



**Mark Horne**  
Project Manager  
Marketing Business Unit

**Chevron Environmental  
Management Company**  
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Tel (925) 790-3964  
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Alameda County Health Care Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**RECEIVED**

By Alameda County Environmental Health 2:52 pm, Aug 18, 2015

Re: Former Texaco Service Station No. 359766  
2700 23<sup>rd</sup> Avenue  
Oakland, CA

I have reviewed the attached report titled *Second Quarter 2015 Groundwater Monitoring and Sampling Report*

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 to the best of my knowledge.

Sincerely,

A handwritten signature in blue ink that reads "Mark E. Horne".

Mark Horne  
Project Manager

Attachment: *Second Quarter 2015 Groundwater Monitoring and Sampling Report*



August 18, 2015

Reference No. 062086

Ms. Karel Detterman  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Re: Second Quarter 2015 Groundwater Monitoring and Sampling Report  
Former Texaco Service Station 359766  
2700 23<sup>rd</sup> Avenue  
Oakland, California  
ACEH Case RO0003098**

Dear Ms. Detterman:

On behalf of Chevron Environmental Management Company, GHD Services Inc (GHD) is submitting this *Second Quarter 2015 Groundwater Monitoring and Sampling Report* for the site referenced above (Figure 1). Groundwater monitoring and sampling was performed by Blaine Tech Services (BTS) of San Jose, California. BTS *Second Quarter 2015 Groundwater Monitoring Data Package* is included as Attachment A. Current groundwater monitoring and sampling data are presented in Table 1 and shown on Figure 2. Eurofins Lancaster Laboratory Environmental, LLCs' of Lancaster, Pennsylvania *Analytical Results* report is included as Attachment B.

## Results of Second Quarter 2015 Event

On June 19, 2015, BTS monitored and sampled the site wells per the established schedule.

Results of the current monitoring event indicate the following:

- Groundwater Flow Direction                      Southwest
- Hydraulic Gradient                                      0.06
- Depth to Groundwater                                Approximately 6 to 11 feet below grade

A summary of results from the current sampling event is presented below in Table A:

Table A - Groundwater Analytical Data

<i>Well ID</i>	<i>TPHg (µg/L)</i>	<i>Benzene (µg/L)</i>	<i>Toluene (µg/L)</i>	<i>Ethylbenzene (µg/L)</i>	<i>Total Xylenes (µg/L)</i>	<i>MTBE (µg/L)</i>
<b>WQOs</b>	<b>100</b>	<b>1</b>	<b>40</b>	<b>30</b>	<b>20</b>	<b>5</b>
MW-1	Monitored only					
MW-2	Monitored only					
MW-3	Monitored only					
MW-4	Monitored only					
MW-5	<50	<0.5	<0.5	<0.5	<0.5	<0.5
µg/L	Micrograms per Liter					
TPHg	Total Petroleum Hydrocarbons as Gasoline					
MTBE	Methyl tertiary butyl ether					
<x	Indicates constituent was not detected at or above laboratory reporting limit.					
WQOs	Water Quality Objective from Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater prepared by California Regional Water Quality Control Board – San Francisco Bay Region, Interim Final November 2007, updated December 2013.					
<b>Concentrations in Bold equal to or exceed WQO.</b>						

## Conclusions and Recommendations

No dissolved hydrocarbons were detected in MW-5 and the groundwater flow direction was to the southwest, in the direction of MW-5.

## Anticipated Future Activities

### **Groundwater Monitoring**

Blaine Tech will monitor and sample monitoring well MW- 5 and measure groundwater depth in onsite wells MW-1 through MW-4 per the established schedule. The results will be presented in a groundwater monitoring reports and submitted to Alameda County Environmental Health (ACEH).

Please contact Nathan Lee (925) 849-1003 if you have any questions or require additional information.

Cordially,

GHD



Nathan Lee, PG 8486

NL/aa/5

Encl.

Figure 1 Vicinity Map

Figure 2 Groundwater Elevation Contour Map

Table 1 Groundwater Monitoring and Sampling Data

Attachment A Monitoring Data Package

Attachment B Laboratory Analytical Report

cc: Mr. Mark Horne, Chevron (*electronic copy*)

Pedro and Maria Pulido, Property Owner

# Figures

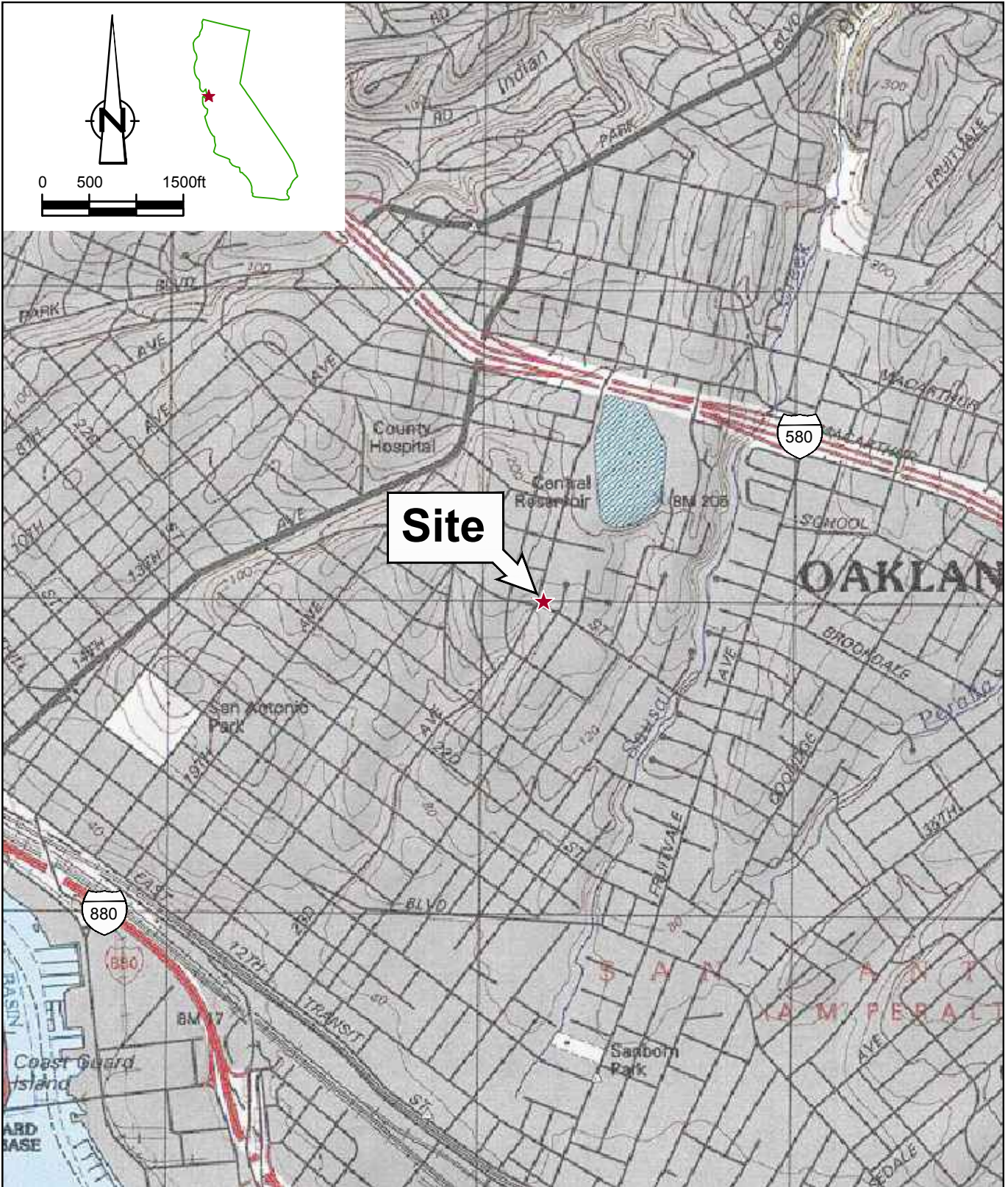
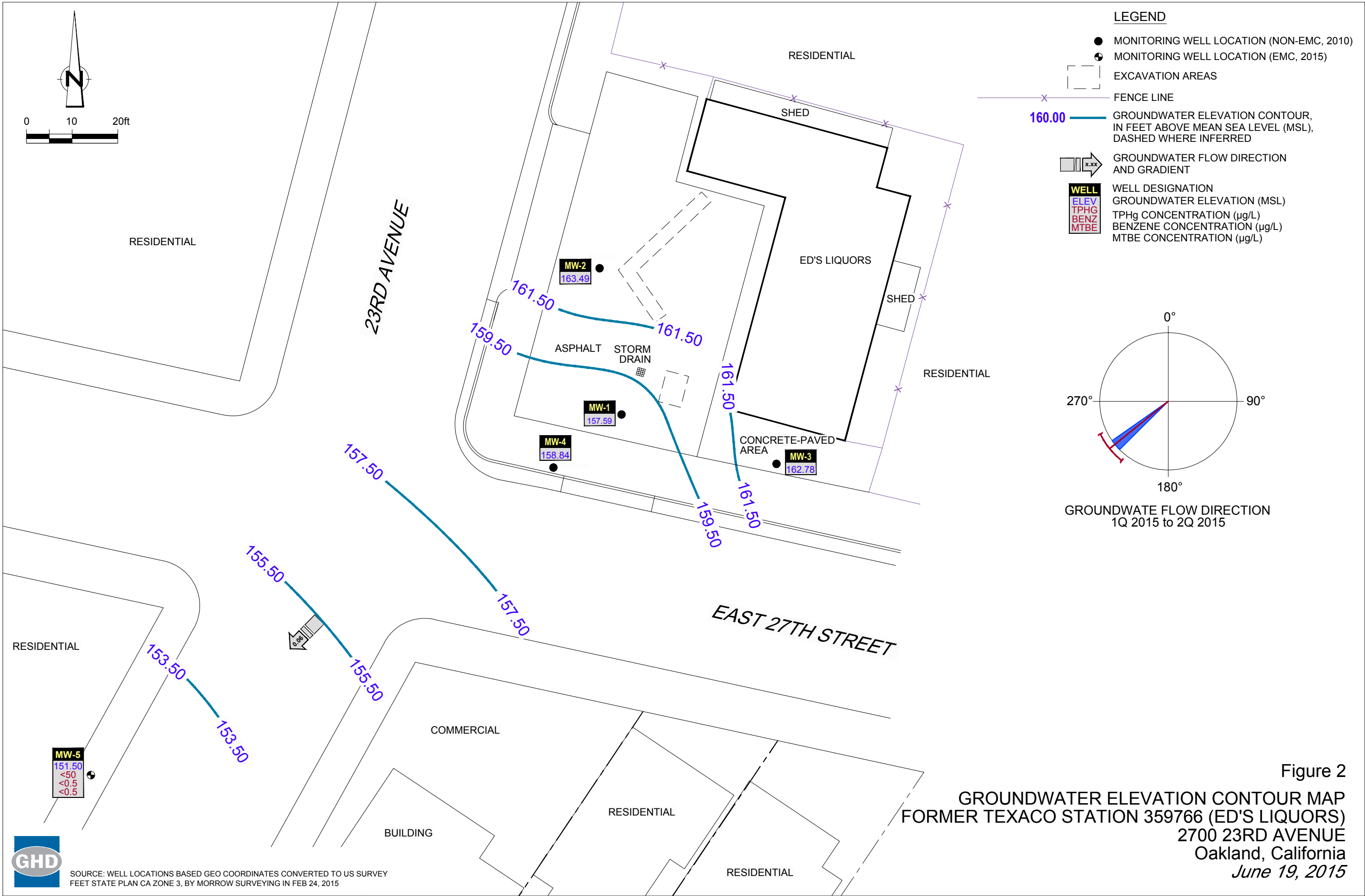


Figure 1

VICINITY MAP  
 FORMER TEXACO STATION 359766 (ED's LIQUORS)  
 2700 23rd AVENUE  
 Oakland, California





SOURCE: WELL LOCATIONS BASED GEO COORDINATES CONVERTED TO US SURVEY FEET STATE PLAN CA ZONE 3, BY MORROW SURVEYING IN FEB 24, 2015

# Table



**Table 1**  
**Groundwater Monitoring and Sampling Data**  
**Former Texaco Service Station 359766 (Ed's Liquors)**  
**2700 23rd Avenue**  
**Oakland, California**

Location	Date	TOC <sup>a</sup>	DTW	GWE	HYDROCARBONS			VOCS												ADDITIONAL		
					TPH-MO	TPH-DRO	TPH-GRO	B	T	E	X	M/TBE by SW8260	Naphthalene	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB			
	Units	ft	ft	ft-amsl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
MW-1	11/18/2010 <sup>1</sup>	168.84	7.93	160.91	<250	<50	--	--	--	--	--	1.3	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	02/14/2012 <sup>1</sup>	168.84	7.31	161.53	--	<50	<50	<0.50	<0.50	<0.50	<0.50	1.2	--	--	--	--	--	--	--	--	--	--
	03/13/2015	168.90	12.11	156.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	<b>06/19/2015</b>	<b>168.90</b>	<b>11.31</b>	<b>157.59</b>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	11/18/2010 <sup>1</sup>	170.33	7.52	162.81	<250	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	02/14/2012 <sup>1</sup>	170.33	6.37	163.96	--	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--	--	--	--
	03/13/2015	170.41	8.10	162.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	<b>06/19/2015</b>	<b>170.41</b>	<b>6.92</b>	<b>163.49</b>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	11/18/2010 <sup>1</sup>	168.67	5.14	161.15	<250	2,100	3,700	<0.5	<0.5	<0.5	0.84	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.0 <sup>9</sup> 0.68 <sup>d</sup> 2.0 <sup>6</sup> 2.2 <sup>b</sup> 6.6 <sup>f</sup>
	02/14/2012 <sup>1</sup>	168.67	4.98	163.69	--	<1,500	3,400	<0.50	<0.50	1.2	<0.50	<0.50	--	--	--	--	--	--	--	--	--	--
	03/13/2015	168.71	6.50	162.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	<b>06/19/2015</b>	<b>168.71</b>	<b>5.93</b>	<b>162.78</b>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	11/18/2010 <sup>1</sup>	168.40	--	--	<250	2,800	26,000	2,800	1,500	550	3,100	<0.5	210	<200	<50	<50	<50	<50	<50	<50	<50	790 <sup>1</sup> 210 <sup>l</sup>
	02/14/2012 <sup>1</sup>	168.40	6.45	161.95	--	<3,000	27,000	1,500	660	520	1,500	<5.0	--	--	--	--	--	--	--	--	--	--
	03/13/2015	168.47	10.70	157.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	<b>06/19/2015</b>	<b>168.47</b>	<b>9.63</b>	<b>158.84</b>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	02/26/2015 <sup>2</sup>	162.42	17.81	144.61	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	--
	03/13/2015	162.42	16.48	145.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	<b>06/19/2015</b>	<b>162.42</b>	<b>10.92</b>	<b>151.50</b>	--	--	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	--	--	--	--	--	--	--	--	--	--

Table 1

**Groundwater Monitoring and Sampling Data  
Former Texaco Service Station 359766 (Ed's Liquors)  
2700 23rd Avenue  
Oakland, California**

**Abbreviations and Notes:**

-- = Not analyzed

<x and ND = Not detected above the method detection limit x.

Total purgeable petroleum hydrocarbons (TPPH) by EPA Method 8260B

Total petroleum hydrocarbons as motor oil (TPHmo), TPH as diesel (TPHd), and TPH as gasoline (TPHg) by modified EPA Method 8015B

Benzene, Toluene, Ethylbenzene, Xylenes by EPA Method 8260B

Methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), 1,2-dichloroethane (1,2-DCA), 1,2-dibromoethane (EDB), tertiary butyl alcohol (TBA), naphthalene by EPA Method 8260B

Volatile organic compounds (VOCs) by EPA Method 8260B

a = Top of casing elevation was surveyed by Morrow Surveying on February 24, 2015; coordinates are California State Plan Zone 3, from GPS observation using CSDS virtual survey network, coordinate datum is NAD 83, reference geoid is GEOID03, and vertical datum is NAVD 88 from GPS observations. Prior to 2015, a survey was completed by licensed surveyor Ty Hawkins on December 20, 2010; based on California Coordinate System NAD 83, Zone III (2002.00), and elevations based on NAVD 88.

b = n-butyl benzene

c = 4-isopropyl toluene

d = Sec-butyl benzene

e = Isopropylbenzene

f = n-propyl benzene

g = 2-butanone

h = 4-methyl-2-pentanone

i = 1,2,4-trimethylbenzene

j = 1,3,5-trimethylbenzene

1 = Sampled by previous consultant

2 = Well development

# Attachment A

## Monitoring Data Package



June 25, 2015

Chevron Environmental Management Company  
Mark Horne  
6101 Bollinger Canyon Rd.  
San Ramon, CA 94583

Second Quarter 2015 Monitoring at  
Chevron Service Station 359766  
2700 23<sup>rd</sup> Ave.  
Oakland, CA

Monitoring performed on June 19, 2015

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**Blaine Tech Services, Inc. Groundwater Monitoring Event 150619-CK2**

This submission covers the routine monitoring of groundwater wells conducted on June 19, 2015 at this location. Five monitoring wells were measured for depth to groundwater (DTW). One monitoring well was sampled. All sampling activities were performed in accordance with local, state and federal guidelines.

Water levels measurements were collected using an electronic slope indicator. All sampled wells were purged using low flow methodology until water temperature, pH and conductivity stabilized. Purging was accomplished using peristaltic pumps, electric submersible pumps, positive air displacement pumps, or stainless steel, Teflon, or disposable bailers. Subsequent sample collection and sample handling was performed in accordance with EPA protocols. Alternately, where applicable, wells were sampled utilizing no-purge methodology. All reused equipment was decontaminated in an integrated stainless steel sink with de-ionized water supplied Hotsy pressure washer and Liquinox or equivalent.

Samples were delivered under chain-of-custody to Lancaster Laboratories of Lancaster, Pennsylvania, for analysis. Monitoring well purgewater and equipment rinsate water was collected and transported under bill-of-lading to Blaine Tech of San Jose, California.

Second Quarter Groundwater Monitoring at Chevron 359766, 2700 23<sup>rd</sup> Ave., Oakland, CA

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SAN DIEGO

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(408) 573-0555

FAX (408) 573-7771

LIC. 746684

[www.blainetech.com](http://www.blainetech.com)

Enclosed documentation from this event includes copies of the Well Gauging Sheet, Well Monitoring Data Sheets, and Chain-of-Custody.

Blaine Tech Services, Inc.'s activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrogeologic conditions or formulation of recommendations was performed.

Please call if you have any questions.

Sincerely,



Dustin Becker  
Blaine Tech Services, Inc.  
Senior Project Manager

attachments: SOP  
Well Gauging Sheet  
Individual Well Monitoring Data Sheets  
Wellhead Inspection Form  
Bill of Lading  
Calibration Log

cc: CRA  
Attn: Nathan Lee  
2300 Clayton Rd., Ste. 920  
Concord, CA 94520

Second Quarter Groundwater Monitoring at Chevron 359766, 2700 23<sup>rd</sup> Ave., Oakland, CA

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# BLAINE TECH SERVICES, INC. METHODS AND PROCEDURES FOR THE ROUTINE MONITORING OF GROUNDWATER WELLS AT CHEVRON SITES

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. We specialize in groundwater monitoring assignments and intentionally limit the scope of our services to those centered on the generation of objective information.

To avoid conflicts of interest, Blaine Tech Services, Inc. personnel do not evaluate or interpret the information we collect. As a state licensed contractor (C-57 well drilling –water – 746684) performing strictly technical services, we do not make any professional recommendations and perform no consulting of any kind.

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## **SAMPLING PROCEDURES OVERVIEW**

### **SAFETY**

All groundwater monitoring assignments performed for Chevron comply with Chevron's safety guidelines, 29 CFR 1910.120 and SB-198 Injury and Illness Prevention Program (IIPP). All Field Technicians receive the full 40-hour 29CFR 1910.120 OSHA SARA HAZWOPER course, medical clearance and on-the-job training prior to commencing any work on any Chevron site.

### **INSPECTION AND GAUGING**

Wells are inspected prior to evacuation and sampling. The condition of the wellhead is checked and noted according to a wellhead inspection checklist.

Standard measurements include the depth to water (DTW) and the total well depth (TD) obtained with industry standard electronic water level indicators that are graduated in increments of hundredths of a foot.

The water in each well is inspected for the presence of immiscibles. When free product is suspected, its presence is confirmed using an electronic interface probe (e.g. GeoTech). No samples are collected from a well containing product.

### **TRADITIONAL PURGING & SAMPLING**

#### **Evacuation**

Depth to water measurements are collected by our personnel prior to purging and minimum purge volumes are calculated anew for each well based on the height of the water column and the diameter of the well. Expected purge volumes are never less than three case volumes and are set at no less than four case volumes in some jurisdictions.

Well purging devices are selected on the basis of the well diameter and the total volume to be evacuated. In most cases the well will be purged using an electric submersible pump (i.e. Grundfos) suspended near (but not touching) the bottom of the well.

## **Parameter Stabilization**

Well purging completion standards include minimum purge volumes, but additionally require stabilization of specific groundwater parameters prior to sample collection. Typical groundwater parameters used to measure stability are electrical conductivity, pH, and temperature. Instrument readings are obtained at regular intervals during the evacuation process (no less than once per case volume).

Stabilization standards for routine quarterly monitoring of fuel sites include the following: Temperature is considered to have stabilized when successive readings do not fluctuate more than +/- 1 degree Celsius. Electrical conductivity is considered stable when successive readings are within 10%. pH is considered to be stable when successive readings remain constant or vary no more than 0.2 of a pH unit.

## **Sample Collection**

All samples are collected using disposable bailers.

## **Sample Containers**

Sample material is decanted directly from the sampling bailer into sample containers provided by the laboratory that will analyze the samples. The transfer of sample material from the bailer to the sample container conforms to specifications contained in the USEPA T.E.G.D. The type of sample container, material of construction, method of closure and filling requirements are specific to the intended analysis. Chemicals needed to preserve the sample material are commonly placed inside the sample containers by the laboratory or glassware vendor prior to delivery of the bottle to our personnel. The laboratory sets the number of replicate containers.

## **Dewatered Wells**

Normal evacuation removes no less than three case volumes of water from the well. However, less water may be removed in cases where the well dewateres and does not immediately recharge.

## **Measuring Recharge**

Upon completion of well purging, a depth to water measurement is collected and notated to ensure that the well has recharged to within 80% of its static, pre-purge level prior to sampling.

Wells that do not immediately show 80% recharge or dewatered wells will be allowed approximately 2 hours to recharge prior to sampling or will be sampled at site departure. All wells requiring off-site traffic control in the public right-of-way, the 80% recharge rule may be disregarded in the interests of Health and Safety. The sample may be collected as soon as there is sufficient water. The water level at time of sampling will be noted.

## **Dissolved Oxygen Measurements**

Dissolved Oxygen readings are taken pre- and/or post-purge using YSI meters (e.g. YSI Model 550) or HACH field test kits.

The YSI meters are able to collect accurate in-situ readings. The probe allows downhole measurements to be taken from wells with diameters as small as two inches. The probe and reel is decontaminated between wells as described above. The meter is calibrated

as per the instructions in the operating manual. The probe is lowered into the water column and the reading is allowed to stabilize prior to collection.

### **Oxidation Reduction Potential Measurements (ORP)**

All readings are obtained with either Corning or Myron-L meters (e.g. Corning ORP-65 or a Myron-L Ultrameter). The meter is cleaned between wells as described above. The meter is calibrated at the start of each day according to the instruction manual.

## **LOW FLOW SAMPLING USING SAMPLE-PRO BLADDER PUMP**

### **Calibration**

Calibrate YSI Flow Cell as per manufacturer's specifications. Thoroughly rinse probe and cup between parameters. Calibration order as follows:

1. pH (use 3-point calibration of 7, 4, 10)
2. Specific Conductance
3. Temperature

### **Purging & Sampling Collection**

1. Insert new bladder into Sample-Pro pump housing.
2. Remove dedicated PE tubing from the well or start with new PE tubing cut to the required length.
3. Attach the PE tubing to the Sample-Pro Bladder Pump.
4. Gently lower the Sample-Pro Bladder Pump, and PE tubing into the well, placing the Sample-Pro Bladder Pump intake at the specified screened interval. Take care to minimize disturbance to the water column.
5. Direct effluent line into YSI 556 Flow Cell.
6. Set Sample-Pro Bladder Pump speed at 100 - 500 ml/min.
7. Collect water quality parameter measurements for temperature, pH, conductivity, turbidity, DO and ORP every 3-5 minutes.
8. Monitor drawdown during purging with electronic water level meter. Record water level with each parameter measurement. **MAXIMUM DRAWDOWN IS 0.33 FEET.**
9. Collect parameter measurements until stability is achieved. Stability is defined as three consecutive measurements where:

Temp	± 1° Celsius
pH	± 0.1
Conductivity	± 3%

10. Sample may be collected once one system has been removed and stability readings have been achieved after the system volume has been removed.
11. Disconnect effluent line from YSI 556 Flow Cell.
12. Sample through effluent line while maintaining constant flow rate.
13. Remove Sample-Pro Bladder Pump, and PE tubing from well.
14. Detach and reinstall dedicated PE tubing in well.

## **PURGEWATER CONTAINMENT**



All non-hazardous purgewater evacuated from each groundwater monitoring well is captured and contained in on-board storage tanks on the Sampling Vehicle and/or special water hauling trailers. Effluent from the decontamination of reusable apparatus (sounders, electric pumps and hoses etc.), consisting of groundwater combined with deionized water and non-phosphate soap, is also captured and pumped into effluent tanks.

Non-hazardous purgewater is transported under standard Bill of Lading or Non-Hazardous Waste Manifest to a Blaine Tech Services, Inc. facility before being transported to a Chevron approved disposal facility

### **TRIP BLANKS**

Trip Blanks, if requested, are taken to the site and kept inside the sample cooler for the duration of the event. They are turned over to the laboratory for analysis with the samples from that site.

### **DUPLICATES**

Duplicates, if requested, may be collected at a site.

### **SAMPLE STORAGE**

All sample containers are promptly placed in food grade ice chests for storage in the field and transport (direct or via our facility) to the designated analytical laboratory. These ice chests contain quantities of restaurant grade ice as a refrigerant material. The samples are maintained in either an ice chest or a refrigerator until relinquished into the custody of the laboratory or laboratory courier.

### **DOCUMENTATION CONVENTIONS**

A label must be affixed to all sample containers. In most cases these labels are generated by our office personnel and are partially preprinted. Labels can also be hand written by our field personnel. The site is identified with the store number and site address, as is the particular groundwater well from which the sample is drawn (e.g. MW-1, MW-2, S-1 etc.). The time and date of sample collection along with the initials of the person who collects the sample are handwritten onto the label. Field documentation is contemporaneous.

### **DECONTAMINATION**

All equipment is brought to the site in clean and serviceable condition and is cleaned after use in each well and before subsequent use in any other well. Equipment such as hose reels, pumps and bailers is decontaminated before leaving the site.

The primary decontamination device is a commercial steam cleaner. The steam cleaner is de-tuned to function as a hot pressure washer that is then operated with high quality deionized water that is produced at our facility and stored onboard our sampling vehicle. Cleaning is facilitated by the use of proprietary fixtures and devices included in the patented workstation (U.S. Patent 5,535,775) that is incorporated in each sampling vehicle. Any sensitive equipment or parts (i.e. Dissolved Oxygen sensor membrane, water level

indicator, etc.) that cannot be washed using the high pressure water, will be sprayed with a non-phosphate soap and deionized water solution and rinsed with deionized water.

### **FERROUS IRON MEASUREMENTS**

All field measurements are collected at time of sampling with a HACH test kit.



## LOW FLOW WELL MONITORING DATA SHEET

Project #: 150619-CW2	Client: CHEVRON
Sampler: CR	Start Date: 6/19/15
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8
Total Well Depth: 19.81	Depth to Water Pre: 10.92 Post: 10.99
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	Flow Cell Type: YSI PRO PLUS

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump  
 Sampling Method: Dedicated Tubing New Tubing Other  
 Flow Rate: 200 ml/min Pump Depth: 18.0'

@ 0950 Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	DTW/ Observations
0951	20.8	7.63	1878	11	3.57	171.8	INITIAL	10.93
0954	20.8	7.58	1834	10	3.98	171.4	600	10.94
0957	20.8	7.52	1781	8	4.08	170.7	1200	10.96
1000	20.8	7.50	1748	8	4.10	169.8	1800	10.97
1003	20.8	7.49	1744	7	4.12	169.4	2400	10.97
1006	20.8	7.49	1743	7	4.13	169.3	3000	10.99

Did well dewater? Yes  No  Amount actually evacuated: 3000

Sampling Time: 1010 Sampling Date: 6/19/15

Sample I.D.: MW-5 Laboratory: LANCASTER

Analyzed for: TPH-G BTEX MTBE TPH-D Other: SEE LOG

Equipment Blank I.D.: QA @ Time 0925 Duplicate I.D.:

**CHAIN OF CUSTODY FORM**

**Chevron Environmental Management Company ■ 6111 Bollinger Canyon Rd. ■ San Ramon, CA 94583**      **COC 1 of 1**

Chevron Site Number: 359766  
 Chevron Site Global ID: T060000004218  
 Chevron Site Address: 2700 23<sup>rd</sup> Ave., Oakland, CA  
 Chevron PM: Mark Horne  
 Chevron PM Phone No.: (925) 790-3964  
 Retail and Terminal Business Unit (RTBU) Job  
 Construction/Retail Job

Chevron Consultant: CRA  
 Address: 2300 Clayton Rd., Ste. 920, Concord, CA  
 Consultant Contact: Nathan Lee  
 Consultant Phone No. 925-849-1003  
 Consultant Project No. 150619-CX2  
 Sampling Company: Blaine Tech Services  
 Sampled By (Print): CORY KILPATRICK  
 Sampler Signature: [Signature]

**ANALYSES REQUIRED**

- EPA 8260B/GC/MS TPH-G  BIEX  MTBE  OXYGENATES  HVOC
- EPA 8015B GRO  DRO  ORO  HC SCREENING
- EPA 8021B BTEX  MTBE
- EPA 6010 Ca, Fe, K, Mg, Mn, Na
- EPA 6010/7000 TITLE 22 METALS  TTLC  STLC
- EPA 150.1 PH  EPA 310.1 ALKALINITY
- SM2510B SPECIFIC CONDUCTIVITY
- EPA 418.1 TRPH  EPA 413.1 OIL & GREASE
- EPA 8260 ETHANOL
- EPA 8015 TPH-D

Preservation Codes  
 H = HCL T= Thiosulfate  
 N = HNO<sub>3</sub> B = NaOH  
 S = H<sub>2</sub>SO<sub>4</sub> O = Other

Charge Code: **NWRTB-0098247-0-OML**  
 NWRTB 00SITE NUMBER-0-WBS  
**(WBS ELEMENTS:**  
 SITE ASSESSMENT: A1L    REMEDIATION IMPLEMENTATION: R5L  
 SITE MONITORING: OML    OPERATION MAINTENANCE & MONITORING: M1L  
**THIS IS A LEGAL DOCUMENT. ALL FIELDS MUST BE FILLED OUT CORRECTLY AND COMPLETELY.**

**Lancaster Laboratories**  
 Lancaster, PA  
 Lab Contact: Nicole Maljovec  
 2425 New Holland Pike,  
 Lancaster, PA 17601  
 Phone No:  
 (717)656-2300

Other Lab	Temp. Blank	Check
	Time	Temp.
	0925	2°C

Special Instructions  
 Must meet lowest detection limits possible for 8260 compounds.

SAMPLE ID				Sample Time	# of Containers	Container Type	ANALYSES REQUIRED												Notes/Comments																	
Field Point Name	Matrix	Top Depth	Date (yymmdd)				EPA 8260B/GC/MS TPH-G	BIEX	MTBE	OXYGENATES	HVOC	EPA 8015B GRO	DRO	ORO	HC SCREENING	EPA 8021B BTEX	MTBE	EPA 6010 Ca, Fe, K, Mg, Mn, Na		EPA 6010/7000 TITLE 22 METALS	TTLC	STLC	EPA 150.1 PH	EPA 310.1 ALKALINITY	SM2510B SPECIFIC CONDUCTIVITY	EPA 418.1 TRPH	EPA 413.1 OIL & GREASE	EPA 8260 ETHANOL	EPA 8015 TPH-D							
MW-5	W		150619	1010	6	H VJAS	X	X																												
CR	T		↓	0925	2	H VJAS	X	X																												

Relinquished By: <u>[Signature]</u>	Company: <u>BTS</u>	Date/Time: <u>6/11/15 1450</u>	Relinquished To:	Company:	Date/Time:	Turnaround Time: Standard: 24 Hours <input type="checkbox"/> 48 hours <input type="checkbox"/> 72 Hours <input type="checkbox"/> Other: <input type="checkbox"/>
Relinquished By:	Company:	Date/Time:	Relinquished To:	Company:	Date/Time:	
Relinquished By:	Company:	Date/Time:	Relinquished To:	Company:	Date/Time:	Intact:      On Ice:      Temp:      COC #









# Attachment B Laboratory Analytical Report

## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

Chevron  
6001 Bollinger Canyon Rd L4310  
San Ramon CA 94583

July 01, 2015

**Project: 359766**

Submittal Date: 06/20/2015  
Group Number: 1570819  
PO Number: 0015166637  
Release Number: HORNE  
State of Sample Origin: CA

Client Sample Description

MW-5-W-150619 NA Water  
QA-T-150619 NA Water

Lancaster Labs (LL) #

7937971  
7937972

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

ELECTRONIC COPY TO	CRA	Attn: Nathan Lee
ELECTRONIC COPY TO	Chevron	Attn: Anna Avina
ELECTRONIC COPY TO	Blaine Tech Services, Inc.	Attn: Dustin Becker
ELECTRONIC COPY TO	Chevron c/o CRA	Attn: Report Contact

Respectfully Submitted,



Amek Carter  
Specialist

(717) 556-7252

Sample Description: MW-5-W-150619 NA Water  
Facility# 359766 BTST  
2700 23rd Ave-Oakland T10000004218

LL Sample # WW 7937971  
LL Group # 1570819  
Account # 10991

Project Name: 359766

Collected: 06/19/2015 10:10 by CK

Chevron

6001 Bollinger Canyon Rd L4310  
San Ramon CA 94583

Submitted: 06/20/2015 10:50

Reported: 07/01/2015 19:37

230M5

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>						
10945	Benzene	71-43-2	N.D.	ug/l 0.5	ug/l 1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
<b>GC Volatiles SW-846 8015B</b>						
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	ug/l 50	ug/l 100	1

### General Sample Comments

CA ELAP Lab Certification No. 2792

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
10945	BTEX/MTBE	SW-846 8260B	1	F151804AA	06/29/2015 22:09	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F151804AA	06/29/2015 22:09	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15178A20A	06/27/2015 19:49	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	15178A20A	06/27/2015 19:49	Jeremy C Giffin	1

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

Sample Description: QA-T-150619 NA Water  
Facility# 359766 BTST  
2700 23rd Ave-Oakland T10000004218

LL Sample # WW 7937972  
LL Group # 1570819  
Account # 10991

Project Name: 359766

Collected: 06/19/2015 09:25

Chevron

Submitted: 06/20/2015 10:50

6001 Bollinger Canyon Rd L4310

Reported: 07/01/2015 19:37

San Ramon CA 94583

230QA

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles SW-846 8260B</b>						
10945	Benzene	71-43-2	N.D.	ug/l 0.5	ug/l 1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
<b>GC Volatiles SW-846 8015B</b>						
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	ug/l 50	ug/l 100	1

### General Sample Comments

CA ELAP Lab Certification No. 2792

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
10945	BTEX/MTBE	SW-846 8260B	1	F151804AA	06/29/2015 21:26	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F151804AA	06/29/2015 21:26	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15178A20A	06/27/2015 13:01	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	15178A20A	06/27/2015 13:01	Jeremy C Giffin	1

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

## Quality Control Summary

Client Name: Chevron  
Reported: 07/01/2015 19:37

Group Number: 1570819

Matrix QC may not be reported if insufficient sample or 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.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: F151804AA	Sample number(s): 7937971-7937972								
Benzene	N.D.	0.5	1	ug/l	103		78-120		
Ethylbenzene	N.D.	0.5	1	ug/l	97		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	94		75-120		
Toluene	N.D.	0.5	1	ug/l	103		80-120		
Xylene (Total)	N.D.	0.5	1	ug/l	98		80-120		
Batch number: 15178A20A	Sample number(s): 7937971-7937972								
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	91	90	80-139	1	30

### Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: F151804AA	Sample number(s): 7937971-7937972 UNSPK: 7937971								
Benzene	114	112	72-134	2	30				
Ethylbenzene	106	107	71-134	2	30				
Methyl Tertiary Butyl Ether	98	99	72-126	1	30				
Toluene	111	110	80-125	0	30				
Xylene (Total)	106	106	79-125	0	30				

### Surrogate Quality Control

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

Analysis Name: BTEX/MTBE  
Batch number: F151804AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7937971	94	103	100	93
7937972	93	104	100	94
Blank	96	105	100	94
LCS	96	105	101	97
MS	94	104	100	95
MSD	95	107	100	98

\*- 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  
Reported: 07/01/2015 19:37

Group Number: 1570819

### Surrogate Quality Control

Limits: 80-116                      77-113                      80-113                      78-113

Analysis Name: TPH-GRO N. CA water C6-C12

Batch number: 15178A20A

Trifluorotoluene-F

---

7937971 95

7937972 94

Blank 93

LCS 105

LCSD 105

---

Limits: 63-135

\*- 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.





# Explanation of Symbols and Abbreviations

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

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m<sup>3</sup></b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter
<b>&lt;</b>	less than		
<b>&gt;</b>	greater than		
<b>ppm</b>	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 per liter of gas.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

## Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value  $\geq$  the Method Detection Limit (MDL or DL) and the  $<$  Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column  $>40\%$ . The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column  $>100\%$ . The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

## Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

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

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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