

5900 Hollis Street, Suite A Emeryville, California 94608

Telephone: (510) 420-0700 Fax: (510) 420-9170

http://www.craworld.com

October 30, 2009

Reference No. 060058

#### **RECEIVED**

Mr. Jerry Wickham Alameda County Environmental Health Services 1131 Harbor Bay Parkway, Suite 250

Alameda, California 94502-6577

8:44 am, Mar 29, 2010

Alameda County Environmental Health

Re: Third Quarter 2009 Groundwater Monitoring and Sampling Report

Former Texaco Service Station 21-1253

930 Springtown Boulevard Livermore, California

Fuel Leak Case No. RO000189

Dear Mr. Wickham:

Conestoga-Rovers & Associates is submitting the attached *Groundwater Monitoring and Sampling Report* for the site referenced above on behalf of Chevron Environmental Management Company (Chevron). The report prepared by Gettler-Ryan Inc. (G-R) and dated August 20, 2009 presents the results of the Third Quarter 2009 sampling and monitoring event. Also attached are Figure 1 (Vicinity Map), Figure 2 (Concentration Map) and Figure 3 (Potentiometric Map) presenting the Third Quarter 2009 analytical results and groundwater flow direction data. A perjury letter from Chevron and Professional Geologist stamp are included within the G-R report.

Equal Employment Opportunity Employer



October 30, 2009 Reference No. 060058

Please contact Charlotte Evans at (510) 420-3351 if you have any questions or require additional information.

Sincerely,

**CONESTOGA-ROVERS & ASSOCIATES** 

Charlotte Evans

IH/doh/5

Enc.

Figure 1 Site Vicinity Map

Figure 2 Hydrocarbon Concentrations in Groundwater

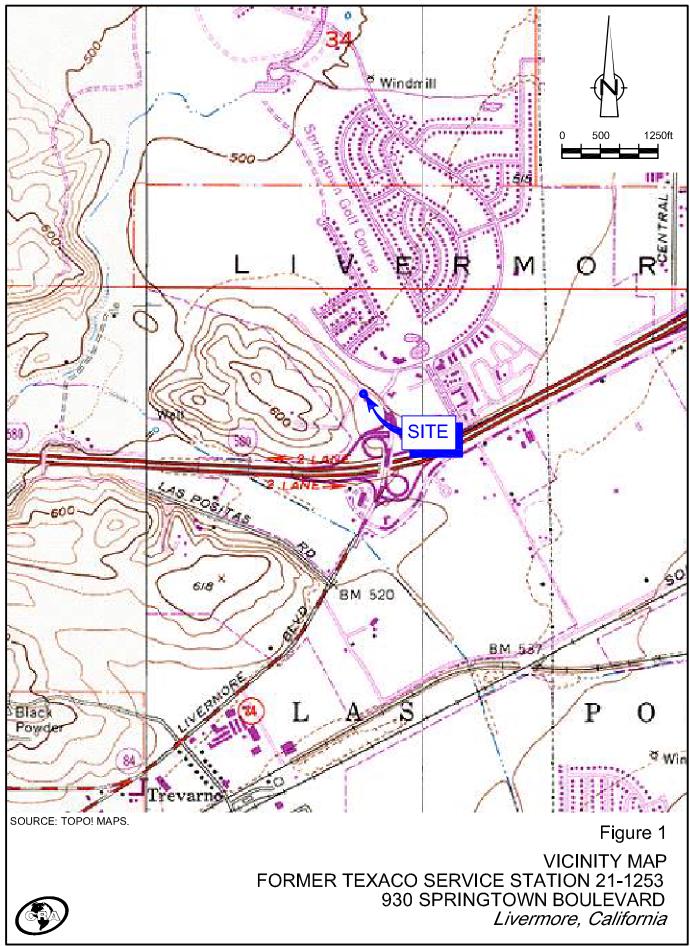
Figure 3 Potentiometric Map

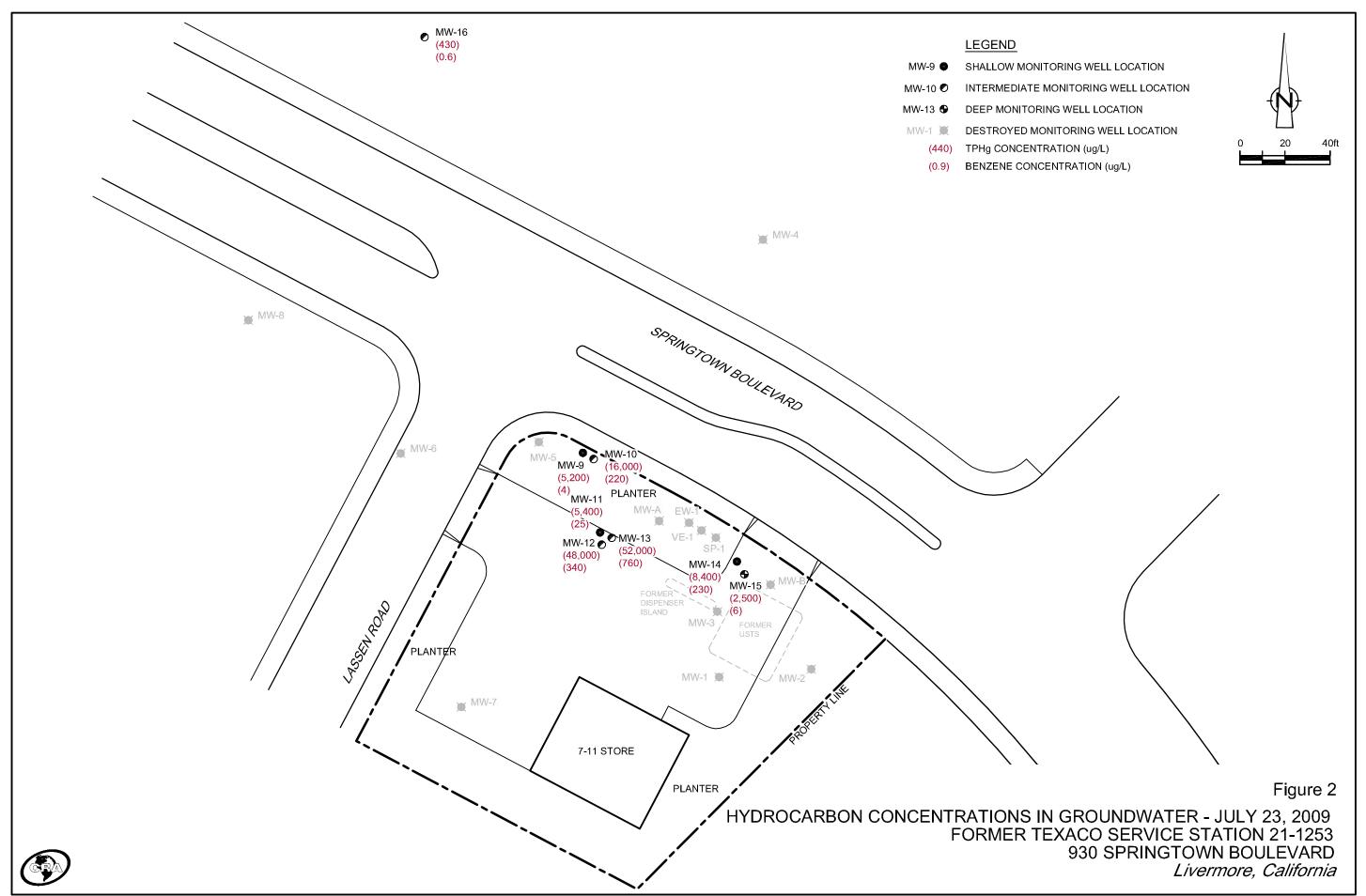
Attachment A August 20, 2009 G-R Groundwater Monitoring and Sampling Report

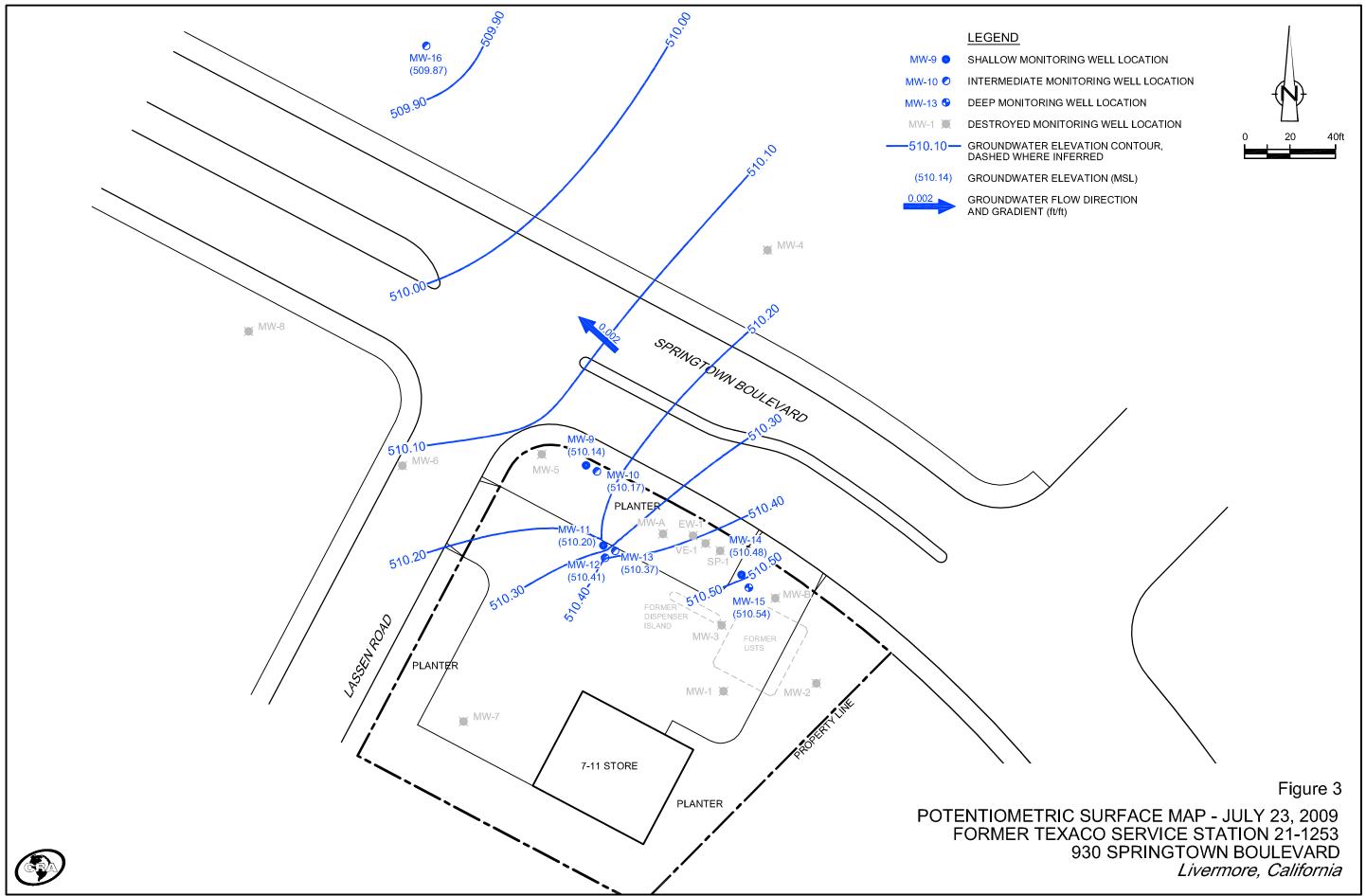
cc: Mr. Ian Robb, Chevron Environmental Management Company

Mr. Joe Zadik

### **FIGURES**







ATTACHMENT A
AUGUST 20, 2009 G-R GROUNDWATER MONITORING AND SAMPLING REPORT



### TRANSMITTAL

August 20, 2009 G-R #385867

TO: Ms. Charlotte Evans

Conestoga-Rovers & Associates 5900 Hollis Street, Suite A Emeryville, CA 94608

(VIA PDF)

FROM: Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6747 Sierra Court, Suite J Dublin, California 94568 RE: Former Texaco Service Station

930 Springtown Blvd. Livermore, California

(Site #211253)

#### WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	August 19, 2009	Groundwater Monitoring and Sampling Report Third Quarter Event of July 23, 2009

#### COMMENTS:

Pursuant to your request, we are providing you with a copy of the above referenced report for <u>your</u> <u>use and distribution to the following:</u>

Mr. Ian Robb, Chevron EMC, 6111 Bollinger Canyon Road, Room 3612, San Ramon, CA 94583 (NO COPY)

Mr. Jerry Wickham, Alameda County Environmental Health, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577 (Distributed by CRA via PDF)

Mr. Ken Hilliard, Environmental Services, 7-Eleven, Inc., One Arts Plaza, 1722 Routh St., Suite 1000, Dallas, TX 75201

Mr. Wyman Hong, Zone 7 Water Agency, 100 North Canyons Parkway, Livermore, CA 94551

#### **Enclosures**

Trans/211253-IR



Ian Robb Project Manager Marketing Business Unit Chevron Environmental
Management Company
6001 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 842-9496
Fax (925) 842-8370
Janrobb@chevron.com

August 20, 2009

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

RE: Chevron Service Station # 211253

Address 930 Springtown Blvd., Livermore California

I have reviewed the attached routine groundwater monitoring report dated August 20, 2009

Lagree 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 Gettler-Ryan Inc., 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,

Ian Robb

Attachment: Report

### **WELL CONDITION STATUS SHEET**

Client/Facility #:	Chevron #211253	Job#	385867
Site Address:	930 Springtown Blvd.	Event Date:	7/23/09
City:	Livermore, CA	Sampler:	SK AW

WELL ID	Vault Frame Condition	Gasket/ O-Ring (M)missing	BOLTS (M) Missing (R) Replaced	Bolt Flanges B= Broken S= Stripped R=Retap	APRON Condition C=Cracked B=Broken G=Gone	Grout Seat (Deficient) inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y/N	REPLACE CAP Y/N	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Yes / No
MW-9	ok						$\rightarrow$	7	y	12"/Encol2	$\overline{\lambda}$
MW-10	oh -						<del>&gt;</del>	Y	Y	12"/Emco/2	1
MW-11	ch-						<del>&gt;</del>	7	Ÿ	12"/Enco/2	
MU-12	de		9				<del>-&gt;</del>	4	4	12"/Emco/2	
MW-13	ok-						<b>^</b>	Y	Y	12"/Emco/2	
MW-14	de						~	P	P	12"/EMCd2	
MW-15	de						~~ <u>~</u>	γ	ÿ	12"/Encole	
MW-16	oh -				->	48"	oh	4	P	12"/Emco/2	
	_							-			
	-									с	
									\$15 <b>.</b>		-
											· · · · · · · · · · · · · · · · · · ·

Comments			
•	 <del>-</del>	 <del></del>	 
	<del></del>	 <del></del>	 

0

August 19, 2009 G-R Job #385867

Mr. Ian Robb Chevron Environmental Management Company 6111 Bollinger Canyon Road, Room 3612 San Ramon, CA 94583

RE: Third Quarter Event of July 23, 2009

Groundwater Monitoring & Sampling Report Former Texaco Service Station #211253 930 Springtown Boulevard Livermore, California

Dear Mr. Robb:

This report documents the well development and the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater levels were measured and the wells were checked for the presence of separate-phase hydrocarbons. Static water level data, groundwater elevations, and separate-phase hydrocarbon thickness (if any) are presented in the attached Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells and submitted to a state certified laboratory for analyses. The field data sheets for this event are attached. Analytical results are presented in the table(s) listed below. The chain of custody document and laboratory analytical report are also attached. All groundwater and decontamination water generated during sampling activities was removed from the site, per the Standard Operating Procedure.

No. 6882

Please call if you have any questions or comments regarding this report. Thank you.

Sincerely,

Deanna L. Harding Project Coordinator

Douglas J. Lee

Senior Geologist, P.G. No. 6882

Figure 1:

Potentiometric Map

Table 1: Attachments: Groundwater Monitoring Data and Analytical Results Standard Operating Procedure - Groundwater Sampling

Field Data Sheets

Chain of Custody Document and Laboratory Analytical Reports

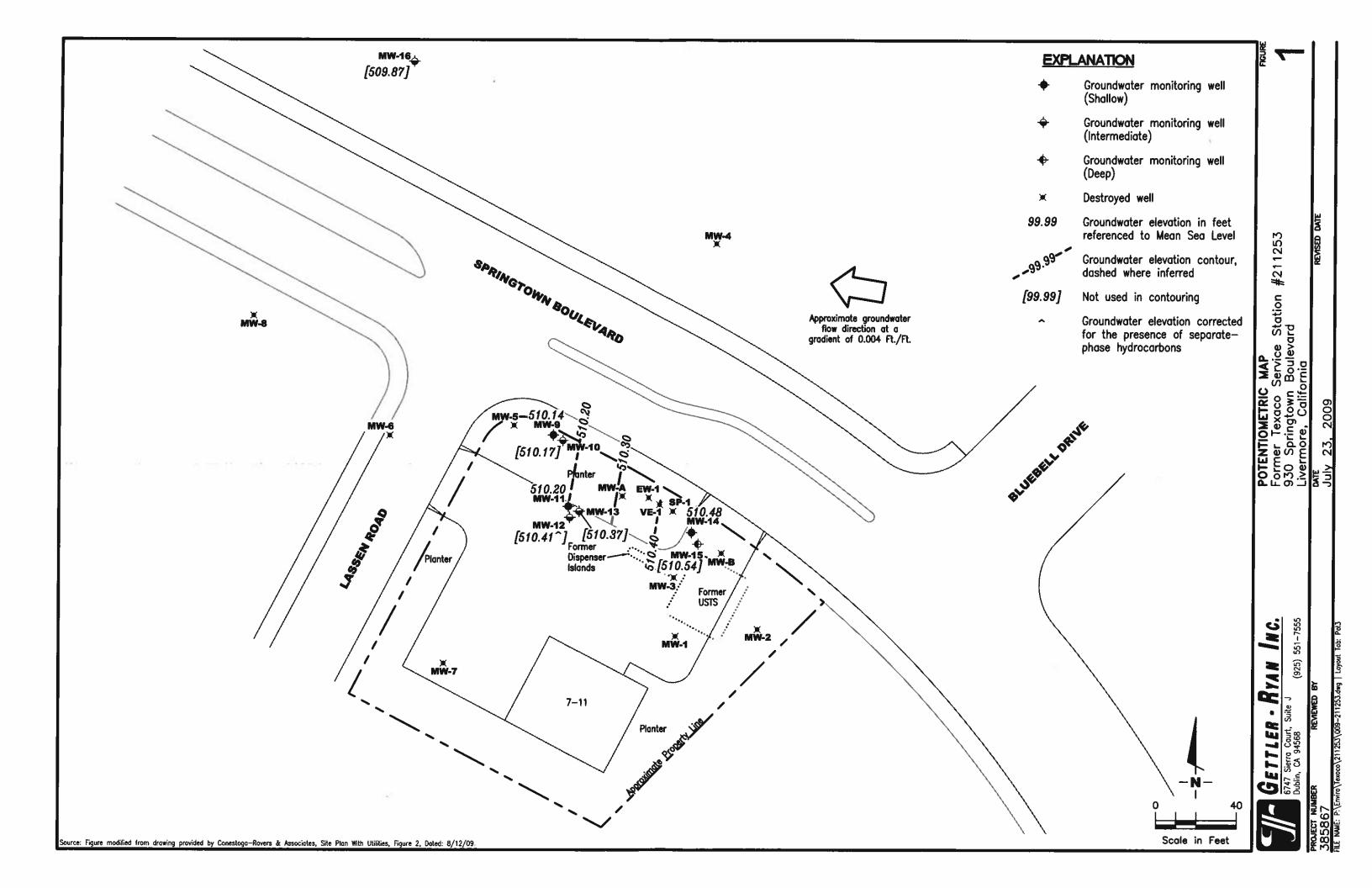


Table 1
Groundwater Monitoring Data and Analytical Results

Former Texaco Service Station #211253
930 Springtown Boulevard
Livermore, California

					Livermore, California					
WELL ID/	TOC*	DTW	GWE	SPHT	SPH REMOVED	TPH-GRO	Since B.		E	X
DATE	(ft.)	(ft.)	(msl)	(fl.)	(galions)	(μg/L)	(μg/L)	(µg/L)	(pg/L)	(µg/L)
MW-9 07/23/09 <sup>1</sup>	523.14	13.00	510.14	0.00	0.00	5,200	4	5	310	100
MW-10 07/23/09 <sup>1</sup>	522.76	12.59	510.17	0.00	0.00	16,000	220	440	440	660
MW-11 07/23/09 <sup>1</sup>	523.25	13.05	510.20	0.00	0.00	5,400	25	28	62	66
MW-12 07/23/09 <sup>1</sup>	523.42	13.03	510.41**	0.02	5.012	48,000	340	3,100	1,300	7,600
MW-13 07/23/09 <sup>1</sup>	523.12	12.75	510.37	0.00	0.00	52,000	760	6,200	980	13,000
MW-14 07/23/09 <sup>1</sup>	520.88	10.40	510.48	0.00	0.00	8,400	230	460	180	670
MW-15 07/23/09 <sup>1</sup>	520.87	10.33	510.54	0.00	0.00	2,500	6	17	16	320
MW-16 07/23/09 <sup>1</sup>	520.50	10.63	509.87	0.00	0.00	430	0.6	<0.5	<0.5	<0.5

### Table 1

# Groundwater Monitoring Data and Analytical Results Former Texaco Service Station #211253

# 930 Springtown Boulevard Livermore, California

WELL ID/	TOC*	DTW	GWE	SPHT	SPH REMOVED	TPH-GRO	B. B	T	District Control	X
DATE	(ft.)	(fl.)	(ensl)	(fl.)	(gallons)	(μg/L)	(μg/L)	(µg/L)	(pg/L)	(μg/L)
QA										
07/23/09	-	-	-	_	_	<50	<0.5	<0.5	<0.5	<0.5

#### Table 1

#### Groundwater Monitoring Data and Analytical Results

Former Texaco Service Station #211253 930 Springtown Boulevard Livermore, California

#### **EXPLANATIONS:**

TOC = Top of Casing

(msl) = Mean Sea Level

(ft.) = Feet

TPH = Total Petroleum Hydrocarbons

DTW = Depth to Water

GRO = Gasoline Range Organics

GWE = Groundwater Elevation

B = Benzene

SPHT = Separate Phase Hydrocarbon Thickness

T = Toluene

QA = Quality Assurance/Trip Blank (μg/L) = Micrograms per liter

E = Ethylbenzene

-- = Not Measured/Not Analyzed

X = Xylenes

- TOC elevations were surveyed on July 22, 2009, by Morrow Surveying. Vertical datum is NAVD 88 from GPS Observations.
- GWE has been corrected due to the presence of SPH; correction factor: [(TOC DTW) + (SPHT x 0.80)].

#### **ANALYTICAL METHODS:**

TPH-GRO analyzed by EPA Method 8015 BTEX analyzed by EPA Method 8260

Well development preformed.

<sup>2</sup> Product + water removed.

## STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to well development, each well is monitored for the presence of free-phase hydrocarbons and the depth to water is recorded. Wells are then developed by alternately surging the well with the bailer, then purging the well with a pump to remove accumulated sediments and draw groundwater into the well. Development continues until the groundwater parameters (temperature, pH, and conductivity) have stabilized.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4NC for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by IWM to Chemical Waste Management located in Kettleman Hill, California.



Client/Facility#:	Cnevron #211253		Job Number:	385867	
Site Address:	930 Springtown Bl	vd.	Event Date:	7/23/09	— (inclusive)
-	Livermore, CA			71-3-51	_ ("10145176)
	Liverniore, OA	<del></del>	Sampler:	10 2	_
Well ID Well Diameter Initial Total Depth Final Total Depth Depth to Water  Depth to Water w/ Purge Equipment: Disposable Bailer Stainless Steel Baller Stack Pump Suction Pump	MW-9 4 in. 14.18 ft. 14.86 ft. 13.00 ft.	Check if water colum  = /./  of Water Column x 0.20) +  Sampling Equipment:  Disposable Bailer  Pressure Bailer  Discrete Bailer  Peristaltic Pump	Volume Factor (VF)  n is less then 0.50 x10 case volume	Time Started: Time Completed: Depth to Product: Depth to Water: Hydrocarbon Thickness: Visual Confirmation/Description:	
Grundfos  Poriotaltio Piumo		QED Bladder Pump	<del></del>	Skimmer / Absorbant Sock (circ	le one)
Peristaltic Pump QED Bladder Pump Other:		Other:		Amt Removed from Skimmer: Amt Removed from Well: Water Removed: Product Transferred to:	gal
Start Time (purge): Sample Time/Date Approx. Flow Rate Did well de-water?	135 / 7/23/c	Weather Cor Water Color: Sediment De ne: Volun	aray scription:	Odor: Y/N	09
Time (2400 hr.) /053 )056 i059 i102 i105 i114 i114 i117	Volume (gal.)  1 7.41  2 7.35  5 7.32  4 7.36  6 7.29  7 7.21  9 7.21  9 7.22	Conductivity (µmhos/cm (µS) 9466 940 979 977 977 977 977 977	Femperature (2 / F) 27. Z 22. 3 72. 5 21. 9 22. 0 12. 2 22. 4 17. 1 22. 0 22. 0	D.O. ORP (mg/L) (mV)	- - - - - - -
		LABORATORY IN		VII	22701400
SAMPLE ID (	* CONTAINER REFRIG	HCL	LABORATORY LANCASTER	ANALYSES TPH-GRO(8015)/BTEX(8260)	
COMMENTS: N	en well done	eloped + a	unpled		
Add/Replaced Loc	ck: Add	d/Replaced Plug:	(4")	Add/Replaced Bolt:	



Client/Facility#:	Cnevron #211253		Job Number:	385867	
Site Address:	930 Springtown B	lvd.	Event Date:	7/23/09	(inclusive)
City:	Livermore, CA		Sampler:	SP	
Well ID Well Diameter Initial Total Dept Final Total Dept Depth to Water Depth to Water  Purge Equipment: Disposable Bailer Stainless Steel Baile Stack Pump Suction Pump Grundfos Peristaltic Pump QED Bladder Pump Other:	h 26.29 ft. 12.59 ft. 13.51 xVF. w/ 80% Recharge [(Height	Check if water colum	x10 case volume	3/4"= 0.02 1"= 0.04 2"= 0.17 4"= 0.66 5"= 1.02 6"= 1.50 0 ft. = Estimated Purge Volume:	gal.  (2400 hrs) (2400 hrs) ft ft ft cn: rcle one) gal gal
Start Time (purge Sample Time/Da Approx. Flow Rat Did well de-water Time (2400 hr.) (30% 1314 (314 (317 (327 (328 (1326 (1327 (1337)	te: <u>/355 /7/23/6</u> te: <u>~3</u> gpm.	Sediment De	#, b வர் escription:	Odor (V) / N week	3.17_
SAMPLE ID  MW- ()  COMMENTS:	(#) CONTAINER REFRIG 6 x voa vial YES  New well den	HCL	LABORATORY LANCASTER	ANALYSES TPH-GRO(8015)/BTEX(8260)	
Add/Replaced L	.ock: X Ad	id/Replaced Plug:/	X(4")	Add/Replaced Bolt:	



Client/Facility#:	Chevron #21125	3	Job Number:	<u>3</u> 85867 ,	
Site Address:	930 Springtown	Blvd.	Event Date:	7/23/09	(inclusive)
City:	Livermore, CA		Sampler:	SL	
Well ID Well Diameter Initial Total Depth Final Total Depth Depth to Water  Depth to Water w Purge Equipment: Disposable Bailer Stainless Steel Bailer Stack Pump Suction Pump Grundfos Peristaltic Pump QED Bladder Pump	14, 79 ft. 13,05 ft. 1.63 xvf.	Check if water column to the column of the c	Volume Factor (VF)  in is less then 0.50 x10 case volume	Time Started: Time Completed: Depth to Product: Depth to Water: Hydrocarbon Thickness: Visual Confirmation/Description Skimmer / Absorbant Sock (circ Amt Removed from Well:	de one)
Other:				Water Removed: Product Transferred to:	
Start Time (purge): Sample Time/Date Approx. Flow Rate Did well de-water?  Time (2400 hr.) 0853 0854 0857 0908 0911 0914 0914	9: 0935 / 1/2: gpm / If yes, Volume (gal.) / 1/7: 2 / 1.6	Sediment De Time: Volur	9/24 escription:	Odor: Y / D  Cloudy  gal. DTW @ Sampling: / 3  D.O. ORP  (mg/L) (mV)	
		LABORATORY IN			
	<del></del>	RIG. PRESERV. TYPE	LABORATORY	ANALYSES	
MW- I	x voa vial YE	ES HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)	
		·			
ļ		<del>_</del>			
<b></b>					
COMMENTS:	New well	doveloped t =	sampled		
Add/Replaced Lo	ock:	Add/Replaced Plug: _/	X/4 ·/)	Add/Replaced Bolt:	-



Client/Facility#:	Chevron #2112	200		Job Number:	385867	
Site Address:	930 Springtow	n Blvd	<u>l.                                      </u>	Event Date:	7/23/09	(inclusive)
City:	Livermore, CA			Sampler:	OR!	_`
<u> </u>						<del></del>
Well ID	MW-12			ate Monitored:	7/23/09	
Well Diameter	4 in.		-		4-7-1	<del>-</del>
Initial Total Depti				Volume	3/4"= 0.02 1"= 0.04 2"= 0.17	3"= 0.38
Final Total Depth				Factor (VF)	4"= 0.66 5"= 1.02 6"= 1.50	12"= 5.80
Depth to Water	13.03 ft.		heck if water column	is lose than 0 50	0.4	
- opin to states		/F _ 66	. /2		= Estimated Purge Volume: 90	
Depth to Water w	// 80% Recharge [(F					gal.
Dopui to Water to	7 00 % Nechaige (F	teight of v	valer Column x 0.20) +	101WJ. (21.72	Time Started: 10/0	(2400 hrs)
Purge Equipment:	/	S	ampiing Equipment:	/	Time Completed: 1025	(2400 hrs)
Disposable Bailer			isposable Bailer		Depth to Product: 13.03	ft
Stainless Steel Bailer		P	ressure Bailer		Hydrocarbon Thickness:	
Stack Pump			iscrete Bailer		Visual Confirmation/Description:	
Suction Pump Grundfos			eristaltic Pump ED Bladder Pump		Skimmer Absorbant Sock (circle	2 020
Peristaltic Pump			ther:		Amt Removed from Skimmer:	gal
QED Bladder Pump	\ #		<del>-</del>		Amt Removed from Well: 50	
Other: 3 abso	chent pads				Water Removed: ) gal	<del>d</del>
					7.0000 7.0000	
Start Time (purge)	: 1410		Weather Con	ditions:	w/Ny-	
Sample Time/Date		23/09	Water Color:	,,		
Approx. Flow Rate		<del>70</del> ( m.	Sediment De	· · ·	-, -, -, -, -, -, -, -, -, -, -, -, -, -	****
Did well de-water		s, Time:		· ·		14
Did Well de-Water	: <u>1</u> 11 ye	s, i ii ii ç.	Voidii	ie	gal. DT <b>W</b> @ Sampling: <u>//3.</u>	10
Time	Volume	рН	Conductivity	Temperature	D.O. ORP	
(2400 hr.)	a <sup>(gal.)</sup>	01	(μmhos/cm(- μS))	(C) F)	(mg/L) (mV)	
1912	<del></del>	96	951 <del>956</del>	<del>34.4</del>		-
14/6	18 6.	10 1692	958	<u> 24.2</u> 24.1		-
1422	27 36 G	विषे	964	24.5		-
1425	45 6.	र्ख	970	24,4		•
1428		34	979	24.4		•
1431	$\frac{63}{2}$	32	990	24.2		•
1434	81 6.	<u>47</u>	981 986	24.2		•
1440	90 6	<del>81</del>	विश्वेष	24.4		•
	<del></del>	<u> </u>				•
			ABORATORY IN	ORMATION		
SAMPLE ID		EFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES	
MW- [7]	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)	
			93			
	<del></del>					
COMMENTS:	gallons of	water	en was hav	d-bailed	to attempt to rem	ove product
- A. A. T	ours the	well	- 4	used &	resproduct was	Sund
so the u	vell was the	en d	eveloped o	+ Sand	ed new well	
Add/Replaced Lo	<b>3</b> 4		Replaced Plug: X	141	Add/Replaced Bolt:	



Client/Facility#: C	hevron #211253		Job Number:	385867	
Site Address: 9	30 Springtown Blv	rd.	Event Date:	7/23/08	—— (inclusive)
City: L	ivermore, CA		Sampler:	SR	`
Final Total Depth Depth to Water	<del></del>	Check if water colum	Factor (VF) n is less then 0.50 x10 case volume	= Estimated Purge Volume: $15$	gal.  (2400 hrs) (2400 hrs) ft ft ft (circle one)
1155 1200		Sediment De	#. brown scription: ne:  Temperature (C) F) 21.7 22.0 22.3 22.5 22.5 22.5 22.5 22.6 22.6 22.6	Odor VI N Moderate Standy Gal. DTW @ Sampling:	13.11
MW-/3	new well of	PRESERV. TYPE HCL	MAS DE	At pumping con	thry problems
Aum Jehiacen Fock	·· Add	#rxepiaceu Piug;∕	<del></del>	Add/Replaced Bolt:	



Client/Facility#:	Chevron #211253		Job Number:	385867 <sub>.</sub>	
Site Address:	930 Springtown Bl	vd.	Event Date:	7/23/09	(inclusive)
City:	Livermore, CA		Sampler:	GL.	
Well ID Well Diameter Initial Total Depth Final Total Depth Depth to Water	MW-14 4 in. 14.42 ft. 14.49 ft. 10.40 ft.	Check if water colum   56	Volume Factor (VF)  an is less then 0.50 x10 case volume + DTW]: ///. 2.0	Time Started: Time Completed: Depth to Product: Depth to Water: Hydrocarbon Thickness: Visual Confirmation/Description Skimmer / Absorbant/Sock (cir Amt Removed from Well: Water Removed:	(2400 hrs)ftftftft n: cle one)gal
Start Time (purge):	0740	Weather Co	nditional	Product Transferred to:	
Sample Time/Date Approx. Flow Rate Did well de-water?  Time (2400 hr.) 0743 0746 0749 0752 0755 0755 0755	: 0825 17/23/0 = 1 gpm.	Water Color: Sediment De  Sediment De  Conductivity (µmhos/cm-{µS})  1058  1104  1114  1125  1194  1131	escription:	Odor V/ N weak  Joudy  gal. DTW Sampling: IC  D.O. ORP  (mg/L) (mV)	0.456
		LABORATORY IN			
SAMPLE ID MW- J4	(#) CONTAINER REFRIG	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)	
COMMENTS:	new well dove	lapsed 4 sau	mpled	· · · · · · · · · · · · · · · · · · ·	
Add/Replaced Lo	ck:X Ad	d/Replaced Plug:	X (4')	Add/Replaced Bolt:	



Client/Facility#: Chev	ron #211253	Job Number:	385867	
Site Address: 930 S	pringtown Blvd.	Event Date:	7/23/09	 (inclusive)
City: Liver	more, CA	_ Sampler:	52	_ `
Well ID Well Diameter Initial Total Depth Final Total Depth Depth to Water  35	MW-15 4 in. 40 ft. 5.94 ft.	Volume Factor (VF)  umn is less then 0.50x10 case volume 0) + DTW]:	Estimated Purge Volume: 23	(2400 hrs)(2400 hrs)ftftftft de one)
Approx. Flow Rate: 2 Did well de-water? 1	If yes, Time:Vo	or: <u>((cuy</u> Description: _	Odor: Y IAN	56
	8.35 1592 9.35 1592 9.28 1620 1632 9.24 1619 9.20 1634 9.20 1637 9.21 1637 9.21 1637 9.21 1637	20.7 20.7 20.1 20.4 20.4 20.4 20.2 20.2 20.3 20.3	(mg/L) (mV)	
CAMPIED (#) CON	LABORATORY	INFORMATION		
	TAINER REFRIG. PRESERV. TYPI		ANALYSES	
MW-15 6	x voa vial YES HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)	
J		<u></u>		
<u> </u>				
		<del></del>	·	
COMMENTS: New v	ell developed I sam	jed -	Barco /2"/2	_6X_
	И	W/a "		
Add/Replaced Lock:	Add/Replaced Plug:	17	Add/Replaced Bolt:	



Client/Facility#:	Chevron #211253		Job Number:	385867	
Site Address:	930 Springtown B	lvd.	Event Date:	7-23-09	(inclusive)
City:	Livermore, CA		Sampler:	AW	<del>_</del> ` ·
Well ID Well Diameter Initial Total Depth Final Total Depth Depth to Water Depth to Water w Purge Equipment: Disposable Bailer Stainless Steel Bailer Stack Pump Suction Pump Grundfos Peristaltic Pump QED Bladder Pump Other:	7996 n. 29.	2 <i>0</i> Check if water colun	nn is less then 0.50 x10 case volume = + DTWJ: 14.34	= Estimated Purge Volume:	zie one)
Start Time (purge) Sample Time/Date Approx. Flow Rate Did well de-water  Time (2400 hr.)   1726   1232   1238   1244   1250   1306   1314   1320	e: 335 / 7-23 e: 20 gpm.	Sediment Dome:Volu  Conductivity (µmhos/cm (\$3) 1362 1363 1386	escription:	Odor: (V) N _ modera;  Clear  gal. DTW @ Sampling:l  D.O. ORP  (mg/L) (mV)	fe 0.75
SAMPLE ID	(#) CONTAINER   REFRI	LABORATORY IN G.   PRESERV. TYPE	IFORMATION LABORATORY	ANALYSES	
MW- 16	x voa vial YES		<del></del>	TPH-GRO(8015)/BTEX(8260)	
		<del></del>	-		
<u> </u>					
COMMENTS: _	New well d	evelopment &	Sumple	. Emco/12	1/2 = gout 48
Add/Replaced Lo	ock: A	dd/Replaced Plug:	Z (4")	Add/Replaced Bolt:	

# Chevron California Region Analysis Request/Chain of Custody



072409-03

Acct. #: 10904 | Sample # 5732923-31 | Group #: 017593

									_	A	naly	7808	Req	uesi	ed			G# 1154	946	ı
Facility #: SS#211253-OML G-R#38586	7 Global ID#	T06001013	53	N	latrix	1				P	709	erva	tlori	Cod	33				ative Cod	-67
Site Address 930 SPRINGTOWN BLVD., LI	VERMORE, (	CA				ļ	#	4			_	_}	$\dashv$	-	ž.	$\bot$	$\perp$	H = HCI	T = Thic	
Chevron PMIR Lead	Consultant.	ACE				-	l	•	3		ŀ	$\parallel$	-	-				<b>N</b> = HNO <sub>3</sub> <b>S</b> = H <sub>2</sub> SO <sub>4</sub>	8 = Na( 0 = Oth	
Consultant/Office: G-R, Inc., 6747 Sierra Con	urt, Suite J, D	ublin, CA 94	1568	1 1	8 W	e e			8				- }}		ļ			☐ J value repor		
Consultant Prj. Mgr.: Deanna L. Harding (de	enna@grinc.	com)			Potable	Containers	1 500 pt		8			П	∦					Must meet lo possible for 8	west detec	zion limits
Consultant Phone #925-551-7555 Fax #925-551-7899						မှ			밍	. ]		Method	B		ĺ	Ì		8021 MTBE Co		Old Na
sampler. Steve Rice, Alexe Wong			Gomposite		į	Number	0929	TPH 8015 MOD GRO	TPH 8015 MOD DRO 🗌 SIlica Gal Cleanup	acen	Organistes	- 1	ed Leed. Met			-		☐ Confirm high	est hit by 8 its by 8260	
Sample Identification	Date Collected	Time Collected	S S	ig So:	Water	Total	BTEX +	17. 08	8	8280 Auti		Total Lead	)isohe		1			☐ Run ox		
<del>QA</del>	7/23/09		<u> </u>		X	2	X	X		Ť	7		7	十	+	+-	H	Comments /	101 1000	
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MW-10		1355	$\triangle$		$\times$	6	X	X		$\exists$	$\neg$	7		7	1	42		:		1
MW-II		0935			X	6	X	X				7								ŀ
MW-12		1515	4□		$\mathbf{X}$	6	X	X			7	7		1	1		П			]
MW-13		245				6	X	X			7			7	1		Н		ř	
MW-14		2825	≰⊥		X	6	X	X				$\neg$					П			- 1
<u>MW-15</u>		1555	Ϥ		<u> </u>	6	X	X				$\Box$			1					f
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1425 New Holland Pike, PO Box 12425, Lancesier, PA 17605-2425 -717-656-2300 Fax: 717-656-2661 - www.lancesisriebs.com

ANALYTICAL RESULTS

RECEIVED

AUG 1 0 2009

Prepared for:
Chevron

6001 Bollinger Canyon Rd L4310 San Ramon CA 94583 GETTLER-RYAN INC.
GENERAL CONTRACTORS

925-842-8582

Prepared by:

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

August 07, 2009

#### **SAMPLE GROUP**

The sample group for this submittal is 1154946. Samples arrived at the laboratory on Saturday, July 25, 2009. The PO# for this group is 0015039978 and the release number is ROBB.

Lancaster Labs Number
5732923
5732924
5732925
5732926
5732927
5732928
5732929
5732930
5732931

#### **METHODOLOGY**

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

ELECTRONIC

CRA c/o Gettler-Ryan

Attn: Cheryl Hansen

COPY TO ELECTRONIC COPY TO

CRA

Attn: Charlotte Evans



2425 New Holland Pilos, PO Box 12425, Lancoster, PA 17603-2425 \*717-656-2500 Fix: 717-656-2661 \* www.lancesterlebs.com

Questions? Contact your Client Services Representative Jill M Parker at (717) 656-2300

Respectfully Submitted,

Judgey A. Cole Tracy A. Cole Senior Specialist



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Lancaster Laboratories Sample No. WW 5732923

Group No. 1154946

QA-T-090723 NA Water

Facility# 211253 Job# 385867 GRD

930 Springtown-Livermore T0600101353 QA

Collected: 07/23/2009

Account Number: 10904

Submitted: 07/25/2009 09:30

Reported: 08/07/2009 at 15:19

Discard: 09/07/2009

Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

SBLQA

CAT No.	Analysis Name	CAS	Number	As Received Result	As Received Method Detaction Limit	Dilution Factor
SW-84	6 8260B	GC/MS Volatile	38	ug/l	ug/l	
06053	Benzene	71-4	13-2	N.D.	0.5	1
06053	Ethylbenzene	100-	41-4	N.D.	0.5	1
06053	Toluene	108-	88-3	N.D.	0.5	1
06053	Xylene (Total)	1330	-20-7	N.D.	0.5	1
SW-846	6 8015B	GC Volatiles		ug/1	ug/l	
01728	TPH-GRO N. CA water	C6-C12 n.a.		N.D.	50	1

#### 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.

CAT No.	Analysis Name	Method	Triel#	Batch#	Anelysis Date and Time	Analyst	Dilution Pactor
01163 01728	BTEX by 8260B GC/MS VOA Water Prep TPH-GRO N. CA water C6-C12 GC VOA Water Prep	SW-846 8260B SW-846 5030B SW-846 8015B SW-846 5030B	1 1 1 1	F092112AA F092112AA 09209A08A 09209A08A	07/30/2009 12:55 07/30/2009 12:55 07/28/2009 12:57 07/28/2009 12:57	Anita M Dale Anita M Dale Fanella S Zamcho Fanella S Zamcho	1 1 1 1



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Lancaster Laboratories Sample No. WW 5732924

Group No. 1154946

CA

MW-9-W-090723 Grab Water

Facility# 211253 Job# 385867 GRD

930 Springtown-Livermore T0600101353 MW-9

Collected: 07/23/2009 11:35

by SR

Account Number: 10904

Submitted: 07/25/2009 09:30

Reported: 08/07/2009 at 15:19

Discard: 09/07/2009

Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

SBL09

CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	ug/l	ug/l	
71-43-2	4	0.5	1
100-41-4	310		10
108-88-3	5		1
1330-20-7	100	0.5	î
GC Volatiles	ug/l	ug/l	
C6-C12 n.a.	5,200	250	5
	GC/MS Volatiles 71-43-2 100-41-4 108-88-3 1330-20-7 GC Volatiles	GC/MS Volatiles ug/l  71-43-2 4 100-41-4 310 108-88-3 5 1330-20-7 100  GC Volatiles ug/l	CAS Number Result Method Detection Limit  GC/MS Volatiles ug/l ug/l  71-43-2 4 0.5 100-41-4 310 5 108-88-3 5 0.5 1330-20-7 100 0.5  GC Volatiles ug/l ug/l

#### 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.

CAT No.	Analysis Name	Nethod	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	F092151AA	08/03/2009 23:32	Kelly E Brickley	1
	BTEX by 8260B	SW-846 8260B	1	P092163AA	08/05/2009 07:58	Kelly E Brickley	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F092151AA	08/03/2009 23:32	Kelly E Brickley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P092163AA	08/05/2009 07:58	Kelly E Brickley	10
01728		SW-846 8015B	1	09209A08A	07/28/2009 23:22	Fanella S Zamcho	5
01146	GC VOA Water Prep	SW-846 5030B	1	09209A08A	07/28/2009 23:22	Panella S Zamcho	5



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Lancaster Laboratories Sample No. WW 5732925

Group No. 1154946

CA

MW-10-W-090723 Grab Water

Facility# 211253 Job# 385867 GRD

930 Springtown-Livermore T0600101353 MW-10

Collected: 07/23/2009 13:55

by SR

Account Number: 10904

Submitted: 07/25/2009 09:30

Reported: 08/07/2009 at 15:19

Discard: 09/07/2009

Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

SBL10

CAT No.	Analysis Name	CAS Numb	As Received ar Result	As Received Nethod Detection Limit	Dilution Factor
SW-846	5 8260B	GC/MS Volatiles	ug/l	ug/l	
06053	Benzene	71-43-2	220	5	10
06053	Ethylbenzene	100-41-4	440	5	10
06053	Toluene	108-88-3	440	5	10
06053	Xylene (Total)	1330-20-3	7 660	5	10
SW-846	8015B	GC Volatiles	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12 n.a.	16,000	500	10

#### 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.

CAT No.	Analysis Name	Method	Triel#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163 01728	BTEX by 8260B GC/MS VOA Water Prep TPH-GRO N. CA water C6-C12 GC VOA Water Prep	SW-846 8260B SW-846 5030B SW-846 8015B SW-846 5030B	1 1 1	F092151AA F092151AA 09209A08A 09209A08A	08/04/2009 00:15 08/04/2009 00:15 07/28/2009 23:46 07/28/2009 23:46	Kelly E Brickley Fanella S Zamcho	10 10 10



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Lancaster Laboratories Sample No. WW 5732926

Group No. 1154946

CA

MW-11-W-090723 Grab Water

Facility# 211253 Job# 385867 GRD

930 Springtown-Livermore T0600101353 MW-11

Collected: 07/23/2009 09:35

by SR

Account Number: 10904

Submitted: 07/25/2009 09:30

Reported: 08/07/2009 at 15:19

Discard: 09/07/2009

Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

SBL11

CAT No.	Analysis Name	CAS Ma	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846	8260B	GC/MS Volatiles	ug/l	u <b>g/1</b>	
06053	Benzene	71-43-	2 25	0.5	1
06053	Ethylbenzene	100-41-	-4 62	0.5	ī
06053	Toluene	108-88	-3 28	0.5	ī
06053	Xylene (Total)	1330-20	0-7 66	0.5	ī
SW-846	8015B	GC Volatiles	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12 n.a.	5,400	250	5

#### 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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D092113AA	07/31/2009 03:15	Michael A Ziegler	
	GC/MS VOA Water Prep	SW-846 5030B	1	D092113AA	07/31/2009 03:15	Michael A Ziegler	
	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09209A07A	07/30/2009 00:44	Fanella S Zamcho	5
01146	GC VOA Water Prep	SW-846 5030B	1	09209A07A	07/30/2009 00:44	Fanella S Zamcho	1



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by SR

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Lancaster Laboratories Sample No. WW 5732927

Group No. 1154946

MW-12-W-090723 Grab Water

Facility# 211253 Job# 385867 GRD

930 Springtown-Livermore T0600101353 MW-12

Collected: 07/23/2009 15:15

Account Number: 10904

Submitted: 07/25/2009 09:30

Reported: 08/07/2009 at 15:19

Discard: 09/07/2009

Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

SBL12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846	8260B	GC/MS Volatiles	ug/l	ug/l	
06053	Benzene	71-43-2	340	1	2
06053	Ethylbenzene	100-41-4	1,300	10	20
06053	Toluene	108-88-3	3,100	10	20
06053	Xylene (Total)	1330-20-7	7,600	100	200
SW-846	8015B	GC Volatiles	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12 n.a.	48,000	1,000	20

#### 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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
	DEREN ALL AGEOR				Date and Time		<b>Factor</b>
06053	BTEX by 8260B	SW-846 8260B	1	D092113AA	07/31/2009 04:04	Michael A Ziegler	2
06053		SW-846 8260B	1	D092113AA	07/31/2009 04:29	Michael A Ziegler	20
06053		SW-846 8260B	1	Z092164AA	08/05/2009 01:17	Holly Berry	200
	GC/MS VOA Water Prep	SW-846 5030B	1	D092113AA	07/31/2009 04:04	Michael A Ziegler	2
	GC/MS VOA Water Prep	SW-846 5030B	2	D092113AA	07/31/2009 04:29		
01163	GC/MS VOA Water Prep	SW-846 5030B	3	Z092164AA	08/05/2009 01:17	Holly Berry	200
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09209A07A	07/30/2009 01:37	Fanella S Zamcho	20
01146	GC VOA Water Prep	SW-846 5030B	1	09209A07A	07/30/2009 01:37	Fanella S Zamcho	1



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Lancaster Laboratories Sample No. WW 5732928

Group No. 1154946

MW-13-W-090723 Grab Water

Facility# 211253 Job# 385867 GRD

930 Springtown-Livermore T0600101353 MW-13

Collected: 07/23/2009 12:45

by SR Account Number: 10904

Chevron

Submitted: 07/25/2009 09:30 Reported: 08/07/2009 at 15:19

Discard: 09/07/2009

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

SBL13

CAS Number	As Received Result	As Received Method Detection Limit	Dilution Fector
/MS Volatiles	ug/l	ug/l	
71-43-2	760	3	5
100-41-4	980	3	5
108-88-3	6,200	130	250
1330-20-7	13,000	13	25
Volatiles	ug/l	ug/1	
-C12 n.a.	52,000	1,000	20
	/MS Volatiles 71-43-2 100-41-4 108-88-3 1330-20-7	CAS Number Result  /MS Volatiles ug/1  71-43-2 760 100-41-4 980 108-88-3 6,200 1330-20-7 13,000  Volatiles ug/1	CAS Number

#### 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.

CAT	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
No.					Date and Time	-	Factor
06053	BTEX by 8260B	SW-846 8260B	1	D092113AA	07/31/2009 04:53	Michael A Ziegler	
	BTEX by 8260B	SW-846 8260B	1	D092113AA	07/31/2009 05:18		
	BTEX by 8260B	SW-846 8260B	1	Z092164AA	08/05/2009 01:42		250
	GC/MS VOA Water Prep	SW-846 5030B	1	D092113AA	07/31/2009 04:53	Michael A Ziegler	5
	GC/MS VOA Water Prep	SW-846 5030B	2	D092113AA	07/31/2009 05:18	-	
01163	GC/MS VOA Water Prep	SW-846 5030B	3	Z092164AA	08/05/2009 01:42	_	250
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09209A07A	07/30/2009 02:05	• •	20
01146	GC VOA Water Prep	SW-846 5030B	1	09209A07A	07/30/2009 02:05	Fanella S Zamcho	1



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Lancaster Laboratories Sample No. WW 5732929

Group No. 1154946

CA

MW-14-W-090723 Grab Water

Facility# 211253 Job# 385867 GRD

930 Springtown-Livermore T0600101353 MW-14

Collected: 07/23/2009 08:25

by SR

Account Number: 10904

Submitted: 07/25/2009 09:30

Reported: 08/07/2009 at 15:19

Discard: 09/07/2009

Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

SBL14

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846	8260B	GC/MS Vola	tiles	ug/l	ug/l	
06053	Benzene		71-43-2	230	5	10
06053	Ethylbenzene		100-41-4	180	5	10
06053	Toluene		108-88-3	460	5	10
06053	Xylene (Total)		1330-20-7	670	5	10
SW-846	8015B	GC Volatile	98	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	8,400	250	5

#### 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.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01728	BTEX by 8260B GC/MS VOA Water Prep TPH-GRO N. CA water C6-C12 GC VOA Water Prep	SW-846 8260B SW-846 5030B SW-846 8015B SW-846 5030B	1 1 1 1	Z092164AA Z092164AA 09209A07A 09209A07A	08/05/2009 02:07 08/05/2009 02:07 07/30/2009 01:11 07/30/2009 01:11	Holly Berry Holly Berry Fanella S Zamcho Fanella S Zamcho	10 10 5



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Lancaster Laboratories Sample No. WW 5732930

Group No. 1154946

CA

MW-15-W-090723 Grab Water

Facility# 211253 Job# 385867 GRD

930 Springtown-Livermore T0600101353 MW-15

Collected: 07/23/2009 15:55

by SR

Account Number: 10904

Submitted: 07/25/2009 09:30

Reported: 08/07/2009 at 15:19

Discard: 09/07/2009

Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

SBL15

CAT No.	Analysis Name		CAS Number	As Received Result	Am Received Nethod Detection <u>Limi</u> t	Dilution Factor
SW-84	6 8260B	GC/MS Vola	tiles	u <b>g/1</b>	ug/l	
06053	Benzene		71-43-2	6	0.5	1
06053	Ethylbenzene		100-41-4	16	0.5	1
06053	Toluene		108-88-3	17	0.5	ī
06053	Xylene (Total)		1330-20-7	320	0.5	1
SW-846	8015B	GC Volatil	es	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	2,500	50	1

#### 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.

CAT No.	Anelysis Name	Method	Triel#	Batch#	Analysis Deta and Time	Analyst	Dilution Factor
01163 01728	BTEX by 8260B GC/MS VOA Water Prep TPH-GRO N. CA water C6-C12 GC VOA Water Prep	SW-846 8260B SW-846 5030B SW-846 8015B SW-846 5030B	1 1 1	D092113AA D092113AA 09209A07A 09209A07A		Michael A Ziegler Michael A Ziegler Fanella S Zamcho Fanella S Zamcho	1



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Lancaster Laboratories Sample No. WW 5732931

Group No. 1154946

CA

MW-16-W-090723 Grab Water

Facility# 211253 Job# 385867 GRD

930 Springtown-Livermore T0600101353 MW-16

Collected: 07/23/2009 13:35

by SR

Account Number: 10904

Submitted: 07/25/2009 09:30

Reported: 08/07/2009 at 15:19

Discard: 09/07/2009

Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

SBL16

CAT No. Analysis Name	CAS Number	As Received Result	As Received Nethod Detection Limit	Dilution Factor
SW-846 8260B	GC/MS Volatiles	ug/l	ug/l	
06053 Benzene	71-43-2	0.6	0.5	1
06053 Ethylbenzene	100-41-4	N.D.	0.5	i
06053 Toluene	108-88-3	N.D.	0.5	1
06053 Xylene (Total)	1330-20-7	N.D.	0.5	ī
SW-846 8015B	GC Volatiles	ug/l	ug/l	
01728 TPH-GRO N. CA water	C6-C12 n.a.	430	50	1

#### 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.

CAT No.	Analysis Name	Nethod	Trial#	Betch#	Analysis Date and Time	Analyst	Dilution Factor
01728	BTEX by 8260B GC/MS VOA Water Prep TPH-GRO N. CA water C6-C12 GC VOA Water Prep	SW-846 8260B SW-846 5030B SW-846 8015B SW-846 5030B	1 1 1	D092113AA D092113AA 09209A07A 09209A07A	07/30/2009 21:31 07/30/2009 21:31 07/29/2009 14:41 07/29/2009 14:41	Michael A Ziegler Michael A Ziegler Fanella S Zamcho Fanella S Zamcho	1



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### Quality Control Summary

Client Name: Chevron

Group Number: 1154946

Reported: 08/07/09 at 03:19 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 <u>Result</u>	Blank MDL	Report Units	lcs <u>%rec</u>	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D092113AA	Sample numb	er(s) - 57	32926-5732	928 57329	30-5722021			
Benzene	N.D.	0.5	ug/1	110	JO J/J2JJI	80-116		
Ethylbenzene	N.D.	0.5	ug/l	107		80-113		
Toluene	N.D.	0.5	ug/l	109		80-115		
Xylene (Total)	N.D.	0.5	ug/l	109		81-114		
•		0.5	ug/ 1	103		91-114		
Batch number: F092112AA	Sample numb	er(s): 57	32923					
Benzene	N.D.	0.5	ug/1	96		80-116		
Ethylbenzene	N.D.	0.5	ug/l	95		80-113		
Toluene	N.D.	0.5	ug/l	97		80-115		
Xylene (Total)	N.D.	0.5	ug/l	96		81-114		
			- 3,					
Batch number: F092151AA	Sample numb	er(s): 573	32924-5732	925				
Benzene	N.D.	0.5	ug/l	93	93	80-116	1	30
Ethylbenzene	N.D.	0.5	ug/l	95	94	80-113	ī	30
Toluene	N.D.	0.5	uq/l	93	92	80-115	ō	30
Xylene (Total)	N.D.	0.5	ug/1	94	94	81-114	ĭ	30
			•				-	50
Batch number: P092163AA	Sample numb	er(s): 573	32924					
Ethylbenzene	N.D.	0.5	ug/l	93		80-113		
Batch number: Z092164AA	Sample numb	er(s): 573	12927-5732	929				
Benzene	N.D.	0.5	ug/1	95	95	80-116	0	30
Ethylbenzene	N.D.	0.5	ug/1	95	95	80-118	0	
Toluene	N.D.	0.5	ug/l	96	95	80-115		30
Xylene (Total)	N.D.	0.5	ug/l	95	96		1	30
		0.5	ug/1	93	20	81-114	1	30
Batch number: 09209A07A	Sample number	er(s): 573	2926-57329	931				
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	109	75-135	0	30
Batch number: 09209A08A	Cample	(-) ===	_			· <b>-</b>	•	
TPH-GRO N. CA water C6-C12	Sample numb							
IFR-GRO N. CA Water C6-C12	N.D.	50.	ug/l	118	109	75-135	8	30

#### Sample Matrix Quality Control

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

Analysis Name	ms <u>rec</u>	MSD \REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD
Batch number: D092113AA Benzene Ethylbenzene	Sample : 110 105	number(s) 102 102	: 5732926 80-126 77-125	-573292 7 3	28,5732 30 30	930-5732931	UNSPK:	5732931	

#### \*- Outside of specification

- (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.



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### Quality Control Summary

Client Name: Chevron

Group Number: 1154946

Reported: 08/07/09 at 03:19 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 Toluene Xylene (Total)	MS MSD \$REC \$REC 108 103 108 103	<b>MS/MSD</b> <u>Limits</u> <u>RPD</u> 80-125 5 79-125 5	RPD BKG KAX Conc 30 30	DUP DUP Conc RPD	
Batch number: F092112AA Benzene Ethylbenzene Toluene Xylene (Total)	Sample number (s 102 101 103 101 102 102 103 100	8): 5732923 UNSPK 80-126 2 77-125 3 80-125 1 79-125 2	: P731947 30 30 30 30		
Batch number: F092151AA Benzene Ethylbenzene Toluene Xylene (Total)	Sample number(s 94 95 94 95	8): 5732924-57329; 80-126 77-125 80-125 79-125	25 UNSPK: P734224		
Batch number: P092163AA Ethylbenzene	Sample number(s	3): 5732924 UNSPK: 77-125 1	P737079		
Batch number: Z092164AA Benzene Ethylbenzene Toluene Xylene (Total)	Sample number(s 103 101 100 101	8): 5732927-573292 80-126 77-125 80-125 79-125	9 UNSPK: P737323		
Batch number: 09209A07A TPH-GRO N. CA water C6-C12	Sample number(s	): 5732926-573293 63-154	1 UNSPK: P732941		
Batch number: 09209A08A TPH-GRO N. CA water C6-C12	Sample number(s	): 5732923-573292 63-154 19	5 UNSPK: P731947		

#### 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 by 8260B Batch number: D092113AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5732926	105	102	98	110
5732927	105	103	95	113
5732928	107	103	97	109
5732930	105	101	97	100
5732931	106	101	99	103
Blank	108	105	97	99
LCS	108	102	99	104
MS	106	105	99	104
MSD	107	104	100	105
Limits:	80-116	77-113	80-113	78-113

#### \*- Outside of specification

- (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.



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### Quality Control Summary

Client Name: Chevron

Reported: 08/07/09 at 03:19 PM

Group Number: 1154946

Surrogate Quality Control

Analysis Name: BTEX by 8260B

Batch number: F092112AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzen
5732923	80	84	91	96
Blank	88	91	94	100
LCS	89	90	90	101
MS	90	92	89	101
MSD	89	88	87	99
Limits:	80-116	77-113	80-113	78-113
Batch numl	Name: BTEX by 8260B Der: F092151AA Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5732924	90	92	91	102
5732925	91	90	93	101
Blank	94	94	92	101
LCS	94	95	92	101
LCSD	95	94	91	102
MS	94	94	91	102
Limits:	80-116	77-113	80-113	78-113
Analysis N Batch numb	Jame: BTEX by 8260B er: P092163AA			
	Dibromofluoromethane	1.2-Dichloroethane-d4	Toluene-de	4 - Dwama 61amabawaaaa

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	85	90	86	84
LCS	84	92	86	85
MS	84	91	87	85
MSD	85	90	86	86
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX by 8260B Batch number: Z092164AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5732929	109	105	110	99
Blank	109	105	110	96
LCS	108	105	108	98
LCSD	110	105	109	99
MS	111	106	108	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12 Batch number: 09209A07A Trifluorotoluene-F

5732926	122
5732927	132
5732928	124
5732929	124
5732930	113

#### \*- Outside of specification

- (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.



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### Quality Control Summary

Client Name: Chevron Group Number: 1154946 Reported: 08/07/09 at 03:19 PM Surrogate Quality Control 5732931 116 Blank 100 113 112 LCS LCSD MS 106 Limits: 63-135 Analysis Name: TPH-GRO N. CA water C6-C12 Batch number: 09209A08A Trifluorotoluene-F 5732923 103 5732924 112 125 5732925 Blank 104 LCS 110 LCSD 109 MS 113 MSD 111 Limits: 63-135

<sup>\*-</sup> Outside of specification

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> The unspiked result was more than four times the spike added.

## 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
С	degrees Celsius	F	degrees Fahrenheit
Cai	(diet) calories	ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	ĭ	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/mi	fibers greater than 5 microns in length per ml

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

inorganic Qualifiers

Correlation coefficient for MSA < 0.995

- 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:

Α	TIC is a possible aldol-condensation product	В	Value is <crdl, but="" th="" ≥idl<=""></crdl,>
В	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quatitated on a diluted sample	N	Spike amount not within control limits
E	Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
	the instrument		for calculation
J	Estimated value	U	Compound was not detected
N	Presumptive evidence of a compound (TICs only)	W	Post digestion spike out of control limits
P	Concentration difference between primary and	*	Duplicate analysis not within control limits

U Compound was not detected

confirmation columns >25%

**Organic Qualifiers** 

X,Y,Z Defined in case narrative

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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