

5900 Hollis Street, Suite A Emeryville, California 94608 Telephone: (510) 420-0700 http://www.craworld.com

Fax: (510) 420-9170

April 30, 2010

Mr. Jerry Wickham

Alameda County Environmental Health Services

1131 Harbor Bay Parkway, Suite 250

Alameda, California 94502-6577

## Reference No. 060058

# RECEIVED

4:40 pm, Apr 30, 2010

Alameda County Environmental Health

Re: Fourth Quarter 2009 Groundwater Monitoring Report and Annual Update Former Texaco Service Station 21-1253 930 Springtown Boulevard Livermore, California Fuel Leak Case No. RO000189

Dear Mr. Wickham:

Conestoga-Rovers & Associates (CRA) is submitting this *Fourth Quarter 2009 Groundwater Monitoring Report and Annual Update* on behalf of Chevron Environmental Management Company (Chevron) for the site referenced above. Groundwater monitoring data is being submitted in accordance with the reporting requirements of 23CCR2652d. The site background, a discussion of 2009 data, and CRA's conclusions and recommendations are discussed below.

# BACKGROUND

### Site Description

The site is a former Texaco service station located on the south corner of Springtown Boulevard and Lassen Road in Livermore, California (Figure 1). In the summer of 1985, Texaco sold the site to Southland Corporation who constructed a 7-Eleven convenience store. The underground storage tanks (USTs), dispenser islands, and product piping were removed concurrent with the construction of the convenience store. The site is still occupied by a 7-Eleven convenience store, surrounded by a paved parking area (Figure 2).

### Geology and Hydrogeology

Subsurface soil consists of a heterogeneous mixture of alluvial and colluvial silty clays, clayey silts, sandy silts, silty sands, and gravelly sands of Holocene age. These regional sediments have a maximum thickness of approximately 150 feet. The Pliocene-aged Tassajara Formation, described by California Department of Water Resources (DWR), consists of sandstone, shale and limestone, and forms the bedrock beneath the site.

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April 30, 2009

Reference No. 060058

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The site is located in the Mocho II sub-basin of the Main Basin in the Livermore Valley, as defined by the DWR and the Zone 7 Water Agency. The Mocho II sub-basin is defined by the Livermore Fault on the west, thinning Quaternary alluvium on the east, the Livermore Uplands to the south, and the Tassajara Formation to the north. Main Basin groundwater is currently used as a drinking water resource. General groundwater gradient in the basin is to the west; however, hills near the site appear to affect the groundwater flow direction.

The nearest surface water bodies are Arroyo Seco and Arroyo Las Positas, which converge approximately one mile west of the site.

# **RESULTS OF 2009 GROUNDWATER MONITORING**

In June 2009, CRA installed monitoring wells MW-9 through MW-16. On July 23 and November 9, 2009, Gettler-Ryan, Inc. (G-R) gauged and sampled all eight wells. Cumulative groundwater monitoring data and analytical results are presented in Table 1 of the December 9, 2009 G-R Report (Attachment A). The monitoring wells are divided into three different zones based on the screen intervals: shallow zone (wells MW-9, MW-11 and MW-14), intermediate zone (wells MW-10, MW-12, MW-13 and MW-16) and deep zone (well MW-15). In 2009, depth to groundwater ranged from 10.11 to 13.05 feet below grade (fbg) in all wells. Based on similar depth to groundwater data, the three zones appear to be hydraulically connected. Groundwater was calculated to flow west-northwestward. A rose diagram is presented on Figure 3.

Light non-aqueous phase liquid (LNAPL) was detected in well MW-12 during the July 23, 2009 sampling event at a thickness of 0.02 feet. G-R subsequently removed 5.01 gallons of LNAPL and water.

The highest hydrocarbon concentrations are detected in wells MW-12 through MW-15. On November 9, 2009, the highest petroleum hydrocarbon concentrations detected were in well MW-14, which contained 23,000 micrograms per liter ( $\mu$ g/L) total petroleum hydrocarbons as gasoline (TPHg) and 1,800  $\mu$ g/L benzene. Well MW-16, located across Springtown Boulevard, defines the downgradient extent of dissolved hydrocarbons with only 180  $\mu$ g/L TPHg and no benzene. Concentrations are presented on Figure 3. Not enough data has been collected to establish concentration trends.



April 30, 2009

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# ANTICIPATED FUTURE ACTIVITIES

Additional groundwater monitoring and sampling data will be collected to further evaluate hydrocarbon concentration trends before providing a Pilot Test Workplan or Draft Corrective Action Plan (CAP) by August 19, 2010.

Please contact Kiersten Hoey at (510) 420-3347 if you have any questions or require additional information.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

dieisten

Kiersten Hoey

No. 5747

N. Scott MacLeod, P.G. #5747

KH/cm/6

Encl.

- Figure 1Site Vicinity Map
- Figure 2 Site Plan
- Figure 3 Hydrocarbon Concentrations in Groundwater

Attachment A December 9, 2009 G-R Groundwater Monitoring and Sampling Report

cc: Mr. Ian Robb, Chevron Mr. Joe Zadik FIGURES



60058-2009(004)GN-WA001 JUL 28/2009



60058-2009(004)GN-WA003 AUG 12/2009



60058-2010(PRES001)GN-WA001 MAR 15/2010

ATTACHMENT A

DECEMBER 9, 2009 G-R GROUNDWATER MONITORING AND SAMPLING REPORT



TRANSMITTAL

December 9, 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	December 7, 2009	Groundwater Monitoring and Sampling Report Fourth Quarter Event of November 9, 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

# WELL CONDITION STATUS SHEET

Client/Facility #:	Che	vron	#21	1253						Job #	385867			
Site Address:	<u>930</u>	Spri	ngto	wn B	lvd.				•	Event Date:	11-	9,00	7	
City:	Live	ermo	re, C	A						Sampler:	_ 30	e e	· · · · · · · · · · · · · · · · · · ·	
WELL ID	Vault Con	Frame dition	Gas O-R (M)mi	ket/ ling ssing	BOLTS (M) Missi (R) Replac	ng xed	Bolt Flanges B= Broken S≃ Stripped R=Retap	APRON Condition C=Cracked B=Broken G=Gone	Grout Seal (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	Ċ	K	٥.	IC	0.0	-	0.12	0.12	o.k	0.14	2	N	12"EMCO/2_	No
MW-10								_ }	•	1	1	1	11	
MW-11													11	
MW-12													11	
MW-13													11	
MW - 14														— <b> </b> — —
MW-15													11	
mw-16	V	·	V	/	V		V	V	48" covity	$\nabla$				$\overline{\mathbf{v}}$
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Comments



December 7, 2009 G-R Job #385867

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

RE: Fourth Quarter Event of November 9, 2009 Groundwater Monitoring & Sampling Report Former Texaco Service Station #211253 930 Springtown Boulevard Livermore, California

Dear Mr. Robb:

This report documents 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,

1. Hardin

Deanna L. Harding Project Coordinator

Douglas I Lee Senior Geologist, P.G. No. 6882

Figure 1:	Potentiometric Map
Table 1:	Groundwater Monitoring Data and Analytical Results
Attachments:	Standard Operating Procedure - Groundwater Sampling
	Field Data Sheets
	Chain of Custody Document and Laboratory Analytical Reports



			Grou	ndwater Mo	onitoring Data and A	Analytical Resu	lts			
Former Texaco Service Station #211253         930 Springtown Boulevard         Livermore, California         WELL ID/       TOC*       DTW       GWE       SPHT       SPH REMOVED       TPH-GRO       B       T       E       X         DATE       (ft.)       (ft.)       (gallons)       (µg/L)       (µg/L)       (µg/L)       (µg/L)										
WELL HD/     T E X       WELL HD/     TOC*     DTW     GWE     SPHT     SPH REMOVED     TPH-GRO     B     T     E     X       DATE     (ft.)     (ft.)     (ft.)     (gallons)     (µg/L)     (µg/L)     (µg/L)     (µg/L)										
WELL ID/	TOC*	DTW	GWE	SPHT	SPH REMOVED	TPH-GRO			Deserved to the second s	x
DATE	(ft.)	(ft.)	(msl)	(fl.)	(gallons)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-9										
07/23/ <b>09</b> <sup>1</sup>	523.14	13.00	510.14	0.00	0.00	5,200	4	5	310	100
11/09/09	523.14	12.70	510.44	0.00	0.00	240	4	4	2	5
MW-10										
07/23/09 <sup>1</sup>	522.76	12.59	510.17	0.00	0.00	16,000	220	440	440	660
11/09/09	522.76	12.30	510.46	0.00	0.00	2,800	1	2 <sup>3</sup>	30	30
MW-11										
07/23/09 <sup>1</sup>	523.25	13.05	510.20	0.00	0.00	5,400	25	28	62	66
11/09/09	523.25	12.73	510.52	0.00	0.00	1,100	3	0.6 <sup>3</sup>	2	2
MW-12										
07/23/09 <sup>1</sup>	523.42	13.03	510.41**	0.02	5.01 <sup>2</sup>	48,000	340	3,100	1,300	7,600
11/09/09	523.42	12.78	510.64	0.00	0.00	18,000	290	560	22	3,100
MW-13										
07/23/09	523.12	12.75	510.37	0.00	0.00	52,000	760	6,200	980	13,000
11/09/09	523.12	12.51	510.61	0.00	0.00	12,000	340	1,300	16	1,700
MW-14										
07/23/09	520.88	10.40	510.48	0.00	0.00	8,400	230	460	180	670
11/09/09	520.88	10.11	510.77	0.00	0.00	23,000	1,800	1,900	750	2,600
MW-15										
07/23/09 <sup>1</sup>	520.87	10.33	510.54	0.00	0.00	2,500	6	17	16	320
11/09/09	520.87	10.18	510.69	0.00	0.00	20,000	110	590	370	4,900

Table 1

Table 1         Groundwater Monitoring Data and Analytical Results         Former Texaco Service Station #211253         930 Springtown Boulevard										
				L	ivermore, California	1				
WELL ID/ DATE	TOC* (f1)	DTW (ft.)	GWE (msl)	SPHT (fl.)	SPH REMOVED (gallons)	TPH-GRO (µg/L)	В (µg/L)	Т (µg/L)	E (µg/L)	Х (µg/L)
MW-16 07/23/09 <sup>1</sup> 11/09/09	520.50 <b>520.50</b>	10.63 <b>10.31</b>	509.87 <b>510.19</b>	0.00 <b>0.00</b>	0.00 <b>0.00</b>	430 <b>180</b>	0.6 < <b>0.5</b>	<0.5 <0.5	<0.5 < <b>0.5</b>	<0.5 <0 <b>.5</b>
QA 07/23/09 11/09/09						<50 < <b>50</b>	<0.5 <0.5	<0.5 1 <sup>4</sup>	<0.5 <0.5	<0.5 <0.5

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#### **EXPLANATIONS:**

TOC = Top of Casing (ft.) = Feet DTW = Depth to Water GWE = Groundwater Elevation SPHT = Separate Phase Hydrocarbon Thickness (msl) = Mean Sea Level TPH = Total Petroleum Hydrocarbons GRO = Gasoline Range Organics B = Benzene T = Toluene E = Ethylbenzene X = Xylenes -- = Not Measured/Not Analyzed QA = Quality Assurance/Trip Blank (µg/L) = Micrograms per liter

\* 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

- <sup>1</sup> Well development preformed.
- <sup>2</sup> Product + water removed.

<sup>3</sup> The Laboratory report indicates the result reported for toluene in this sample may be attributed to trace amounts of toluene recently found in HCl preserved vials from the manufacturer. The trip blank associated with this sample had a trace toluene detection of 1 ug/l. Please refer to the letter accompanying the lab report for further explanation.

<sup>4</sup> The Laboratory report indicates the result reported for toluene in this trip blank may be attributed to trace amounts of toluene recently found in HCl preserved vials from the manufacturer. Please refer to the letter accompanying the lab report for further explanation.

# 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 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 4°C 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 Hills, California.



Client/Facility#:	Chevron #2	11253		Job Number:	385867		
Site Address:	930 Springt	own Blvd.		Event Date:	11-0	7.09	 (inclusive)
City:	Livermore, (	CA		Sampler:	50	) e	(
Well ID	MW-9			)ate Monitored:	119	09	
Well Diameter	4 ir	 1.					<b>—</b> 1
Total Depth	14.86 #	<u>.</u>	Factor	e 3/4"= 0.02 (VF) 4"= 0.66	2 1"= 0.04 5 5"= 1.02	2"= 0.17 $3"= 06"= 1.50$ $12"= 5$	0.38
Depth to Water	12.70 ft	Check i	f water colum	n is less then 0.50	ft		
·	2.16	XVF (2 66	= 1,43	x3 case volume = 1	Estimated Pure	e Volume: 4.	
Depth to Water v	v/ 80% Recharge	E [(Height of Water C	olumn x 0.20) +	DTW1: 13.13	3		yar.
	-				Time Sta	irted:	(2400 hrs)
Purge Equipment:		g Equipment:		Depth to	Product:	(2400 hrs)	
Disposable Bailer Stainless Steel Bailer		Disposab	le Bailer Beiler		Depth to	Water:	ft
Stack Pump	<del></del>	Discrete	Bailer Bailer	<u></u>	Hydroca	bon Thickness:	ft
Suction Pump		Peristaltic	Pump		Visual Co	onfirmation/Description	D <b>N</b> :
Grundfos		OED Blac	Ider Pump	<u> </u>	Skimmer	/ Absorbant Sock (c	ircle one)
Peristaltic Pump		Other:			Amt Rem	oved from Skimmer:	gal
QED Bladder Pump					Amt Rem	oved from Well:	gal
Other:					Product 1	ransferred to:	<u> </u>
							100 maga
Start Time (purge)	0935	v	Veather Con	ditions C	long		
Sample Time/Date	e: 1000 11	1-9-09 V	Vater Color:	Clean	Odor (2)	N atom	
Approx. Flow Rate		gpm. S	ediment De	scription:		STICKS	<del>}</del>
Did well de-water	? If	yes, Time:	Volun	ne: a	al. DTW @	Sampling 12	.99
_							
(2400 hr.)	Volume (gal.)	pH Cor	ductivity	Temperature	<b>D</b> .O.	ORP	
OU 4th		721 10	, v		(iiig/t)	(mv)	
0950	<u> </u>	1.00 B	10	-19.1 -			-
0955			22-2	- X-8,-			-
		<u> </u>		_ <u></u>			-
							-
		LABOF	RATORY IN	ORMATION			
SAMPLE ID	(#) CONTAINER	REFRIG. PRES	SERV. TYPE	LABORATORY		ANALYSES	

	T				
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 01	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)
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## COMMENTS:

Add/Replaced Lock: \_\_\_\_\_



Client/Facility#:	Chevron #21125	53	Job Number:	385867	
Site Address:	930 Springtown	Blvd.	Event Date:	11-9 09	/inclusive)
City:	Livermore, CA		Sampler:	<u> </u>	(inclusive)
Well ID	<u>MW-10</u>		Date Monitored:	11-9-09	
Well Diameter	<u>4 in.</u>	Vo	olume 3/4"= 0.02	2 1"= 0.04 2"= 0.17 3	"= 0.38 I
Total Depth	26.29 ft.	Fa	ctor (VF) 4"= 0,66	5"= 1.02 6"= 1.50 12	"= 5.80
Depth to Water	12.30 ft.	Check if water col	umn is less then 0.50	ft.	
	13.99 XVF	0.66 = 9.2	🔰 x3 case volume = l	Estimated Purge Volume:	gal.
Depth to Water	w/ 80% Recharge ((Hei	ght of Water Column x 0.2	0) + DTW]: <u>/S.O</u>	7	
Purso Equipmente		0		Time Started:	(2400 hrs)
Disposable Bailer		Sampling Equipmen	nt:	Depth to Product:	(2400 111S)
Stainless Steel Baile		Disposable Baller		Depth to Water:	ft
Stack Pump		Discrete Railer	·····	Hydrocarbon Thickness:	ft
Suction Pump	····	Peristaltic Pump		Visual Commation/Desc	npuon:
Grundfos		QED Bladder Pump		Skimmer / Absorbant Soc	k (circle one)
Peristaltic Pump	<u></u>	Other:	······	Amt Removed from Skim	mer:gal
QED Bladder Pump				Water Removed from Well:	gal
Other:				Product Transferred to:	
Start Time (purge	1020	Weather C	Conditions:	lear	
Sample Time/Da	te: 1046 11-9.	water Col	or: cloar	Odor OIN (L.	rona
Approx. Flow Ra	te: <u>3-4</u> gpm	. Sediment	Description:		
Did well de-water	r? If yes,	Time: Vo	lume: g	al. DTW @ Sampling: _	12.69
Time		Conductivity	Temperature	D.O. ORP	/
(2400 hr.)	volume (gal.) pr	(µmhos/cm - μS)	( 🖸 / F )	(mg/L) (mV)	
1030	9 6.	70 593	18.5		
<u> 1034</u>	70 4.	72 610	187		
1039	-28- G-	68 614			
<u> </u>		LABORATORY	INFORMATION		
SAMDIE ID	(#) CONTAINER T BEE				

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES						
MW- /o	💪 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)						
	<u>├</u>										
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# COMMENTS:

Add/Replaced Lock: \_\_\_

Add/Replaced	Plug:
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Client/Facility#:	Chevron #211253		Job Number	: <b>385867</b>		
Site Address:	930 Springtown B	livd.	Event Date:	11- 9	7-04	(inclusive)
City:	Livermore, CA		Sampler:	- Fo	Le	
Well ID	MW-//		Date Monitored	1: <u>11-9</u>	-09	
Well Diameter Total Depth	<u>4</u> in. <u>14.79</u> ft.	Ĩ	Volume         3/4"= 0           Factor (VF)         4"= 0	0.02 1"≏ 0.04 0.66 5"≂ 1.02	2"= 0.17 3"= 0 6"= 1.50 12"= 5	.38 .80
Depth to Water	12.73 ft.	Check if water of	olumn is less then 0.	50 ft.		J
Depth to Water v		t of Water Column x (	).20) + DTWJ: <u>3 case volume</u>	Estimated Purg	e Volume: 4.5	gal.
Purge Equipment: Disposable Bailer Stainless Steel Bailer		Sampling Equipn Disposable Bailer Pressure Bailer	nent:	Time Sta Time Co Depth to Depth to Hydrocar	nted: mpleted: Product: Water: bon Thickness:	(2400 hrs) (2400 hrs) ft ft
Stack Pump Suction Pump Grundfos		Discrete Bailer Peristaltic Pump QED Bladder Pum	p	Visual Co Skimmer	/ Absorbant Sock (ci	n: rcle one)
Penstattic Pump QED Bladder Pump Other:		Other:	<u> </u>	Amt Rem Water Re Product 1	oved from Well: moved: ransferred to:	gal
Start Time (purge) Sample Time/Dat Approx. Flow Rat Did well de-water	): <u> 055</u> e: <u>  20   </u> 1-9-0 e: <u>201</u> gpm. ? If yes, Til	Weather 9 Water C Sedimen me:	Conditions: olor: at Description: /olume:	<u>Cleer</u> 70dor: (*) / 1 gal. DTW @	N <u>Sampling: 12</u>	.80
Time (2400 hr.) //./D //05	Volume (gal.) pH	$\begin{array}{c} \text{Conductivity} \\ (\mu\text{mhos/cm} - \mu\text{c}) \\ \hline 2 \\ \hline 2 \\ \hline 2 \\ \hline 2 \\ \hline 3 \\ \hline 7 \\ \hline 4 \\ \hline 7 \\ \hline 4 \\ \hline 7 \\ \hline 4 \\ \hline \end{array}$	$\begin{array}{c} \text{Temperature} \\ ( \bigcirc / F ) \\ \hline / 8, 5 \\ \hline / 9, 0 \\ \hline \end{pmatrix}$	D.O. (mg/L)	ORP (mV)	-
				- <u></u>		-

	LABORATORY INFORMATION										
	SAMPLE ID	(#) COI	NTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES				
	MW- //	6	x voa vial	YES	HCL	LANCASTER	TPH-GRO(80t5)/BTEX(8260)				
<u> </u>	·										
<u> </u>											
<b> </b>		<u> </u>									
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## COMMENTS:

Add/Replaced Lock: \_\_\_\_\_

Add/Replaced Bolt: \_\_\_\_\_

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Client/Facility#:	Chevron #2112	53	Jol	Number:	385867		
Site Address:	930 Springtow	n Blvd.	Ev	ent Date:	11 6	- 09	(inclusive)
City:	Livermore, CA		Sa	mpler:	Fo	د	(
	MINA/_ 12		D-4-1				
Well Diameter	<u> </u>			Monitored:	<u></u>	-09	<u> </u>
Total Depth	26.71 #		Volume Factor (VF)	3/4"≠ 0.0 4"= 0.0	02 1"= 0.04 66 5"= 1.02	2"= 0.17	3*= 0.38 2*= 5 80
Depth to Water	12. 7 2 ft.	Check if wate	r column is le	ss then 0.5	0.8	·····	
	13.93 XVI	= 0.61 = 9	/ <i>8</i> 1 x3 c	ase volume :	= Estimated Dur		
Depth to Water v	w/ 80% Recharge [(He	eight of Water Column ;	x 0.20) + DTW	1: 15.5	6		<u>~ 0 _ gal.</u>
	•	-	·····, -···	· <u> </u>	Time Sta	arted:	(2400 hrs)
Purge Equipment:		Sampiing Equi	pment:		Depth to	mpleted:	(2400 hrs)
Disposable Bailer		Disposable Baile	er		Depth to	Water:	
Stainless Steel Baller Stock Dump	·	Pressure Bailer			Hydroca	ton Thickness:	ft
Stack Fump		Discrete Bailer			Visual C	onfirmation/Desc	cription:
Grundfos	·····	OED Bladder B			Skimmer	/ Absorbant Sor	ck (circle one)
Peristaltic Pump		Other:	b		Amt Ren	loved from Skim	mer:gal
QED Bladder Pump	·····	<u> </u>			Amt Rem	loved from Well:	gal
Other:					Product	moved:	
Start Time (purge	): 1132	Weath	er Condition	)S'	·le		
Sample Time/Dat	te: 12001 11.0	1.09 Water	Color:	· /	Odor: (7)/	N OLA	
Approx. Flow Rat	te:3 -4 gpn	n. Sedimo	ent Descript	ion:			<u> </u>
Did well de-water	? If yes,	, Time:	Volume:		aal DTW @	Sampling	13.16
-			_		3	oumping	
(2400 hr.)	Volume (gal.) p	H Conductivi	ty Tem	perature	D.O.	ORP	
1136	to A	a 747			(myr.)	(mv)	
11/2	$-\frac{10}{10}$	01 -1/1		<u>7. L</u>			
1140	- 10 10		— <del> ;</del>	1.4			
		<del>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>	<i>←</i>	1.00			
		LABORATO	RY INFORM	ATION			
SAMPLE ID	(#) CONTAINER RE	FRIG. PRESERV.	TYPE LAB	ORATORY		ANALYSES	
MVV- I C				ICASTER	TPH-GRO(8015	)/BTEX(8260)	

 MW-12
 G x voa vial
 YES
 HCL
 LABORATORY
 ANALYSES

## COMMENTS:

Add/Replaced Lock: \_\_\_\_\_



Client/Facility#:	Chevron #211253	Job Number:	385867	
Site Address:	930 Springtown Blvd.	Event Date:	11-9-09	 (inclusive)
City:	Livermore, CA	Sampler:	For	
Well ID	MW-13	Date Monitored:	11-9-09	
Well Diameter Total Depth	$\frac{4}{36.75}$ in.	Volume 3/4"= 0.02 Factor (VF) 4"= 0.66	1"= 0.04 2"= 0.17 3"= 0. 5"= 1.02 6"= 1.50 12"= 5	38
Depth to Water	12.51 ft. Check if	water column is less then 0.50 ft	L	<u> </u>
Depth to Water v Purge Equipment: Disposable Bailer Stainless Steel Bailer Stack Pump Suction Pump Grundfos Peristaltic Pump QED Bladder Pump Other:	v/ 80% Recharge [(Height of Water Co Sampling Disposabl Pressure I Discrete B Peristaltic QED Blad Other:	plumn x 0.20) + DTWJ: <u>17.35</u> <b>Equipment:</b> The Bailer Bailer Bailer Pump der Pump Construction of the Pump	Time Started: Time Completed: Depth to Product: Depth to Water: Hydrocarbon Thickness: Visual Confirmation/Descriptio Skimmer / Absorbant Sock (cin Amt Removed from Skimmer: Amt Removed from Well: Water Removed: Product Transferred to:	gal. (2400 hrs) ft ft ft ft ft ft gal gal gal
Start Time (purge) Sample Time/Dat Approx. Flow Rate Did well de-water Time (2400 hr.) <u>1218</u> <u>1223</u> 1223	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	/eather Conditions:	Lear           Odor: ØIN         Struation           I. DTW @ Sampling:         12           D.O.         ORP           (mg/L)         (mV)	2 .08
SAMPLE ID	(#) CONTAINER   REFRIG.   PRES	ATORY INFORMATION ERV. TYPE   LABORATORY	ANALYSES	······································

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- / 3	x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)
	—			-	
		· · · · ·			

# COMMENTS:

Add/Replaced Lock: \_\_\_\_\_



Client/Facility#:	Chevron #2112	53	Job N	Number:	385867			
Site Address:	930 Springtow	n Blvd.	Even	t Date:	11- 4	7.00	2	- (inclusive)
City:	Livermore, CA		Samp	oler: -	Tore		· · · · ·	- (
Well ID	<u>mw-14</u>		Date Mo	nitored:	11-	9-04	1	
Well Diameter	<u>4 in.</u>		Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38	3
Total Depth	<u>14.49 ft.</u>		Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80	
Depth to Water	<u>10-11 ft.</u>	Check if water	column is less	then 0.50 fi	t.		_	_
	<u>4.38</u> ×VI	: <u>066 = 2</u>	<u>87</u> x3 case	volume = E	stimated Purg	je Volume:	<u> </u>	_ gal.
Depth to Water v	w/ 80% Recharge [(He	eight of Water Column x	: 0.20) + DTWJ: _	10.98				
Duran Caulom - t					Time Sta	arted:	<u></u>	(2400 hrs)
Purge Equipment:		Sampling Equip	oment:		Depth to	Product:		(2400 nrs) A
Disposable Baller		Disposable Baile	r		Depth to	Water:		n ft
Stainless Steel Baller	r	Pressure Bailer		··	Hydrocar	rbon Thickne	\$S:	ft
Stack Fump		Discrete Bailer			Visual Co	onfirmation/D	escription:	
Succon Fump		Penstaltic Pump		·	Skimmer	/ Absorbant	Sock (oirol	
Peristaltic Pump		QED Bladder Pur	mp		Amt Rem	oved from S	kimmer:	oal
OED Bladder Pump		Other			Amt Rem	oved from W	/ell:	gal
Other:					Water Re	moved:		
Start Time (purge)	): 0836	Weathe	er Conditions		ba c			
Sample Time/Dat	te: 0910 111-0	9-04 Water (	Color: Z	Lenn C	dor (V) /	N C	7	
Approx. Flow Rat	e don	<u> </u>	nt Description	<u>reave</u> ~			mer	7
Did well de-water	2 If yes	Time:	Volumo	···		0		
	: ii yes,	riine		ga	I. DIW@	Sampling	: <u>_/Ø·</u>	40
Time		Conductivit	y Temper	rature	D.O.	c	RP	
(2400 hr.)	volume (gal.) p	μmhos/cm -	is ( cy	F)	(mg/L)	(r	πV)	
0840	2 6.	77 802	18	9				
0842		80 790		+2 -				
0867	9 6	84 784		<u> </u>			·	
						~		
		LABORATOR	RY INFORMA	TION				
MW- //I		TRUG. PRESERV. T		ATORY	1000/00/17	ANALYS	ES	
				ASTER TP	H-GRO(8015	)/BTEX(8260	<u>))</u>	
				<u> </u>				
				———				

## COMMENTS:

Add/Replaced Lock: \_\_\_\_\_

Add/Replaced Plug: \_\_\_\_\_



Client/Facility#:	Chevron #21125	3	Job Number:	385867		
Site Address:	930 Springtown	Blvd.	Event Date:	11-9-	ory	→ (inclusive)
City:	Livermore, CA		Sampler:	Joe		
Well ID	MW-15		Date Monitored:	11-9-	04	
Well Diameter	<b>4</b> in.	l v		2 1"= 0.04 2"	= 0.17 2"- 0	28
Total Depth	45,94 ft.	Fa	actor (VF) 4"= 0.66	6 5"= 1.02 6"=	= 0.17 3 = 0 = 1.50 12"= 5	.80
Depth to Water	10.18 ft.	Check if water col	lumn is less then 0.50	) ft.		]
	35.76 XVF	0.66 = 236	x3 case volume =	Estimated Purge Vo	ume: 70	aal
Depth to Water w	/ 80% Recharge [(Heig	ht of Water Column x 0.2	20) + DTWI: 17.3	2		yan.
Pu <b>rge Equip</b> ment:		Sampling Equipme	nt:	Time Started: Time Complet	ed:	(2400 hrs) (2400 hrs)
Disposable Bailer		Disposable Bailer		Depth to Prod	UCC: M":	ft
Stainless Steel Bailer		Pressure Bailer	<u> </u>	Hydrocarbon	Thickness:	n ft
Stack Pump Suction Pump		Discrete Bailer	<u> </u>	Visual Confirm	ation/Description	on:
Grundfos		OED Bladder Pump		Skimmer / Abs	orbant Sock (ci	rcle one)
Peristaltic Pump		Other:		Amt Removed	from Skimmer:	gal
QED Bladder Pump				Amt Removed	from Well:	gai
Other:				Product Trans	ferred to:	
Start Time (purge)	0754	Weather (	Conditions: 0	lear	· · · · · · · · · · · · · · · · · · ·	
Sample Time/Date	: <u>0830111-9</u>	- Water Col	lor: den	Odor: 00/ N	7 2	on
Approx. Flow Rate	e: gpm.	Sediment	Description:			
Did well de-water?	If yes, ]	Time: <u>0802</u> Vo	olume: <u>2&lt;1 g</u>	jal. DTW @ San	npling:	1.18
Time (2400 hr.)	ر Volume (gal.) pH		Temperature (	D.O. (mg/L)	ORP (mV)	
0800	23 6.8	8 6.96	18.8			-
0000	2.4					-
						-
						-

	LABORATORY INFORMATION												
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES								
MW	x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)								
10													
l													

# COMMENTS:

Add/Replaced Lock: \_\_\_\_\_



Client/Facility#:	Chevron #2	11253		Job	Number:	385	5867			
Site Address:	930 Springt	own Blve	ł.	Ever	nt Date:	1	1-9	-09		(inclusive)
City:	Livermore,	CA	<u> </u>	 Sam	pler:		Ta	/_ ~		(moldered)
	being 1/									
Well Diameter	<u>IVIVV-/_6</u>		F	Date M	onitored:	·	1-9	-09		_
Total Depth	7972	п. —		Volume Factor (V/F)	3/4"= 0.	.02 1"	= 0.04	2"= 0.17	3"= 0.38	
Depth to Water	10:31 6		ן heck if water c'		4 - 0.	00 5		6'= 1.50	12"= 5.80	]
	18.89	<u>∽</u> ⊑` xVF <u>7</u> 2.	66 = 12		s uten 0.5	DU IL. = Estimo	tod Durno	Mahamat		
Depth to Water	w/ 80% Recharg	E [(Height of \	Vater Column x 0	.20) + DTWI:	14.0	8 г	leu Fuige	volume:	<u>)/:</u>	gai.
·					<u> </u>	<u> </u>	Time Star	led:	<u> </u>	(2400 hrs)
Purge Equipment:		S	ampling Equipr	nent:			l ime Com Denth to P	pleted:		(2400 hrs)
Disposable Bailer Staipless Steal Baile			isposable Bailer		<u> </u>		Depth to V	Vater:	······································	^n
Stack Pump	······		ressure Bailer				lydrocarb	on Thickne	SS:	ft
Suction Pump		P	eristaltic Pump			`	/isual Cor	nfirmation/E	Description:	
Grundfos		Q	ED Bladder Pum	p	<u> </u>	i s	Skimmer /	Absorbant	Sock (circle	one)
Peristaltic Pump		0	ther:			L A	Int Remo	ved from S	ikimmer:	gal
QED Bladder Pump					-	- Iv	Vater Ren	noved:	ven:	gar
Other:						P	roduct Tra	ansferred to	o:	
						<b>k</b>	-			
Start Time (purge	a): 0108		Weather	Conditions	; _	<u>c 1-e</u>	2er		-	
Sample Time/Da	ite: <u>#745 /</u>	<u>[1-9-0</u>	9 Water C	olor: <u> </u>	ean	_Odor:	() N	to	rist	
Approx. Flow Ra	te: <u>3 - 4</u>	_gpm	Sedimen	t Descriptic	on:			• •		
Did well de-wate	r? li	i yes, Time:	V	/olume:		gal. D	TW @ 9	Sampling	: <u>_//_</u> (	e3
Time (2400 hr.)	Volume (gal.)	pН	Conductivity (µmhos/cm - 👩	Tempe ()	erature F)	C (m	).(). 1g/L)	C (i	) mV)	
0724	13	7.07	761	18	1,8				•	
0724	25.	6.90	766	19	1.3					
0735	38	6.84	-763		25		·			
		<u> </u>								
		. <u></u> 1	ABORATOR	INFORM						
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TY	PE LABO	RATORY	<u> </u>		ANALYS	BES	
MW- / 6	<u>6</u> x voa vial	YES	HCL	LANC	ASTER	TPH-GF	RO(8015)/	BTEX(8260	0)	
						L				

 MVV I\_\_\_\_\_
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## COMMENTS:

Add/Replaced Lock: \_\_\_

Add/Replace	d Plug: _
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Processing         ULUM-dG         Processing         Output         Processing         Output         Processing         Output		Chev	ron C	alif	orn	nic: R	Red	aic	n	Ar	าต	lvsi	s R	20	au	le	st/	Chain d	of Ci	isto						
Facility #:         SSE211253-OML         G-#1/7073-7           Facility #:         SSE211253-OML         G-B/335267         Global ID/T0500101353         Matrix         Preservettion Codes         H = HC:         T = Trico.Itian           Sile Address@30 SPRINGTOWN BLVD., LIVERNORE, CA         Matrix         Preservettion Codes         H = HC:         T = Trico.Itian           Convoltant/Office_GR, Inc., 6747 Sierre Court, Suite J, Dubin, CA 94568         B (0)         B	Lancaster Laboratories		4- <i>6</i> 6	12		l     Ac	ct. #:_	10-	)OL		Sam	For Lar ple #	83	r La 51	27	iorie - U	q	only Group #;	019	<u>25</u>						
Facility #:       SSI211253-OML       Orderar 300000000000000000000000000000000000											Ar	naiyse	Rec	lnes	sted		_	7 C#117	1073	1						
Chevron PM/R       Land Consultar/PACE       g	acility #: <u>SS#211253-OML G-R#385</u>	67 Global	ID#T060010	)1353	_	Matrix		#	Ţ <b>ļ</b> Ŧ		- P1		tion	Co	tes			H = HCI	rative Co T = Thi	des osulfate						
Consultart/Office: GR. Inc., 6747 Sterra Court, Suite J, Dublin, CA 94568 Consultart Pri, Mgr. Dearna L. Herding (deanna@grinc.com) Consultant Pri, Mgr. Dearna L. Herding (deanna@grinc.com)	hevron PMR	d Consultan	CRACE	••• #	┶┝	TŤT	-											$N = HNO_3$ $S = H_2SO_4$	B = Nat O = Otherapy Control Reprint the second s	OH 1er						
Consultant Prj. Mg.: Deanns L. Harding (deenna@grinc.com) Consultant Prj. Mg.: Deanns L. Harding (deenna@grinc.com) Consultant Phone #925-551-7555 Fax #925-551-7859 Sampler:	onsultant/Office: G-R, Inc., 6747 Sierra C	ourt, Suite	, Dublin, C/	9456	8	e Si	Į			8	-							J value repo	rting need	ed						
Consultant Prione #925-551-7555       Fax #925-551-7899       IDD       0	onsultant Prj. Mgr. Deanna L. Harding (	ieanna@gri	inc.com)		-	Pote NPD	ietu.	<b>B</b>										Must meet l	owest date	ction iimi						
Sampler:	onsultant Phone #925-551-7555	Fax #:92	25-551-7899	}		몓믹	10		Q			<b>P</b>	B					8021 MTBE C	ozoo com							
Bample Identification       Date Collected Col	ampler: JOEASEMIA				0		je je	8	<b>B</b>	50		Ne N	2					Confirm high	hest hit by	8260						
Bernpte Identification       Date       Time       0 <t< td=""><td>۵ </td><td></td><td></td><td></td><td>ŝ</td><td> </td><td></td><td></td><td>15 IK</td><td>15 MO</td><td></td><td><u>हे</u> हो ह</td><td></td><td></td><td></td><td></td><td></td><td>Confirm ali I</td><td>its by 826</td><td>D</td></t<>	۵ 				ŝ				15 IK	15 MO		<u>हे</u> हो ह						Confirm ali I	its by 826	D						
Q //         Image: Second of the secon	mple Identification	Date Collected	Time	<u>]</u> [g] ]	Į ž	l de l		Ř	18 E	8	100		A Sector					DRun or	oy's on higi oy's on all i	høst hit Nie						
MW-9         IL-9-9         I 0270         G         V           MW-10         10 45         G         V         M           MW-12         1720         G         V         M           MW-12         17240         G         V         M           MW-13         1740         G         V         M           MW-14         910         G         V         M           MW-15         0.830         G         V         M           MW-16         0.745         V         G         V           MW-16         0.745         V         G         V           MW-16         0.745         V         G         V           MW-16         0.745         V         G         V         M           MW-16         0.745         V         G         V         M           Mux-16         0.745         V         G         V         M         M	QK			ĬŽ		13	2						-9	-+		┽	╺┼╸	Comments /	Remarka							
MW-10     1/2 d3     G     V       MW-11     1/2 d0     G     V       MW-12     1/2 d0     G     V       MW-13     1/2 d0     G     V       MW-14     @ 91.0     G     V       MW-15     V     06 30     G       MW-16     V     06 30     G       MW-12     V     06 30     G       MW-13     V     06 40     V       MW-14     071.0     G     G       MW-15     V     06 30     G       MW-16     V     07 45     G       Mu     V     07 45     G       Mu     V     V     08 000       Mu     V     V	mw-6	11-9-00	1 1000	┨╻╽			6	1-2	2																	
Image: state		4-+-	1045	++	╋	┞┟┊┝	19	$\vdash$			-		_+	_	5	4	4	4								
MW-13     1240     C       MW-14     \$\$910     C       MW-15     0830     C       MW-15     0830     C       MW-16     0745       MW-16     0745       MW-16     0745       MW-16     0745       Muration     0745       Muration <t< td=""><td>MW-12</td><td></td><td>1200</td><td>╂╂╶┾</td><td>╋</td><td></td><td>6</td><td>Ľ</td><td>Ľ</td><td>-<del> </del>-</td><td>-</td><td>┽┤</td><td>-+-</td><td>-+</td><td></td><td>+</td><td></td><td>10</td><td></td><td></td></t<>	MW-12		1200	╂╂╶┾	╋		6	Ľ	Ľ	- <del> </del> -	-	┽┤	-+-	-+		+		10								
MW-14     910     G       MW-15     0.830     0.745       MW-16     0.745       Mumaround Time Requested (TAT) (please circle)     Date for:       Durnaround Time Requested (TAT) (please circle)     Date for:       Date for:     Date for:       Date for:     Date for:       Date for:     Placetweed by:       Date for:     Placetweed by:	MW-12		1240	<u></u>			10	ブ	7	-f	╶╉	╉╉	-+	┥	╉	╋		-		85						
MW-1S       68.30       I <thi< th="">       I       <thi< th=""> <thi< t<="" td=""><td></td><td>4</td><td>0910</td><td><math>\mathbb{H}</math></td><td><math>\square</math></td><td></td><td>6</td><td>Z</td><td>V</td><td></td><td></td><td></td><td></td><td>T</td><td></td><td>1</td><td>İ</td><td></td><td></td><td></td></thi<></thi<></thi<>		4	0910	$\mathbb{H}$	$\square$		6	Z	V					T		1	İ									
Turnaround Time Requested (TAT) (please circle)     Ballagatified fv:     Date     Time     Received by:       T2: TAT     72 hour     48 hour     4 day     5 day     Ballagatified fv:     Date     Time       ata Package Options (please circle)     Type I - Full     EDF/EDD     Bellagatified fv:     Date     Time     Received ty:     Date     Time       c Summary     Type I - Full     EDF/EDD     Helinguitabed by:     IIIIII Date     Time     Received ty:     Date     Time       pe VI (Raw Data)     Cost Deliverable not needed     EDF/EDD     Retificulated by Commercial Carrier:     Point     Point </td <td></td> <td>┨──╟──</td> <td>0830</td> <td>╫/┼</td> <td>+</td> <td></td> <td>-16</td> <td>ĸ</td> <td><math>\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{</math></td> <td></td> <td></td> <td>┥┦</td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td>		┨──╟──	0830	╫/┼	+		-16	ĸ	$\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{\mathbf{$			┥┦		-				-								
Furmaround Time Requested (TAT) (please circle)         Turnaround Time Requested (TAT) (please circle)       Ballingottshed for:       Date       Time       Received by:       Date       Time         TDP-TAT       72 hour       48 hour       48 hour       48 hour       94 40       64 40       64 40       64 40       64 40       74 40<				┫┸╢╴	-			+-		-+-	┿	┥┥	+	+		╋	-+-	4								
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24 hour     4 day     5 day     Bettinuisbed br.     Date     Trpe     Received br.     Date     Time       Nata Package Options (please circle if required)     Relinquisbed by:     Date     Time     Received br.;     Date     Time       KC Summary     Type I - Full     EDF/EDD     Relinquisbed by:     Date     Time     Received by:     Date     Time       Vpo VI (Raw Data)     Coelt Deliverable not needed     EDF/EDD     Relinquished by Commercial Carrier:     Date     Time       VPS     Redix     Other     Date     Time       Isk     Temperature Upon Receipt     O'-1'-4'     C'-1'-4'     C'-1'-4'	LD TAT 72 hour 48 ho	ur	$\geq$	20	$\searrow$	-				1.9.	09	1400	6	E	LER	R	YAN	FRIDGE /	-09-0	1400						
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Lancaster Laboratories, Inc., 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 (717) 656-2300 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

4804.01 (north) Rev. 10/12/06



November 20, 2009



NOV 2 0 2003

Ms. Cheryl Hansen Gettler-Rvan. Inc. 6747 Sierra Court Suite J Dublin, CA 94568

GETTLER-RYAN INC. GENERAL CONTRACTORS

Dear Ms. Hansen:

I am writing in regards to the Chevron 211253: 930 Springtown-Livermore, CA project. Lancaster Laboratories Group No. 1170737 collected on November 9, 2009.

Toluene was detected in sample MW-10 at a level of 2 µg/L and in sample MW-11 at a level of 0.6 µg/L. We suspect that the vial may have been the source of your low-level toluene hit.

Recently we've noted sporadic detections of toluene in trip, field, and equipment blanks between 0.2 and 1.7 µg/L. We have performed an extensive investigation to determine the source and we've determined that some HCI preserved vials from the vial manufacturer contained trace levels of toluene. We have notified the manufacturer who is performing its own investigation to determine the source.

As corrective action, we have switched to another manufacturer and have confirmed the new vials are clean. All suspect vials have been removed from our inventory to prevent any further issues.

We apologize for any inconvenience that this caused. Please call me at 717-656-2300, Ext. 1241 if you have any further questions.

Sincerely,

fill M. Parker

Jill Parker Project Manager **Environmental Client Services** 

JP/mcs

de tre ménerantes es 2425 Stow Hotost Ne 1.0 1.41-4 13. 17605-2425 21.6556-146 La tractal (#. 17605-3425) (c.2015) (c.

Shipping Address;





2425 New Holland Piles, PO Box 12425, Lancester, PA 17805-2425 - 717-858-2300 Fex: 717-858-2881 - www.lancesterlabs.com

#### ANALYTICAL RESULTS

Prepared for:

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

925-842-8582

Prepared by:

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

November 20, 2009

Project: 211253

Samples arrived at the laboratory on Thursday, November 12, 2009. The PO# for this group is 0015039978 and the release number is ROBB. The group number for this submittal is 1170737.

Client Sample Description QA-T-091109 NA Water MW-9-W-091109 Grab Water MW-10-W-091109 Grab Water MW-11-W-091109 Grab Water MW-12-W-091109 Grab Water MW-13-W-091109 Grab Water MW-14-W-091109 Grab Water MW-15-W-091109 Grab Water

#### Lancaster Labs (LLI) # 5835141 5835142 5835143 5835144 5835145 5835146 5835146 5835147 5835148 5835149

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

ELECTRONIC CRA c/o Gettler-Ryan COPY TO

Attn: Cheryl Hansen





2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 +717-656-2800 Fex: 717-656-2881 + www.lancesterlabs.com

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

Respectfully Submitted,

Christine Dulaney Service Specialist



# **Analysis Report**

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Page 1 of 1

# Sample Description: QA-T-091109 NA Water LLI Sample # WW 5835141 Facility# 211253 Job# 385867 GRD LLI Group # 1170737 930 Springtown-Livermore T0600101353 QA CA

#### Project Name: 211253

Collected: 11/09/2009

Submitted: 11/12/2009 08:50 Reported: 11/20/2009 at 11:45 Discard: 12/21/2009

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

Account Number: 10904

# SBLOA

As Received CAT As Received Dilution Method Analysis Name No. CAS Number Regult Factor Detection Limit GC/MS Volatiles SW-846 8260B ug/1 ug/l 06053 Benzene 71-43-2 N.D. 0.5 1 06053 Ethylbenzene 100-41-4 N.D. 0.5 1 06053 Toluene 108-88-3 1 0.5 1 06053 Xylene (Total) 1330-20-7 N.D. 0.5 1 The result reported for toluene in this trip blank may be attributed to trace amounts of toluene recently found in HCl preserved vials from the manufacturer. GC Volatiles SW-846 8015B ug/1ug/l 01728 TPH-GRO N. CA water C6-C12 N.D. n.a. 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	Mathod	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	P093202AA	11/16/2009 11:39	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P093202AA	11/16/2009 11:35	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09318A07A	11/14/2009 20:23	Matthew S Woods	1
01146	GC VOA Water Prep	SW-846 5030B	1	09318A07A	11/14/2009 20:23	Matthew S Woods	1



# **Analysis Report**

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Page 1 of 1

Sample	Description:	MW-9-W-091109 Grab Water	LLI	Sample :	# >	W 5835142
		Facility# 211253 Job# 385867 GRD	LLI	Group	# 1	170737
		930 Springtown-Livermore T0600101353 MW-9		-	Ċ	'A

#### Project Name: 211253

Collected: 11/09/2009 10:00 by JA

Account Number: 10904

Submitted: 11/12/2009 08:50 Reported: 11/20/2009 at 11:45 Discard: 12/21/2009

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

#### SBL09

CAT No.	Analysis Name		CAS Number	As Received Result	As Raceived Method Detection Limit	Dilution Factor
GC/MS	<b>Volatiles</b>	SW-846	8260B	ug/1	ug/1	
06053	Benzene		71-43-2	4	0.5	1
06053	Ethylbenzene		100-41-4	2	0.5	1
06053	Toluene		108-88-3	4	0.5	1
06053	Xylene (Total)		1330-20-7	5	0.5	1
GC Vol	atiles	SW-846	8015B	ug/1	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	240	50	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 Data and Time	Analyst	Dilution
06053	BTEX by 8260B	SW-846 8260B	1	P093202AA	11/16/2009 14.45	Daniel W Weller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P093202AA	11/16/2009 14:45	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09318A07A	11/14/2009 22:57	Matthew S Woods	ī
01146	GC VOA Water Prep	SW-846 5030B	1	09318A07A	11/14/2009 22:57	Matthew S Woods	1





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Page 1 of 1

# Sample Description: MW-10-W-091109 Grab Water LLI Sample # WW 5835143 Facility# 211253 Job# 385867 GRD LLI Group # 1170737 930 Springtown-Livermore T0600101353 MW-10 CA

#### Project Name: 211253

Collected: 11/09/2009 10:45 by JA

Submitted: 11/12/2009 08:50 Reported: 11/20/2009 at 11:45 Discard: 12/21/2009

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

Account Number: 10904

#### SBL10

CAT No.	Analysis Name		CAS Number	As Received Result	AS Received Method Detection Limit	Dilution Factor	
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l		
06053	Benzene		71-43-2	1	0.5	1	
06053	Ethylbenzene		100-41-4	30	0.5	1	
06053	Toluene		108-88-3	2	0.5	1	
06053	Xylene (Total)		1330-20-7	30	0.5	1	
The : amoun The f ug/l	result reported for t hts of toluene recent trip blank associated	toluene in tly found d with thi	this sample may h in HCl preserved v s sample had a tra	be attributed to tr vials from the manu ace toluene detecti	ace facturer. on of 1		
GC Vol	latiles	SW-846	8015B	ug/1	ug/l		
01728	TPH-GRO N. CA water	C6-C12	n.a.	2,800	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#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	P093202AA	11/16/2009 15:11	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P093202AA	11/16/2009 15:11	Daniel H Heller	î
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09318A07A	11/15/2009 01:05	Matthew S Woods	1
01146	GC VOA Water Prep	SW-846 5030B	1	09318A07A	11/15/2009 01:05	Matthew S Woods	1





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Page 1 of 1

# Sample Description: MW-11-W-091109 Grab Water LLI Sample # WW 5835144 Facility# 211253 Job# 385867 GRD LLI Group # 1170737 930 Springtown-Livermore T0600101353 MW-11 CA

#### Project Name: 211253

Collected: 11/09/2009 11:20 by JA

Account Number: 10904

Submitted: 11/12/2009 08:50 Reported: 11/20/2009 at 11:45 Discard: 12/21/2009

Chevron 6001 Bollinge**r C**anyon Rd L4310 San Ramon **CA** 945**83** 

#### SBL11

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	<b>ug/</b> 1	ug/l	
06053	Benzene		71-43-2	3	0.5	1
06053	Ethylbenzene		100-41-4	2	0.5	1
06053	Toluene		108-88-3	0.6	0.5	1
06053	Xylene (Total)		1330-20-7	2	0.5	1
The : amoun The f ug/l	result reported for nts of toluene recentrip blank associate	toluene in htly found ed with thi	this sample may in HCl preserved s sample had a t	be attributed to tr vials from the manu race toluene detecti	ace facturer. on of 1	
GC Vol	atiles	SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA wate:	r C6-C12	n.a.	1,100	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	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	P093202AA	11/16/2009 15:38	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P093202AA	11/16/2009 15:38	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09318A07A	11/14/2009 23.22	Matthew S Woods	1
01146	GC VOA Water Prep	SW-846 5030B	1	09318A07A	11/14/2009 23:22	Matthew S Woods	1





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Page 1 of 1

# Sample Description: MW-12-W-091109 Grab Water LLI Sample # WW 5835145 Facility# 211253 Job# 385867 GRD LLI Group # 1170737 930 Springtown-Livermore T0600101353 MW-12 CA

### Project Name: 211253

Collected: 11/09/2009 12:00 by JA

Submitted: 11/12/2009 08:50 Reported: 11/20/2009 at 11:45 Discard: 12/21/2009

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

Account Number: 10904

SBL12

CAT No.	Analysis Name		CAS Number	As Receivad Result	Method Detaction Limit	Dilution Factor	
GC/MS	<b>Volatiles</b>	SW-846	8260B	ug/1	ug/1		
06053	Benzene		71-43-2	290	5	10	
06053	Ethylbenzene		100-41-4	22	5	10	
06053	Toluene		108-88-3	560	5	10	
06053	Xylene (Total)		1330-20-7	3,100	5	10	
GC Vol	atiles	SW-846	8015B	ug/l	ug/l		
01728	TPH-GRO N. CA water	C6-C12	n.a.	18,000	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 Tim		Analyst	Dilution Factor
06053	BTEX by \$260B	SW-846 8260B	1	P093182AA	11/14/2009	15:23	Daniel H Heller	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P093182AA	11/14/2009	15:23	Daniel H Heller	10
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09318A07A	11/15/2009	02:22	Matthew S Woods	5
01146	GC VOA Water Prep	SW-846 5030B	1	09318A07A	11/15/2009	02:22	Matthew S Woods	5





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Page 1 of 1

# Sample Description: MW-13-W-091109 Grab Water LLI Sample # WW 5835146 Facility# 211253 Job# 385867 GRD LLI Group # 1170737 930 Springtown-Livermore T0600101353 MW-13

#### Project Name: 211253

Collected: 11/09/2009 12:40 by JA

Submitted: 11/12/2009 08:50 Reported: 11/20/2009 at 11:45 Discard: 12/21/2009

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

Account Number: 10904

#### SBL13

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/1	
06053	Benzene		71-43-2	340	5	10
06053	Ethylbenzene		100-41-4	16	5	10
06053	Toluene		108-88-3	1,300	5	10
06053	Xylene (Total)		1330-20-7	1,700	5	10
GC Vol	atiles	SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	12,000	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	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	P093182AA	11/14/2009 15:49	Daniel H Heller	10
01163	GC/MS VOA Water Prep	SW-846 50308	1	P093182AA	11/14/2009 15:49	Daniel H Heller	10
01728	TPH-GRO N. CA water C6-C12	SW-846 80158	1	09318A07A	11/15/2009 02:48	Matthew S Woods	10
01146	GC VOA Water Prep	SW-846 5030B	1	09318A07A	11/15/2009 02:48	Matthew S Woods	10





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#### Page 1 of 1

#### Sample Description: MW-14-W-091109 Grab Water Facility# 211253 Job# 385867 GRD 930 Springtown-Livermore T0600101353 MW-14

LLI Sample # WW 5835147 LLI Group # 1170737 CA

#### Project Name: 211253

Collected: 11/09/2009 09:10 by JA

Submitted: 11/12/2009 08:50 Reported: 11/20/2009 at 11:45 Discard: 12/21/2009 Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

Account Number: 10904

#### SBL14

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	
06053	Benzene		71-43-2	1,800	10	20
06053	Ethylbenzene		100-41-4	750	10	20
06053	Toluene		108-88-3	1,900	10	20
06053	Xylene (Total)		1330-20-7	2,600	10	20
GC Vol	atiles	SW-846	8015B	ug/l	ug/1	
01728	TPH-GRO N. CA water	C6-C12	n.a.	23,000	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	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution
06053	BTEX by 8260B	SW-846 8260B	1	P093182AA	11/14/2009 16:16	Daniel H Heller	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P093182AA	11/14/2009 16:16	Daniel H Heller	20
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09318A07A	11/15/2009 03:14	Matthew S Woods	10
01146	GC VOA Water Prep	SW-846 5030B	1	09318A07A	11/15/2009 03:14	Matthew S Woods	10



# **Analysis Report**

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

Page 1 of 1

# Sample Description: MW-15-W-091109 Grab Water LLI Sample # WW 5835148 Facility# 211253 Job# 385867 GRD LLI Group # 1170737 930 Springtown-Livermore T0600101353 MW-15 CA

#### Project Name: 211253

Collected: 11/09/2009 08:30 by JA

Account Number: 10904

Submitted: 11/12/2009 08:50 Reported: 11/20/2009 at 11:45 Discard: 12/21/2009

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

#### SBL15

CAT No.	Analysis Name		CAS Number	As Received Result	Af Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	
06053	Benzene		71-43-2	110	5	10
06053	Ethylbenzene		100-41-4	370	5	10
06053	Toluene		108-88-3	590	5	10
06053	Xylene (Total)		1330-20-7	4,900	5	10
GC Vol	atiles	SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	20,000	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	Nethod	Trial#	Batch#	Analyeis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	P093182AA	11/14/2009 16:43	Daniel H Heller	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P093182AA	11/14/2009 16:43	Daniel H Heller	10
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09318A07A	11/15/2009 03:39	Matthew S Woods	10
01146	GC VOA Water Prep	SW-846 5030B	1	09318A07A	11/15/2009 03:39	Matthew S Woods	10





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Page 1 of 1

# Sample Description: MW-16-W-091109 Grab WaterLLI SamFacility# 211253 Job# 385867 GRDLLI Gro930 Springtown-Livermore T0600101353 MW-16

LLI Sample # WW 5835149 LLI Group # 1170737 CA

#### Project Name: 211253

Collected: 11/09/2009 07:45 by JA

Submitted: 11/12/2009 08:50 Reported: 11/20/2009 at 11:45 Discard: 12/21/2009

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

Account Number: 10904

#### SBL16

CAT No.	Analysis Name		CAS Number	As Received Result	As Raceived Nethod Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/1	
06053	Benzene		71-43-2	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
GC Vol	atiles	SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	180	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	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution
06053	BTEX by 8260B	SW-846 8260B	1	P093182AA	11/14/2009 17.10	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P093182AA	11/14/2009 17:10	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09320A07A	11/16/2009 21:09	Tyler O Griffin	ī
01146	GC VOA Water Prep	SW-846 5030B	1	09320A07A	11/16/2009 21:09	Tyler O Griffin	1





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# Quality Control Summary

Client Name: Chevron Reported: 11/20/09 at 11:45 AM

Group Number: 1170737

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 <u>MDL</u>	Report Units	LCS <u>%REC</u>	LCSD BREC	LCS/LCSD Limits	<u>RPD</u>	RPD Max
Batch number: P093182AA	Sample nu	mber(s): 58	35145-5839	149				
Benzene	N.D.	0.5	uq/l	98		79-120		
Ethylbenzene	N.D.	0.5	ug/1	94		79-120		
Toluene	N.D.	0.5	uq/l	95		79-120		
Xylene (Total)	N.D.	0.5	ug/l	93		80-120		
Batch number: P093202AA	Sample nu	mber(s): 58	35141-5835	144				
Benzene	N.D.	0.5	ua/1	98	101	79-120	3	20
Ethylbenzene	N.D.	0.5	$u\alpha/1$	95	99	79-120	4	30
Toluene	N.D.	0,5	ug/l	97	100	79-120	3	30
Xylene (Total)	N.D.	0.5	ug/l	96	98	80-120	3	30
Batch number: 09318A07A	Sample nu	nber(s): 58	35141-5835	148				
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	118	75-135	8	30
Batch number: 09320A07A	Sample nur	nber(s): 58	35149					
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	109	75-135	0	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

Analygig Name		MS <u>%RBC</u>	MSD <u>VRRC</u>	MS/MSD Limits	RPD	RPD MAX	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP RPD	Dup RPD Max
Batch number:	P093182AA	Sample	number(s)	: 5835145	-58351	49 UNSPK	: P836258			
Benzene		101	98	80-126	3	30				
Ethylbenzene		98	96	71-134	1	30				
Toluene		100	98	80-125	2	30				
Xylene (Total)		95	93	79-125	1	30				
Batch number:	P093202AA	Sample	number(s)	: 5835141	-58351	44 INSPK	• 0837537			
Benzene		96		80-126			. 100/00/			
Ethylbenzene		94		71-134						
Toluene		95		80-125						
Xylene (Total)		92		79-125						
Batch number:	09318A07A	Sample	number(s)	: 5835141	-58351/		· D834963			
TPH-GRO N. CA	water C6-C12	118		63-154		io onorn				
Batch number: (	09320A07A	Sample	number(s)	: 5835149	UNSPK	: P834970	5			
TPH-GRO N. CA	water C6-C12	122		63-154			-			

\*- 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: 11/20/09 at 11:45 AM

Group Number: 1170737

#### 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: P093182AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5835145	86	86	92	87
5835146	88	89	88	85
5835147	86	89	90	84
5835148	87	85	91	88
5835149	87	88	90	84
Blank	86	86	90	82
LCS	87	92	90	40
MS	87	89	89	07
MSD	86	90	90	86
Limits:	80-116	77-113	80-113	78-113
Analysis I Batch num	Name: BTEX by 8260B			
Baccar man	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5835141	86	87	90	83
5835142	86	87	89	84
5835143	86	87	89	85
5835144	86	89	88	85
Blank	87	89	90	84
LCS	85	89	89	04
LCSD	87	89	88	07
MS	87	92	90	85
Limits:	80-116	77-113	80-113	78-113
Analysis N Batch numb	Name: TPH-GRO N. CA water ( per: 09318A07A Trifluorotoluene-F	26-C12		
5835141	101			
5835142	102			
5835143	146*			
5835144	124			
5835145	142*			
5835146	109			
5035140	115			
5035149	100			
5055140 Dlank	101			
LCC	112			
	712			
MS	113			
Limits:	63-135			

Analysis Name: TPH-GRO N. CA water C6-C12 Batch number: 09320A07A

\*- 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: 11/20/09 at 11:45 AM Group Number: 1170737

# ported: 11/20/09 at 11:45 AM

Surrogate Quality Control

	Trifuorotoit	lene-F
5835149	109	
Dlask	100	

Limits:	63-135	 	·	
MS	113			
LCSD	114			
LCS	113			
DIAIK	103			

\*- 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.

# Lancaster Laboratories Explanation of Symbols and Abbreviations

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

N.D.	none detected	BMOL	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
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	ka	kilogram(s)
g	gram(s)	ma	milligram(s)
ug	microgram(s)	ĭ	liter(s)
mÌ	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.

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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