concentrations of 1,200 mg/kg and 2.2 mg/kg respectively. Due to the evident soil contamination present, over-excavation was conducted. Over-excavation confirmation soil sample PX-7 (located in the vicinity of P-3) detected TPH-g and benzene at concentrations of 1,300 mg/kg and 6 mg/kg, respectively, indicating that the vertical and lateral extent of the source area appears undefined and the site poses a potential risk to human health and the environment. Please propose a scope of work to address the above-mentioned concerns and submit a work plan due by the date specified below.

5. **Site Conceptual Model** – At this juncture, it may be advantageous to develop a site conceptual model (SCM), which synthesizes all the analytical data and evaluates all potential exposure pathways and potential receptors that may exist at the site, including identifying or developing site cleanup objectives and goals. At a minimum, the SCM should include:

   (1) Local and regional plan view maps that illustrate the location of sources (former facilities, piping, tanks, etc.) extent of contamination, direction and rate of groundwater flow, potential preferential pathways, and locations of receptors;

   (2) Geologic cross section maps that illustrate subsurface features, man-made conduits, and lateral and vertical extent of contamination;

   (3) Plots of chemical concentrations versus time;

   (4) Plots of chemical concentrations versus distance from the source;

   (5) Summary tables of chemical concentrations in different media (i.e. soil, groundwater, and soil vapor); and

   (6) Well logs, boring logs, and well survey maps;

(7) Discussion of likely contaminant fate and transport.

If data gaps (i.e. potential contaminant volatilization to indoor air or contaminant migration along preferential pathways, etc.) are identified in the SCM, please include a proposed scope of work to address those data gaps in the work plan due by the date specified below. Please note that the work plan must address all technical comments presented in this correspondence as well as all data gaps identified in the SCM.

NOTIFICATION OF FIELDWORK ACTIVITIES

Please schedule and complete the fieldwork activities by the date specified below and provide ACEH with at least three (3) business days notification prior to conducting the fieldwork including routine groundwater sampling.

TECHNICAL REPORT REQUEST

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

- **March 30, 2009** – SCM & Data Gap Work Plan
- **April 30, 2009** – Quarterly Monitoring Report (1st Quarter 2009)
- **July 30, 2009** – Quarterly Monitoring Report (2nd Quarter 2009)
- **October 30, 2009** – Quarterly Monitoring Report (3rd Quarter 2009)
- **January 30, 2010** – Quarterly Monitoring Report (4th Quarter 2009)

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

ELECTRONIC SUBMITTAL OF REPORTS

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

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

PERJURY STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

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

AGENCY OVERSIGHT

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

If you have any questions, please call me at (510) 383-1767 or send me an electronic mail message at Steven.Plunkett@acgov.org.

Sincerely,

Steven Plunkett
Hazardous Materials Specialist

Paresh C. Khatri
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
Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032
Donna Drogos, ACEH
Steven Plunkett, ACEH
Paresh Khatri, 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 PREVIOUS ENVIRONMENTAL INVESTIGATION AND REMEDIATION

SUMMARY OF PREVIOUS ENVIRONMENTAL INVESTIGATION AND REMEDIATION
FORMER CHEVRON STATION 9-8341

1993 Trench Sampling

In January 1993, Touchstone Developments (Touchstone) collected three soil samples (TR-1 through TR-3) from a trench that Pacific Gas & Electric (PG&E) had excavated in the sidewalk near the southwestern edge of the site. The trench was approximately 2 feet wide by 4 feet deep and approximately 28 feet long. The soil samples were collected from the northeast sidewall of the trench at approximately 2.5 feet below grade (fbg). The three soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and xylenes (BTEX). Low concentrations of TPHg (up to 7 milligrams per kilogram [mg/kg]) and BTEX (up to 1.5 mg/kg) were detected in the samples. Water was also observed in the bottom of the trench at approximately 3 fbg; it was not known if the water was groundwater or surface runoff from the station or a nearby storm drain. A grab water sample (TR-4) was collected and also analyzed for TPHg and BTEX. TPHg was detected in the water sample at 2,500 micrograms per liter (µg/L); benzene (390 µg/L), toluene (80 µg/L), ethylbenzene (140 µg/L), and xylenes (300 µg/L) were also detected. It was concluded that the water sample may not be representative of groundwater conditions. The results of this investigation were presented in Touchtone's untitled letter report dated January 27, 1993.

1994 Used-Oil UST and Product Line Removal

In May 1994, Touchstone observed the removal of a 1,000-gallon, single-walled fiberglass, used-oil underground storage tank (UST) and gasoline product piping at the site. Two soil samples (WO-N and WO-S) were collected beneath the ends of the former UST at approximately 6 fbg and analyzed for TPHg; TPH as diesel (TPHd); BTEX; halogenated volatile organic compounds (HVOCs); total oil and grease (TOG); semi-VOCs; and the metals cadmium, chromium, lead, nickel, and zinc. TPHg, TPHd, BTEX, TOG, HVOCs, semi-VOCs, cadmium, and lead were not detected in either of the samples. Background levels of chromium (up to 20 mg/kg), nickel (up to 18 mg/kg), and zinc (up to 30 mg/kg) were detected in both of the samples. Groundwater was encountered at approximately 6 fbg in the excavation, and a grab-groundwater sample (WO-H_2O) was collected and analyzed for TPHg, BTEX, TPHd, TOG, HVOCs, semi-VOCs, and metals; which were not detected with the exception of low concentrations of chloroethane (0.6 µg/L), chromium (20 µg/L), lead (7 µg/L), nickel (28 µg/L), and zinc (29 µg/L). Six soil samples (P-1 through P-6) were collected at depths of 2 to 4.5 fbg beneath the product piping and analyzed for TPHg and BTEX. TPHg (ranging from 14 to 1,200 mg/kg) and BTEX (ranging from 0.086 to 70.9 mg/kg) were detected in samples P-1, P-2, P-5, and P-6. Over-excavation was subsequently conducted to remove impacted soil beneath the product piping. Eleven confirmation soil samples (PX-1 through PX-11) were collected at depths of 3 to 5.5 fbg following over-excavation and analyzed for TPHg and BTEX. TPHg and BTEX were detected in six of the samples at concentrations up to 1,300 mg/kg (PX-8 at 5 fbg) and 170 mg/kg (PX-8 at 5 fbg), respectively. Further over-excavation was limited due to the presence of the canopy concrete footing. Approximately 285 cubic yards of impacted soil was removed and disposed offsite during the work; approximately 25,000 gallons of groundwater was also pumped from the excavation and disposed offsite. The results of this

investigation were presented in Touchtone's *Waste Oil Tank and Product Line Removal and Overexcavation Report* dated June 28, 1994.

1996 Monitoring Well Installation

In March 1996, Touchstone installed three groundwater monitoring wells (MW-1 through MW-3) at the site. Groundwater was encountered in the well borings at approximately 4 fbg. A total of 22 soil samples were collected at various depths from the borings and analyzed for TPHg and BTEX. TPHg was only detected in the soil samples collected at 5.5 fbg from borings MW-2 (9.5 mg/kg) and MW-3 (400 mg/kg); low concentrations of toluene, ethylbenzene, and xylenes (up to 32 mg/kg) were also detected in the two samples. A trace concentration of xylenes (0.0069 mg/kg) was detected in the soil sample collected at 20 fbg from boring MW-3. The initial groundwater samples collected from the wells were analyzed for TPHg, BTEX, and methyl tertiary butyl ether (MTBE), which generally were not detected with the exception of MTBE at 6,100 micrograms per liter (µg/L) in MW-2. The results of this investigation were presented in Touchstone's *Well Installation Report* dated July 11, 1996.

1999 Utility Survey

In 1999, Pacific Environmental Group, Inc. (PEG) conducted a survey to identify underground utilities in the site vicinity. The survey included water, sanitary sewer, and storm drain lines. A 10-inch water line (depth ranging from approximately 35 to 42 inches) and an 8-inch sanitary sewer line (depth of 6 feet) were identified beneath MacArthur Boulevard to the south-southwest of the site. A 12-inch storm drain line (depth of 7 feet), an 8-inch sanitary sewer line (depth of 6 feet), and a 4-inch water line (depth of 34 to 42 inches) were identified beneath Magee Avenue to the south-southeast of the site. Based on the results of the survey, it was concluded that due to the shallow depth to groundwater at the site, it was possible that some utility lines may act as preferential pathways for the migration of impacted groundwater. The results of the survey were presented in PEG's *Utility Survey Report* dated June 28, 1999.

2003 Subsurface Investigation

In July 2003, Cambria Environmental Technology, Inc. (Cambria [now CRA]) advanced eight exploratory borings (B-1 and B-3 through B-9) to total depths of 6 to 10.5 fbg to further evaluate the extent of hydrocarbons in soil and groundwater onsite. One or two soil samples were collected at various depths from each boring and analyzed for TPHg, BTEX, fuel oxygenates, 1,2-dichloroethane (1,2-DCA), ethylene dibromide (EDB), and ethanol. TPHg was only detected in the soil samples collected at 1.5 fbg from boring B-7 (2.5 mg/kg) and 2 fbg from boring B-8 (3.3 mg/kg). BTEX generally were not detected in the samples with the exception of trace concentrations of ethylbenzene (0.001 mg/kg) and xylenes (up to 0.002 mg/kg) in the samples collected from boring B-8. MTBE (up to 0.13 mg/kg) was detected in the majority of the soil samples. Other fuel oxygenates, 1,2-DCA, EDB, and ethanol generally were not detected with the exception of low concentrations of tertiary amyl methyl ether (TAME) (up to 0.002 mg/kg) and tertiary butyl alcohol (TBA) (0.044 mg/kg) in three and one of the samples, respectively. Groundwater was encountered in the borings (except B-7) at depths of 3 to 10 fbg. A grab-groundwater sample was collected from each boring and analyzed for TPHg, BTEX, fuel

oxygenates, 1,2-DCA, EDB, and ethanol. TPHg was only detected in the samples collected from borings B-7 (98 µg/L) and B-8 (5,200 µg/L), and benzene was only detected in the sample collected from boring B-8 (3 µg/L). MTBE was detected in all of the samples at concentrations ranging from 2 (B-6) to 980 µg/L (B-8). Low concentrations of TAME (up to 15 µg/L) and TBA (up to 41 µg/L) were detected in several of the samples. The results of this investigation were presented in Cambria's *Additional Subsurface/Baseline Investigation Report* dated September 2, 2003.

2006 Subsurface Investigation

In December 2006, Cambria advanced exploratory boring B-11 onsite to 24 fbg to further evaluate the extent of impacted soil and groundwater. The boring was located upgradient of the USTs. Five other borings were attempted in Magee Avenue and MacArthur Boulevard but could not be completed due to the presence of numerous underground utility lines. Soil samples were collected at depths of 5, 10, 15, 20, and 24 fbg from the boring and analyzed for TPHg, BTEX, fuel oxygenates, 1,2-DCA, EDB, ethanol, and methanol. The analytes generally were not detected in the soil samples with the exception of toluene at 0.002 mg/kg in the sample collected at 10 fbg; methanol (up to 0.33 mg/kg) was also detected in four of the samples. Groundwater was not encountered in the boring. The results of this investigation were presented in CRA's *Subsurface Investigation Report* dated March 28, 2008.

ATTACHMENT C

DRILLING PERMIT AND BORING LOGS

Alameda County Public Works Agency - Water Resources Well Permit

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

Application Approved on: 04/27/2010 By jamesy

Permit Numbers: W2010-0287
Permits Valid from 05/11/2010 to 05/12/2010

Application Id: 1271973024372 **City of Project Site:** Oakland
Site Location: 3530 MacArthur Blvd, Oakland, CA
Project Start Date: 05/11/2010 **Completion Date:** 05/12/2010
Assigned Inspector: Contact Ron Smalley at (510) 670-5407 or ronaldws@acpwa.org

Applicant: Conestoga-Rovers & Associates - Chris Benedict
10969 Trade Center Dr #107, Rancho Cordova, CA 95620 **Phone:** 916-889-8900
Property Owner: Hai Thanh Pham
3530 MacArthur Bl, Oakland, CA 94612 **Phone:** --
Client: Chevron Gas
6001 Bollinger Canyon, San Ramon, CA 94583 **Phone:** --

Total Due: $265.00
Receipt Number: WR2010-0134 **Total Amount Paid:** $265.00
Payer Name : Conestoga-Rovers & Associates Paid By: CHECK **PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Geotechnical Study/CPT's - 5 Boreholes
Driller: Penecore - Lic #: 906899 - Method: Hand **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2010-0287	04/27/2010	08/09/2010	5	3.25 in.	12.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. 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.

4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an 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.

5. 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.

6. 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.

7. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

8. Applicant shall contact Ron Smalley for an inspection time at 510-670-5407 or email to ronaldws@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

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	**BORING/WELL NAME**	B-12
JOB/SITE NAME	Former Chevron 9-8341	**DRILLING STARTED**	11-May-10
LOCATION	3530 MacArthur Boulevard, Oakland, CA	**DRILLING COMPLETED**	11-May-10
PROJECT NUMBER	611650	**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"	**SCREENED INTERVAL**	NA
LOGGED BY	C. Benedict	**DEPTH TO WATER (First Encountered)**	8.5 fbg (11-May-10)
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			8 inches concrete.		Concrete
								0.7	
				1			**FILL:** Sandy CLAY with gravel; dark brown; moist; medium estimated plasticity.		
				2				2.0	
							Sandy CLAY with gravel: dark brown; moist; high estimated plasticity; 1/2 to 1 inch sub-angular gravel.		
				3					
					CL		Color change to brown.		
				4					
0.0		B-12- 5		5					Portland Type I/II
								5.5	
				6			**Clayey SAND with gravel:** moderate brown; moist; 1/2 to 1 inch sub-angular gravel.		
					SC				
				7				7.0	
							Clayey SAND: red brown; moist.		
0.0		B-12- 8		8	SC				
							Wet at 8.5 fbg. ▽		
				9				9.0	Bottom of Boring @ 9 fbg

WELL LOG (PID), I:\CHEVRON\6116--\611650--\611650--3\611650-GINT BORING LOGS.GPJ DEFAULT.GDT 5/28/10

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BORING/WELL LOG

CLIENT NAME	Chevron	**BORING/WELL NAME**	B-13
JOB/SITE NAME	Former Chevron 9-8341	**DRILLING STARTED**	11-May-10
LOCATION	3530 MacArthur Boulevard, Oakland, CA	**DRILLING COMPLETED**	11-May-10
PROJECT NUMBER	611650	**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"	**SCREENED INTERVAL**	NA
LOGGED BY	C. Benedict	**DEPTH TO WATER (First Encountered)**	5.5 fbg (11-May-10) ▽
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		B-13- 5		1	CL		8 inches concrete.	0.7	Concrete
							FILL: Clayey SAND; brown; moist.	1.0	
				2			**CLAY:** dark grey; moist; high estimated plasticity.		
				3					Portland Type I/II
				4					
				5				▽ 5.5	
				6	SC		**Clayey SAND with gravel:** dark grey; wet; 1/2 to 1 inch sub-angular gravel.	6.0	Bottom of Boring @ 6 fbg

WELL LOG (PID) I:\CHEVRON\6116-I611650~1\611650~3\611650-GINT BORING LOGS.GPJ DEFAULT.GDT 5/28/10

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BORING/WELL LOG

CLIENT NAME	Chevron	**BORING/WELL NAME**	B-14
JOB/SITE NAME	Former Chevron 9-8341	**DRILLING STARTED**	11-May-10
LOCATION	3530 MacArthur Boulevard, Oakland, CA	**DRILLING COMPLETED**	12-May-10
PROJECT NUMBER	611650	**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"	**SCREENED INTERVAL**	NA
LOGGED BY	C. Benedict	**DEPTH TO WATER (First Encountered)**	7.5 fbg (12-May-10) ▽
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			8 inches concrete.		Concrete
								0.7	
							FILL: Sandy CLAY; brown; medium estimated plasticity.	1.0	
				1			**CLAY:** dark grey; moist; high estimated plasticity.		
				2					
				3	CL				
				4					
1.8		B-14- 5		5					Portland Type I/II
								5.5	
				6			**CLAY with sand:** Dark grey; moist; high estimated plasticity.		
					CL				
2.2		B-14- 7.5		7					
							Wet at 7.5 fbg. ▽		
				8				8.0	Bottom of Boring @ 8 fbg

WELL LOG (PID) I:\CHEVRON\6116--I611650~1\611650~3\611650-GINT BORING LOGS.GPJ DEFAULT.GDT 5/28/10

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BORING/WELL LOG

CLIENT NAME	Chevron	**BORING/WELL NAME**	B-15
JOB/SITE NAME	Former Chevron 9-8341	**DRILLING STARTED**	12-May-10
LOCATION	3530 MacArthur Boulevard, Oakland, CA	**DRILLING COMPLETED**	12-May-10
PROJECT NUMBER	611650	**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"	**SCREENED INTERVAL**	NA
LOGGED BY	C. Benedict	**DEPTH TO WATER (First Encountered)**	7.5 fbg (12-May-10) ▽
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
							8 inches concrete.		Concrete
								0.7	
							FILL: Clayey SAND; brown; moist.		
				1				1.0	
							CLAY with sand: dark grey; moist; high estimated plasticity.		
20.0				2					
				3					
15.5									
				4			1/4 to 2 inch gravel; color change to grey.		Portland Type I/II
3.5		B-15- 5		5	CL				
				6					
374		B-15- 7		7					
								▽ 7.5	
							Wet at 7.5 fbg.		Bottom of Boring @ 7.5 fbg

WELL LOG (PID). I:\CHEVRON\6116-\611650-\611650-3\611650-GINT BORING LOGS.GPJ DEFAULT.GDT 5/28/10

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BORING/WELL LOG

CLIENT NAME	Chevron	**BORING/WELL NAME**	B-16
JOB/SITE NAME	Former Chevron 9-8341	**DRILLING STARTED**	12-May-10
LOCATION	3530 MacArthur Boulevard, Oakland, CA	**DRILLING COMPLETED**	12-May-10
PROJECT NUMBER	611650	**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"	**SCREENED INTERVAL**	NA
LOGGED BY	C. Benedict	**DEPTH TO WATER (First Encountered)**	7.5 fbg (12-May-10)
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
							5 inches concrete.	0.5	Concrete
							FILL: 3 inches pea gravel.	0.8	
				1			**CLAY with gravel:** brown; moist; high estimated plasticity.		
				2					
				3	CL				
				4					
0.5		B-16- 5		5			**CLAY with sand:** dark grey; moist; high estimated plasticity.	5.0	Portland Type I/II
				6					
					CL				
0.9		B-16- 7.5		7					
							Wet at 7.5 fbg.		
				8				8.0	Bottom of Boring @ 8 fbg

WELL LOG (PID) I:\CHEVRON\6116--\611650~1\611650~3\611650-GINT BORING LOGS.GPJ DEFAULT.GDT 5/28/10

ATTACHMENT D

STANDARD FIELD PROCEDURES

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.

ATTACHMENT E

LABORATORY REPORT

Lancaster Laboratories

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

Analysis Report

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

May 25, 2010

Project: 98341

Submittal Date: 05/14/2010
Group Number: 1194585
PO Number: 98341
Release Number: MTI
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
B-12-S-8-100511 Grab Soil	5980190
B-12-W-100511 Grab Water	5980191
B-13-S-5-100511 Grab Soil	5980192
B-13-W-100511 Grab Water	5980193
B-14-S-7.5-100512 Grab Soil	5980194
B-14-W-100512 Grab Water	5980195
B-16-S-7.5-100512 Grab Soil	5980196
B-16-W-100512 Grab Water	5980197
B-15-S-7-100512 Grab Soil	5980198
B-15-W-100512 Grab Water	5980199

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

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

Analysis Report

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

Respectfully Submitted,

Sarah M. Snyder
Senior Specialist

Lancaster Laboratories

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

Analysis Report

Sample Description: B-12-S-8-100511 Grab Soil
Facility# 98341 MTI# 611650 CRAW
3530 MacArthur Blvd-Oakland T0600101790 B-12

LLI Sample # SW 5980190
LLI Group # 1194585
Account # 11997

Project Name: 98341

Collected: 05/11/2010 10:40 by CB

Submitted: 05/14/2010 09:00
Reported: 05/25/2010 14:17
Discard: 06/25/2010

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

OB128

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	t-Amyl methyl ether	994-05-8	N.D.	0.001	0.005	1.08
10950	Benzene	71-43-2	N.D.	0.0005	0.005	1.08
10950	t-Butyl alcohol	75-65-0	N.D.	0.022	0.11	1.08
10950	Ethyl t-butyl ether	637-92-3	N.D.	0.001	0.005	1.08
10950	Ethylbenzene	100-41-4	N.D.	0.001	0.005	1.08
10950	di-Isopropyl ether	108-20-3	N.D.	0.001	0.005	1.08
10950	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	1.08
10950	Toluene	108-88-3	N.D.	0.001	0.005	1.08
10950	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	1.08
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	24.9

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	201013421129	05/14/2010 14:54	Larry E Bevins	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201013421129	05/14/2010 14:54	Larry E Bevins	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201013421129	05/14/2010 14:37	Larry E Bevins	n.a.
10950	BTEX + 5 Oxygenates 8260 Soil	SW-846 8260B	1	B101371AA	05/17/2010 14:50	Chelsea B Eastep	1.08
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201013421129	05/14/2010 14:38	Larry E Bevins	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10134A34A	05/17/2010 14:37	Elizabeth J Marin	24.9

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

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Analysis Report

Sample Description: B-12-W-100511 Grab Water
Facility# 98341 MTI# 611650 CRAW
3530 MacArthur Blvd-Oakland T0600101790 B-12

LLI Sample # WW 5980191
LLI Group # 1194585
Account # 11997

Project Name: 98341

Collected: 05/11/2010 11:15 by CB

Submitted: 05/14/2010 09:00
Reported: 05/25/2010 14:17
Discard: 06/25/2010

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

MOB12

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**		ug/l	ug/l	ug/l	
10943	t-Amyl methyl ether	994-05-8	N.D.	0.5	1	1
10943	Benzene	71-43-2	N.D.	0.5	1	1
10943	t-Butyl alcohol	75-65-0	N.D.	2	5	1
10943	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10943	di-Isopropyl ether	108-20-3	N.D.	0.5	1	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
10943	Toluene	108-88-3	N.D.	0.5	1	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1
GC Extractable TPH	**SW-846 8015B**		ug/l	ug/l	ug/l	
08269	TPH-DRO water C10-C28	n.a.	230	31	95	1

General Sample Comments

State of California Lab Certification No. 2501
Trip blank vials were not received by the laboratory for this sample group.

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
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D101381AA	05/18/2010 17:09	Ginelle L Feister	1
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	D101381AA	05/18/2010 17:09	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	10137C20A	05/18/2010 15:51	Marie D John	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10137C20A	05/18/2010 15:51	Marie D John	1
07003	Extraction - DRO (Waters)	SW-846 3510C	1	101350016A	05/17/2010 09:15	Karen R Rettew	1
08269	TPH-DRO water C10-C28	SW-846 8015B	1	101350016A	05/20/2010 21:55	Dustin A Underkoffler	1

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

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Analysis Report

Sample Description: B-13-S-5-100511 Grab Soil
Facility# 98341 MTI# 611650 CRAW
3530 MacArthur Blvd-Oakland T0600101790 B-13

LLI Sample # SW 5980192
LLI Group # 1194585
Account # 11997

Project Name: 98341

Collected: 05/11/2010 13:10 by CB

Submitted: 05/14/2010 09:00
Reported: 05/25/2010 14:17
Discard: 06/25/2010

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

OB135

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	t-Amyl methyl ether	994-05-8	N.D.	0.001	0.005	0.99
10950	Benzene	71-43-2	N.D.	0.0005	0.005	0.99
10950	t-Butyl alcohol	75-65-0	N.D.	0.020	0.099	0.99
10950	Ethyl t-butyl ether	637-92-3	N.D.	0.001	0.005	0.99
10950	Ethylbenzene	100-41-4	N.D.	0.001	0.005	0.99
10950	di-Isopropyl ether	108-20-3	N.D.	0.001	0.005	0.99
10950	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	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	24.06

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	201013421129	05/14/2010 14:54	Larry E Bevins	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201013421129	05/14/2010 14:54	Larry E Bevins	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	3	201013821160	05/18/2010 10:54	Larry E Bevins	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201013421129	05/14/2010 14:40	Larry E Bevins	n.a.
10950	BTEX + 5 Oxygenates 8260 Soil	SW-846 8260B	1	B101381AA	05/18/2010 15:20	Chelsea B Eastep	0.99
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201013421129	05/14/2010 14:41	Larry E Bevins	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10134A34A	05/17/2010 15:13	Elizabeth J Marin	24.06

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

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Analysis Report

Sample Description: B-13-W-100511 Grab Water
Facility# 98341 MTI# 611650 CRAW
3530 MacArthur Blvd-Oakland T0600101790 B-13

LLI Sample # WW 5980193
LLI Group # 1194585
Account # 11997

Project Name: 98341

Collected: 05/11/2010 13:25 by CB

Submitted: 05/14/2010 09:00
Reported: 05/25/2010 14:17
Discard: 06/25/2010

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

MOB13

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**		ug/l	ug/l	ug/l	
10943	t-Amyl methyl ether	994-05-8	N.D.	0.5	1	1
10943	Benzene	71-43-2	N.D.	0.5	1	1
10943	t-Butyl alcohol	75-65-0	N.D.	2	5	1
10943	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10943	di-Isopropyl ether	108-20-3	N.D.	0.5	1	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
10943	Toluene	108-88-3	N.D.	0.5	1	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1
GC Extractable TPH	**SW-846 8015B**		ug/l	ug/l	ug/l	
08269	TPH-DRO water C10-C28	n.a.	220	30	95	1

General Sample Comments

State of California Lab Certification No. 2501
Trip blank vials were not received by the laboratory for this sample group.

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
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D101381AA	05/18/2010 17:31	Ginelle L Feister	1
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	D101381AA	05/18/2010 17:31	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	10137C20A	05/18/2010 16:13	Marie D John	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10137C20A	05/18/2010 16:13	Marie D John	1
07003	Extraction - DRO (Waters)	SW-846 3510C	1	101350016A	05/17/2010 09:15	Karen R Rettew	1
08269	TPH-DRO water C10-C28	SW-846 8015B	1	101350016A	05/20/2010 22:16	Dustin A Underkoffler	1

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

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Analysis Report

Sample Description: B-14-S-7.5-100512 Grab Soil
Facility# 98341 MTI# 611650 CRAW
3530 MacArthur Blvd-Oakland T0600101790 B-14

LLI Sample # SW 5980194
LLI Group # 1194585
Account # 11997

Project Name: 98341

Collected: 05/12/2010 10:00 by CB

Submitted: 05/14/2010 09:00
Reported: 05/25/2010 14:17
Discard: 06/25/2010

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

OB147

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	t-Amyl methyl ether	994-05-8	N.D.	0.001	0.005	0.98
10950	Benzene	71-43-2	N.D.	0.0005	0.005	0.98
10950	t-Butyl alcohol	75-65-0	N.D.	0.020	0.098	0.98
10950	Ethyl t-butyl ether	637-92-3	N.D.	0.001	0.005	0.98
10950	Ethylbenzene	100-41-4	N.D.	0.001	0.005	0.98
10950	di-Isopropyl ether	108-20-3	N.D.	0.001	0.005	0.98
10950	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.005	0.98
10950	Toluene	108-88-3	N.D.	0.001	0.005	0.98
10950	Xylene (Total)	1330-20-7	N.D.	0.001	0.005	0.98
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	25.33

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	201013421129	05/14/2010 14:54	Larry E Bevins	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201013421129	05/14/2010 14:54	Larry E Bevins	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201013421129	05/14/2010 14:43	Larry E Bevins	n.a.
10950	BTEX + 5 Oxygenates 8260 Soil	SW-846 8260B	1	A101371AA	05/17/2010 15:51	Chelsea B Eastep	0.98
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201013421129	05/14/2010 14:44	Larry E Bevins	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10134A34A	05/17/2010 15:50	Elizabeth J Marin	25.33

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

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Analysis Report

Sample Description: B-14-W-100512 Grab Water
Facility# 98341 MTI# 611650 CRAW
3530 MacArthur Blvd-Oakland T0600101790 B-14

LLI Sample # WW 5980195
LLI Group # 1194585
Account # 11997

Project Name: 98341

Collected: 05/12/2010 12:30 by CB

Submitted: 05/14/2010 09:00
Reported: 05/25/2010 14:17
Discard: 06/25/2010

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

MOB14

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**		**ug/l**	**ug/l**	**ug/l**	
10943	t-Amyl methyl ether	994-05-8	N.D.	0.5	1	1
10943	Benzene	71-43-2	N.D.	0.5	1	1
10943	t-Butyl alcohol	75-65-0	N.D.	2	5	1
10943	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10943	di-Isopropyl ether	108-20-3	N.D.	0.5	1	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	0.6	0.5	1	1
10943	Toluene	108-88-3	N.D.	0.5	1	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1

General Sample Comments

State of California Lab Certification No. 2501
Trip blank vials were not received by the laboratory for this sample group.

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
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D101381AA	05/18/2010 17:54	Ginelle L Feister	1
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	D101381AA	05/18/2010 17:54	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	10138B20A	05/19/2010 00:17	Tyler O Griffin	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10138B20A	05/19/2010 00:17	Tyler O Griffin	1

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

Lancaster Laboratories

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Analysis Report

Sample Description: B-16-S-7.5-100512 Grab Soil
Facility# 98341 MTI# 611650 CRAW
3530 MacArthur Blvd-Oakland T0600101790 B-16

LLI Sample # SW 5980196
LLI Group # 1194585
Account # 11997

Project Name: 98341

Collected: 05/12/2010 13:30 by CB

Submitted: 05/14/2010 09:00
Reported: 05/25/2010 14:17
Discard: 06/25/2010

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

OB167

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	t-Amyl methyl ether	994-05-8	N.D.	0.001	0.006	1.1
10950	Benzene	71-43-2	N.D.	0.0006	0.006	1.1
10950	t-Butyl alcohol	75-65-0	N.D.	0.022	0.11	1.1
10950	Ethyl t-butyl ether	637-92-3	N.D.	0.001	0.006	1.1
10950	Ethylbenzene	100-41-4	N.D.	0.001	0.006	1.1
10950	di-Isopropyl ether	108-20-3	N.D.	0.001	0.006	1.1
10950	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	0.006	1.1
10950	Toluene	108-88-3	N.D.	0.001	0.006	1.1
10950	Xylene (Total)	1330-20-7	N.D.	0.001	0.006	1.1
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	1	24.37

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	201013421129	05/14/2010 14:54	Larry E Bevins	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201013421129	05/14/2010 14:54	Larry E Bevins	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201013421129	05/14/2010 14:47	Larry E Bevins	n.a.
10950	BTEX + 5 Oxygenates 8260 Soil	SW-846 8260B	1	A101381AA	05/19/2010 09:34	Holly Berry	1.1
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201013421129	05/14/2010 14:48	Larry E Bevins	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10134A34A	05/17/2010 16:26	Elizabeth J Marin	24.37

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

Lancaster Laboratories

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Analysis Report

Sample Description: B-16-W-100512 Grab Water
Facility# 98341 MTI# 611650 CRAW
3530 MacArthur Blvd-Oakland T0600101790 B-16

LLI Sample # WW 5980197
LLI Group # 1194585
Account # 11997

Project Name: 98341

Collected: 05/12/2010 13:35 by CB

Submitted: 05/14/2010 09:00
Reported: 05/25/2010 14:17
Discard: 06/25/2010

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

MOB16

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**		**ug/l**	**ug/l**	**ug/l**	
10943	t-Amyl methyl ether	994-05-8	N.D.	0.5	1	1
10943	Benzene	71-43-2	N.D.	0.5	1	1
10943	t-Butyl alcohol	75-65-0	N.D.	2	5	1
10943	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10943	di-Isopropyl ether	108-20-3	N.D.	0.5	1	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
10943	Toluene	108-88-3	N.D.	0.5	1	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1

General Sample Comments

State of California Lab Certification No. 2501
Trip blank vials were not received by the laboratory for this sample group.

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
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z101403AA	05/21/2010 01:16	Florida A Cimino	1
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	Z101403AA	05/21/2010 01:16	Florida A Cimino	1
01146	GC VOA Water Prep	SW-846 5030B	1	10138B20A	05/19/2010 00:38	Tyler O Griffin	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10138B20A	05/19/2010 00:38	Tyler O Griffin	1

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

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Analysis Report

Sample Description: B-15-S-7-100512 Grab Soil
Facility# 98341 MTI# 611650 CRAW
3530 MacArthur Blvd-Oakland T0600101790 B-15

LLI Sample # SW 5980198
LLI Group # 1194585
Account # 11997

Project Name: 98341

Collected: 05/12/2010 15:30 by CB

Submitted: 05/14/2010 09:00
Reported: 05/25/2010 14:17
Discard: 06/25/2010

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

OB157

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	t-Amyl methyl ether	994-05-8	N.D.	0.001	0.005	1
10950	Benzene	71-43-2	0.004	0.0005	0.005	1
10950	t-Butyl alcohol	75-65-0	N.D.	0.020	0.10	1
10950	Ethyl t-butyl ether	637-92-3	N.D.	0.001	0.005	1
10950	Ethylbenzene	100-41-4	0.27	0.001	0.005	1
10950	di-Isopropyl ether	108-20-3	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	0.003	0.001	0.005	1
10950	Xylene (Total)	1330-20-7	0.019	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.	56	2.1	2.1	51.55

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	201013421129	05/14/2010 14:54	Larry E Bevins	n.a.
00374	GC/MS - Bulk Sample Prep	SW-846 5030A	2	201013421129	05/14/2010 14:54	Larry E Bevins	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201013421129	05/14/2010 14:51	Larry E Bevins	n.a.
10950	BTEX + 5 Oxygenates 8260 Soil	SW-846 8260B	1	A101371AA	05/17/2010 19:53	Chelsea B Eastep	1
01150	GC - Bulk Soil Prep	SW-846 5030A	1	201013421129	05/14/2010 14:51	Larry E Bevins	n.a.
01725	TPH-GRO N. CA soil C6-C12	SW-846 8015B modified	1	10134A34A	05/17/2010 18:49	Elizabeth J Marin	51.55

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

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Analysis Report

Sample Description: B-15-W-100512 Grab Water
Facility# 98341 MTI# 611650 CRAW
3530 MacArthur Blvd-Oakland T0600101790 B-15

LLI Sample # WW 5980199
LLI Group # 1194585
Account # 11997

Project Name: 98341

Collected: 05/12/2010 15:45 by CB

Submitted: 05/14/2010 09:00
Reported: 05/25/2010 14:17
Discard: 06/25/2010

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

MOB15

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**		ug/l	ug/l	ug/l	
10943	t-Amyl methyl ether	994-05-8	N.D.	1	3	2.5
10943	Benzene	71-43-2	34	1	3	2.5
10943	t-Butyl alcohol	75-65-0	N.D.	5	13	2.5
10943	Ethyl t-butyl ether	637-92-3	N.D.	1	3	2.5
10943	Ethylbenzene	100-41-4	490	13	25	25
10943	di-Isopropyl ether	108-20-3	N.D.	1	3	2.5
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	1	3	2.5
10943	Toluene	108-88-3	17	1	3	2.5
10943	Xylene (Total)	1330-20-7	65	1	3	2.5
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	17,000	1,000	2,000	20
GC Extractable TPH	**SW-846 8015B**		ug/l	ug/l	ug/l	
08269	TPH-DRO water C10-C28	n.a.	40,000	1,500	4,700	50

General Sample Comments

State of California Lab Certification No. 2501
Trip blank vials were not received by the laboratory for this sample group.

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
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z101403AA	05/21/2010 01:39	Florida A Cimino	2.5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Z101403AA	05/21/2010 02:01	Florida A Cimino	25
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	Z101403AA	05/21/2010 01:39	Florida A Cimino	2.5
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	Z101403AA	05/21/2010 02:01	Florida A Cimino	25
01146	GC VOA Water Prep	SW-846 5030B	1	10138B20A	05/19/2010 04:38	Tyler O Griffin	20
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10138B20A	05/19/2010 04:38	Tyler O Griffin	20
07003	Extraction - DRO (Waters)	SW-846 3510C	1	101350016A	05/17/2010 09:15	Karen R Rettew	1
08269	TPH-DRO water C10-C28	SW-846 8015B	1	101350016A	05/21/2010 14:08	Dustin A Underkoffler	50

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

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: Chevron c/o CRA
Group Number: 1194585
Reported: 05/25/10 at 02:17 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: A101371AA	Sample number(s): 5980194,5980198								
t-Amyl methyl ether	N.D.	0.001	0.005	mg/kg	99	92	69-124	8	30
Benzene	N.D.	0.0005	0.005	mg/kg	105	103	80-120	2	30
t-Butyl alcohol	N.D.	0.020	0.10	mg/kg	105	108	71-122	3	30
Ethyl t-butyl ether	N.D.	0.001	0.005	mg/kg	97	94	70-122	3	30
Ethylbenzene	N.D.	0.001	0.005	mg/kg	99	97	80-120	2	30
di-Isopropyl ether	N.D.	0.001	0.005	mg/kg	102	98	73-121	4	30
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005	mg/kg	103	93	74-121	10	30
Toluene	N.D.	0.001	0.005	mg/kg	98	96	80-120	2	30
Xylene (Total)	N.D.	0.001	0.005	mg/kg	95	92	80-120	3	30
Batch number: A101381AA	Sample number(s): 5980196								
t-Amyl methyl ether	N.D.	0.001	0.005	mg/kg	94	93	69-124	2	30
Benzene	N.D.	0.0005	0.005	mg/kg	105	102	80-120	3	30
t-Butyl alcohol	N.D.	0.020	0.10	mg/kg	97	97	71-122	0	30
Ethyl t-butyl ether	N.D.	0.001	0.005	mg/kg	94	92	70-122	2	30
Ethylbenzene	N.D.	0.001	0.005	mg/kg	98	95	80-120	3	30
di-Isopropyl ether	N.D.	0.001	0.005	mg/kg	96	94	73-121	2	30
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005	mg/kg	95	93	74-121	2	30
Toluene	N.D.	0.001	0.005	mg/kg	95	94	80-120	2	30
Xylene (Total)	N.D.	0.001	0.005	mg/kg	94	91	80-120	3	30
Batch number: B101371AA	Sample number(s): 5980190								
t-Amyl methyl ether	N.D.	0.001	0.005	mg/kg	99	99	69-124	1	30
Benzene	N.D.	0.0005	0.005	mg/kg	109	100	80-120	9	30
t-Butyl alcohol	N.D.	0.020	0.10	mg/kg	108	113	71-122	5	30
Ethyl t-butyl ether	N.D.	0.001	0.005	mg/kg	103	101	70-122	2	30
Ethylbenzene	N.D.	0.001	0.005	mg/kg	102	93	80-120	9	30
di-Isopropyl ether	N.D.	0.001	0.005	mg/kg	105	104	73-121	0	30
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005	mg/kg	99	102	74-121	3	30
Toluene	N.D.	0.001	0.005	mg/kg	101	92	80-120	9	30
Xylene (Total)	N.D.	0.001	0.005	mg/kg	102	93	80-120	9	30
Batch number: B101381AA	Sample number(s): 5980192								
t-Amyl methyl ether	N.D.	0.001	0.005	mg/kg	106	106	69-124	0	30
Benzene	N.D.	0.0005	0.005	mg/kg	111	110	80-120	0	30
t-Butyl alcohol	N.D.	0.020	0.10	mg/kg	111	112	71-122	1	30
Ethyl t-butyl ether	N.D.	0.001	0.005	mg/kg	107	110	70-122	3	30
Ethylbenzene	N.D.	0.001	0.005	mg/kg	105	104	80-120	1	30
di-Isopropyl ether	N.D.	0.001	0.005	mg/kg	113	114	73-121	1	30
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.005	mg/kg	107	107	74-121	0	30
Toluene	N.D.	0.001	0.005	mg/kg	104	103	80-120	1	30
Xylene (Total)	N.D.	0.001	0.005	mg/kg	103	104	80-120	0	30
Batch number: D101381AA	Sample number(s): 5980191,5980193,5980195								
t-Amyl methyl ether	N.D.	0.5	1	ug/l	95		77-120		
Benzene	N.D.	0.5	1	ug/l	97		79-120		

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

Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1194585
Reported: 05/25/10 at 02:17 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
t-Butyl alcohol	N.D.	2.	5	ug/l	87		73-120		
Ethyl t-butyl ether	N.D.	0.5	1	ug/l	91		76-120		
Ethylbenzene	N.D.	0.5	1	ug/l	96		79-120		
di-Isopropyl ether	N.D.	0.5	1	ug/l	90		71-124		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	92		76-120		
Toluene	N.D.	0.5	1	ug/l	96		79-120		
Xylene (Total)	N.D.	0.5	1	ug/l	102		80-120		
Batch number: Z101403AA	Sample number(s): 5980197,5980199								
t-Amyl methyl ether	N.D.	0.5	1	ug/l	100		77-120		
Benzene	N.D.	0.5	1	ug/l	98		79-120		
t-Butyl alcohol	N.D.	2.	5	ug/l	94		73-120		
Ethyl t-butyl ether	N.D.	0.5	1	ug/l	99		76-120		
Ethylbenzene	N.D.	0.5	1	ug/l	98		79-120		
di-Isopropyl ether	N.D.	0.5	1	ug/l	98		71-124		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	100		76-120		
Toluene	N.D.	0.5	1	ug/l	98		79-120		
Xylene (Total)	N.D.	0.5	1	ug/l	99		80-120		
Batch number: 10134A34A	Sample number(s): 5980190,5980192,5980194,5980196,5980198								
TPH-GRO N. CA soil C6-C12	N.D.	1.0	1.0	mg/kg	82	89	67-119	8	30
Batch number: 10137C20A	Sample number(s): 5980191,5980193								
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	118	118	75-135	0	30
Batch number: 10138B20A	Sample number(s): 5980195,5980197,5980199								
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	118	118	75-135	0	30
Batch number: 101350016A	Sample number(s): 5980191,5980193,5980199								
TPH-DRO water C10-C28	N.D.	32.	100	ug/l	96		56-122		

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: A101371AA	Sample number(s): 5980194,5980198 UNSPK: 5980194								
t-Amyl methyl ether	78		59-123						
Benzene	93		55-143						
t-Butyl alcohol	86		47-153						
Ethyl t-butyl ether	80		58-124						
Ethylbenzene	84		44-141						
di-Isopropyl ether	87		59-133						
Methyl Tertiary Butyl Ether	84		55-129						
Toluene	86		50-146						
Xylene (Total)	78		44-136						
Batch number: A101381AA	Sample number(s): 5980196 UNSPK: P981205								
t-Amyl methyl ether	92		59-123						
Benzene	117		55-143						

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

Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1194585
Reported: 05/25/10 at 02:17 PM

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
t-Butyl alcohol	112		47-153						
Ethyl t-butyl ether	95		58-124						
Ethylbenzene	108		44-141						
di-Isopropyl ether	102		59-133						
Methyl Tertiary Butyl Ether	93		55-129						
Toluene	115		50-146						
Xylene (Total)	101		44-136						
Batch number: B101371AA	Sample number(s): 5980190 UNSPK: 5980190								
t-Amyl methyl ether	96		59-123						
Benzene	111		55-143						
t-Butyl alcohol	126		47-153						
Ethyl t-butyl ether	99		58-124						
Ethylbenzene	107		44-141						
di-Isopropyl ether	105		59-133						
Methyl Tertiary Butyl Ether	98		55-129						
Toluene	106		50-146						
Xylene (Total)	106		44-136						
Batch number: B101381AA	Sample number(s): 5980192 UNSPK: P981227								
t-Amyl methyl ether	88		59-123						
Benzene	109		55-143						
t-Butyl alcohol	106		47-153						
Ethyl t-butyl ether	94		58-124						
Ethylbenzene	88		44-141						
di-Isopropyl ether	106		59-133						
Methyl Tertiary Butyl Ether	96		55-129						
Toluene	97		50-146						
Xylene (Total)	87		44-136						
Batch number: D101381AA	Sample number(s): 5980191,5980193,5980195 UNSPK: P980219								
t-Amyl methyl ether	91	101	75-122	11	30				
Benzene	95	107	80-126	12	30				
t-Butyl alcohol	81	101	67-119	22	30				
Ethyl t-butyl ether	89	99	74-122	10	30				
Ethylbenzene	96	106	71-134	10	30				
di-Isopropyl ether	87	98	70-129	12	30				
Methyl Tertiary Butyl Ether	85	95	72-126	12	30				
Toluene	95	106	80-125	11	30				
Xylene (Total)	99	112	79-125	12	30				
Batch number: Z101403AA	Sample number(s): 5980197,5980199 UNSPK: P980226								
t-Amyl methyl ether	100	100	75-122	1	30				
Benzene	102	101	80-126	1	30				
t-Butyl alcohol	91	92	67-119	1	30				
Ethyl t-butyl ether	100	100	74-122	1	30				
Ethylbenzene	104	103	71-134	1	30				
di-Isopropyl ether	100	100	70-129	0	30				
Methyl Tertiary Butyl Ether	100	97	72-126	3	30				
Toluene	103	104	80-125	1	30				
Xylene (Total)	104	104	79-125	0	30				
Batch number: 10137C20A	Sample number(s): 5980191,5980193 UNSPK: P978817								

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

Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1194585
Reported: 05/25/10 at 02:17 PM

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
TPH-GRO N. CA water C6-C12	127		63-154						
Batch number: 10138B20A	Sample number(s): 5980195,5980197,5980199 UNSPK: P980213								
TPH-GRO N. CA water C6-C12	118		63-154						
Batch number: 101350016A	Sample number(s): 5980191,5980193,5980199 UNSPK: P979350								
TPH-DRO water C10-C28	90	87	19-173	3	20				

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: A101371AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5980194	99	106	100	94
5980198	87	92	105	96
Blank	99	107	99	93
LCS	101	107	100	99
LCSD	99	104	101	98
MS	100	107	101	98
Limits:	71-114	70-109	70-123	70-111

Analysis Name: VOCs by 8260B - Solid
Batch number: A101381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5980196	97	98	105	83
Blank	98	102	98	94
LCS	100	103	98	98
LCSD	100	100	99	98
MS	98	96	106	87
Limits:	71-114	70-109	70-123	70-111

Analysis Name: VOCs by 8260B - Solid
Batch number: B101371AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5980190	100	96	98	92
Blank	102	102	97	92
LCS	101	103	99	100
LCSD	101	104	99	99
MS	100	101	99	98
Limits:	71-114	70-109	70-123	70-111

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

Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1194585
Reported: 05/25/10 at 02:17 PM

Surrogate Quality Control

Analysis Name: VOCs by 8260B - Solid
Batch number: B101381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5980192	103	101	96	88
Blank	105	104	96	91
LCS	102	104	100	100
LCSD	101	101	99	100
MS	99	94	103	98
Limits:	71-114	70-109	70-123	70-111

Analysis Name: UST VOCs by 8260B - Water
Batch number: D101381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5980191	101	99	98	100
5980193	101	98	98	99
5980195	101	99	99	101
Blank	101	99	97	98
LCS	100	100	98	102
MS	98	99	97	102
MSD	100	100	99	102
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: Z101403AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5980197	99	97	101	100
5980199	98	96	101	103
Blank	99	97	100	101
LCS	99	99	101	100
MS	99	99	101	99
MSD	99	98	101	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA soil C6-C12
Batch number: 10134A34A

	Trifluorotoluene-F
5980190	65
5980192	74
5980194	77
5980196	74
5980198	95
Blank	80
LCS	77
LCSD	80
Limits:	61-122

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 10137C20A

	Trifluorotoluene-F

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

Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1194585
Reported: 05/25/10 at 02:17 PM

Surrogate Quality Control

5980191	92
5980193	93
Blank	91
LCS	116
LCSD	113
MS	119
Limits:	63-135

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 10138B20A
Trifluorotoluene-F

5980195	91
5980197	90
5980199	117
Blank	91
LCS	110
LCSD	111
MS	129
Limits:	63-135

Analysis Name: TPH-DRO water C10-C28
Batch number: 101350016A
Orthoterphenyl

5980191	84
5980193	78
5980199	115
Blank	94
LCS	110
MS	103
MSD	100
Limits:	54-127

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

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories
Where quality is a science.

For Lancaster Laboratories use only
Acct. #: 11997 Sample #: 5980190-99 SCR#:

MT#611650

Grp#1194585

Facility #: FORMER CHEVRON 9-8341
Site Address: 3530 MACARTHUR BLVD. OAKLAND, CA
Chevron PM: ROB SPEER Lead Consultant: CRA
Consultant/Office: RANCHO CORDOVA
Consultant Prj. Mgr.: JAMES KIBRNA
Consultant Phone #: 916 859 8900 Fax #: 916 859 8999
Sampler: CHRIS BENEDICT
Service Order #: ☐ Non SAR:

Analyses Requested

Preservation Codes

Field Point Name	Matrix	Repeat Sample	Top Depth	Year Month Day	Time Collected	New Field Pt.	Grab	Composite	Total Number of Containers	BTEX + MTBE 8260 ☒ 8021 ☐	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☐ Silica Gel Cleanup	8260 full scan	Oxygenates MTBE, DIPE, ETBE, TAME, TBA	Lead 7420 ☐ 7421 ☐
B-12-5	SOIL		5	10 5 11	1010		X		1	X	X			X	
B-12-8	SOIL		8	10 5 11	1040		X		1	X	X			X	
B-12	WATER			10 5 11	1115		X		8	X	X	X		X	
B-13-5	SOIL		5	10 5 11	1310		X		1	X	X			X	
B-13	WATER			10 5 11	1325		X		8	X	X	X		X	
B-14-5	SOIL		5	10 5 12	930		X		1	X	X			X	
B-14-7.5	SOIL		7.5	10 5 12	1000		X		1	X	X			X	
B-14	WATER			10 5 12	1230		X		6	X	X			X	
B-15-5	SOIL		5	10 5 12	1150		X		1	X	X			X	
B-16-5	SOIL		5	10 5 12	1315		X		1	X	X			X	
B-16-7.5	SOIL		7.5	10 5 12	1330		X		1	X	X			X	
B-16	WATER			10 5 12	1335		X		6	X	X			X	
B-15-7	SOIL		7	10 5 12	1530		X		1	X	X			X	

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

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

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

Comments / Remarks
HOLD: B-12-5 (SOIL)
B-14-5 (SOIL)
B-15-5 (SOIL)
B-16-5 (SOIL)

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

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

	Date	Time		Date	Time
Relinquished by:	5/13/10	1230	Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS (FedEx) Other			Received by: Katie Hartline	5/14/10	9:00
Temperature Upon Receipt 1.8-4.8°C			Custody Seals Intact? (Yes) No		

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories
Where quality is a science.

Acct. #: 11997 | For Lancaster Laboratories use only Sample #: 5980190-99 | SCR#:

MT#: 611650 | Grp#1194585

Facility #: FORMER CHEVRON 9-83241
Site Address: 3530 MACARTHUR BLVD. OAKLAND, CA
Chevron PM: ROB SPEER | Lead Consultant: CRA
Consultant/Office: RANCHO CORDOVA
Consultant Prj. Mgr.: JAMES KIERNAN
Consultant Phone #: 916 853 8900 | Fax #: 916 853 8999
Sampler: CHRIS BENEDICT
Service Order #: | ☐ Non SAR:

Analyses Requested

Preservation Codes

Preservative Codes
H = HCl | T = Thiosulfate
N = HNO_3 | B = NaOH
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☐ 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, 8260, TBA, DIPE, ETBE, TAME	Lead 7420 ☐ 7421 ☐
B-15	WATER			10 5 12	1545		X		8	X	X	X		X	

Comments / Remarks

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

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

Relinquished by:	Date	Time	Received by:	Date	Time
	5/12/10	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: Katie Hartline	5/14/10	9:00
Temperature Upon Receipt 1.8 C°			Custody Seals Intact? Yes No		

Lancaster Laboratories
Explanation of Symbols and Abbreviations

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

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

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

> greater than

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

ppb parts per billion

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

U.S. EPA data qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

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

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

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

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ATTACHMENT B

LOW-THREAT CHECKLIST

Site Name: Chevron #9-8341
Site Address: 3530 MacArthur Blvd, Oakland

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

General Criteria 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 Candidate sites must satisfy all three of these media-specific criteria: **1. Groundwater:** 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? 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: 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. **Is the site an active commercial petroleum fueling facility?** 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. **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?** If YES, check applicable scenarios: ☐ **1** ☐ **2** ☐ **3** ☐ **4** **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?** **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 ☐Yes ☐ No ☒ NA ☐ Yes ☐ No ☒ NA ☐ Yes ☐ No ☒ NA
3. Direct Contact and Outdoor Air Exposure: 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). **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)?** **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?** **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 ☐ Yes ☐ No ☒ NA ☐ Yes ☐ No ☒ NA