GETTLER-RYAN INC.

TRANSMITTAL

APR 0 2 2002

March 15, 2002 G-R #386521

TO:

Mr. James Brownell

Delta Environmental Consultants, Inc. 3164 Gold Camp Drive, Suite 200 Rancho Cordova, California 95670

CC: Mr. Thomas Bauhs

Chevron Products Company

P.O. Box 6004

San Ramon, California 94583

FROM:

Deanna L. Harding

Project Coordinator Gettler-Ryan Inc.

6747 Sierra Court, Suite J Dublin, California 94568

RE:

Former Chevron Service Station

#209339

5940 College Avenue Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	March 12, 2002	Groundwater Monitoring and Sampling Report First Quarter - Event of January 13, 2002

COMMENTS:

Please provide any comments/changes and propose any groundwater monitoring modifications for the next event prior to March 28, 2002, at which time the final report will be distributed to the following:

cc: Ms. Eva Chu, Alameda County Health Care Services, Dept. of Environmental Health, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577

Mr. Greg Gurss, Gettler-Ryan Inc., 3140 Gold Camp Drive, Suite 170, Rancho Cordova, CA 95670

Enclosures

trans/20-9339-TB



March 12, 2002 G-R Job #386521

Mr. Thomas Bauhs Chevron Products Company P.O. Box 6004 San Ramon, CA 94583

RE:

First Quarter Event of January 13, 2002

Groundwater Monitoring & Sampling Report Former Chevron Service Station #209339

5940 College Avenue Oakland, California

Dear Mr. Bauhs:

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). A joint monitoring event was scheduled but not conducted on the same day with Sheaff's Garage located at 5930 College Avenue, Oakland, California.

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 Groundwater Elevation 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.

No. C 55734

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

Sincerely,

Deanna L. Harding Project Coordinator

Hagop Kevork P.E. No. C55734

Figure 1: Groundwater Elevation Map

Table 1: Groundwater Monitoring Data and Analytical Results

Table 2: Groundwater Analytical Results - Oxygenate Compounds

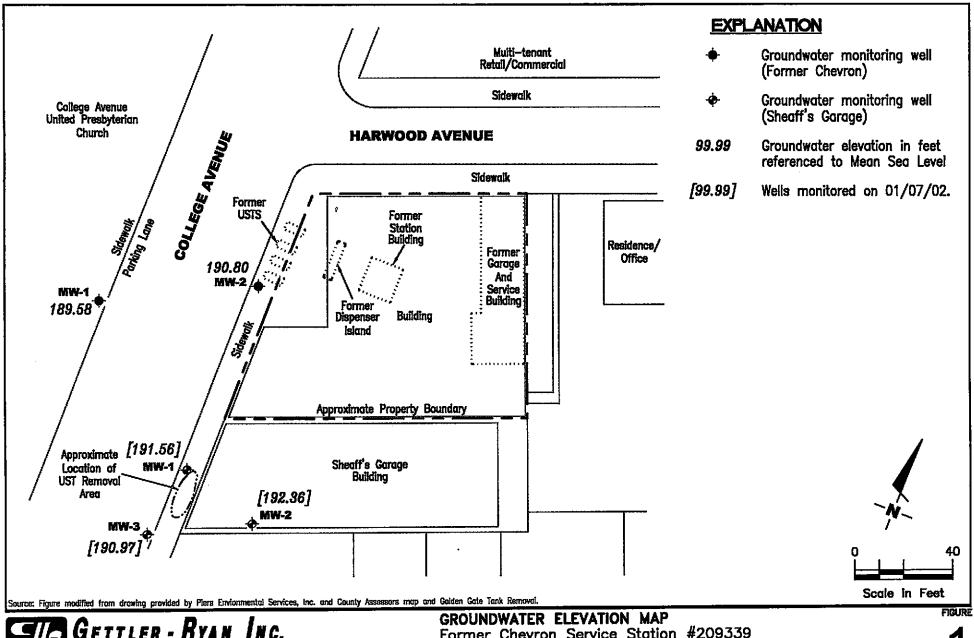
Table 3: Groundwater Analytical Results

Table 4: Field Measurements

Table 5: Joint Groundwater Monitoring Data and Analytical Results Attachments: Standard Operating Procedure - Groundwater Sampling

Field Data Sheets

Chain of Custody Document and Laboratory Analytical Reports





Former Chevron Service Station #209339 5940 College Avenue

Oakland, California

DATE

January 13, 2002

PROJECT NUMBER 386521

386521
FILE NAME: P:\Emviro\Chevron\209339\Q02-20-9339.dwg | Loyout Tab: Pot1

REVIEWED BY

REVISED DATE

ATAINED DUI

Table 1
Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #209339 5940 College Avenue Oakland, California

WELL ID/	DATE	DTW	GWE	TPH-G	В	Т	E	X	MTBE
TOC*(ft.)		(ft.)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
MW-1									
196.91	01/03/01	12.75	184.16	930¹	2.9	6.9	2.7	7.6	$14/<2.0^3$
	04/25/01	9.23	187.68	2104	2.0	1.5	2.0	3.3	5.3/<2.03
	07/09/01	11.86	185.05	290 ⁵	1.8	2.0	2.5	0.96	<2.5
	10/08/01	13.49	183.42	200	< 0.50	< 0.50	<0.50	<1.5	<2.5
	01/13/02	7.33	189.58	<50	<0.50	<0.50	<0.50	<0.50	<2.5
MW-2									
197.35	01/03/01	12.48	184.87	$2,100^2$	110	11	63	25	83/2.23
	04/25/01	8.90	188.45	1,7004	150	12	30	15	150/<2.0
	07/09/01	11.44	185.91	2,500 ⁵	200	21	55	26	<50
	10/08/01	13.37	183.98	4,200	87	2.8	29	9.8	<2.5
	01/13/02	6.55	190.80	410	20	2.9	<2.5	4.4	27/<2.0 ³
TRIP BLANK									
TB-LB	01/03/01			<50	<0.50	<0.50	<0.50	< 0.50	<2.5
	04/25/01			<50	< 0.50	< 0.50	<0.50	< 0.50	<2.5
	07/09/01			<50	< 0.50	< 0.50	<0.50	< 0.50	<2.5
QA	10/08/01			<50	< 0.50	< 0.50	< 0.50	<1.5	<2.5
-	01/13/02			<50	< 0.50	< 0.50	<0.50	< 0.50	<2.5

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #209339 5940 College Avenue Oakland, California

EXPLANATIONS:

TOC = Top of Casing

TPH-G = Total Petroleum Hydrocarbons as Gasoline

MTBE = Methyl tertiary butyl ether

DTW = Depth to Water

B = Benzene

(ppb) = Parts per billion

(ft.) = Feet

T = Toluene

-- = Not Measured/Not Analyzed

GWE = Groundwater Elevation

E = Ethylbenzene

QA = Quality Assurance

(msl) = Mean sea level

X = Xylenes

- MTBE by EPA Method 8260.
- Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons <C6.</p>
- ⁵ Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons C6-C12.

^{*} TOC elevations were surveyed on December 27, 2000, by Virgil Chavez Land Surveying. The benchmark used for the survey was a City of Oakland benchmark being a cut square in the top of curb, at the curb return at the northeast corner of College Avenue and Miles Avenue, (Benchmark Elev. = 179.075 feet, msl).

Laboratory report indicates unidentified hydrocarbons C6-C12.

Laboratory report indicates gasoline C6-C12.

Table 2

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #209339 5940 College Avenue Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)
MW-1	01/03/01	<500	<50	<2.0	<2.0	<2.0	<2.0	<2.0
	04/25/01		<20	<2.0	<2.0	<2.0	<2.0	
MW-2	01/03/01	<500	<50	2.2	<2.0	<2.0	<2.0	<2.0
	04/25/01		<20	<2.0	<2.0	<2.0	<2.0	
	01/13/02		<20	<2.0	<2.0	<2.0	<2.0	

EXPLANATIONS:

TBA = Tertiary butyl alcohol

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tertiary butyl ether

TAME = Tertiary amyl methyl ether

1,2-DCA = 1,2-Dichloroethane

(ppb) = Parts per billion

-- = Not Analyzed

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

Table 3 Groundwater Analytical Results

Former Chevron Service Station #209339 5940 College Avenue Oakland, California

WELL ID	DATE	FERROUS IRON (ppm)	TOTAL ALKALINITY (ppm)	SULFATE AS SO ₄ (ppm)
MW-1	04/25/01	0.15	380	11
	07/09/01	< 0.050	410	6.8
	10/08/01	l	414	5.4
	01/13/02	<0.10 ²	390	10
MW-2	04/25/01	0.093	680	21
	07/09/01	0.44	600	9.3
	10/08/01	1	683	3.8
	01/13/02	$<0.10^{2}$	630	7.0

EXPLANATIONS:

(ppm) = Parts per million

-- = Not Analyzed

ANALYTICAL METHODS:

EPA Method SM 3500 Fe for Ferrous Iron EPA Method 310.1 for Total Alkalinity EPA Method 300.0 for Sulfate as SO₄

Analysis was not performed by the Laboratory as requested on the Chain of Custody.

Due to sample transfer by the lab from laboratory to another, the sample was received beyond the EPA recommended holding time.

Table 4

Field Measurements

Former Chevron Service Station #209339 5940 College Avenue Oakland, California

WELL ID	DATE	D.O. Before Purging (mg/L)	ORP Before Purging (mV)
MW-1	07/09/01	1.25	111
	10/08/01	1.20	64
	01/13/021		
MW-2	07/09/01	1.89	16
	10/08/01	1.04	58
	01/13/021	* *	==

EXPLANATIONS:

D.O. = Dissolved Oxygen Concentration

(mg/L) = Milligrams per liter

ORP = Oxygen Reduction Potential

(mV) = Millivolt

-- = Not Measured

 $^{^{\}rm T}$ D.O. and ORP meter erratic; measurments not taken.

Table 5
Joint Groundwater Monitoring Data and Analytical Results
Sheaff's Garage

Sheaff's Garage 5930 College Avenue Oakland, California

WELL ID/	DATE	DTW	GWE	TPH-G	В	T	E	X	MTBE
TOC*(ft.)		(fL)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
MW-1									
195.90	04/25/011	7.39	188.51						
	07/09/01	9.72	186.18	79,000	15,000	7,800	3,000	15,000	660
	10/08/01	10.88	185.02	112,000	25,300	11,800	4,280	20,600	374
	01/07/02 ³	4.34	191.56	96,100	21,100	13,500	4,160	21,900	596/330 ²
MW-2									
197.28	04/25/01	8.52	188.76						
	07/09/01	11.05	186.23	39,000	6,200	730	2,300	6,100	180
	10/08/01	12.79	184.49	40,700	6,310	399	2,100	5,320	6,460
	01/07/02 ³	4.92	192.36	59,600	10,300	3,250	4,180	14,400	366/170 ²
MW-3									
195.22	04/25/011	6.61	188.61						
	07/09/01	8.85	186.37	12,000	39	10	690	1,600	35
	10/08/01	9.75	185.47	4.912.5	107.7	3.9	99.0	132.5	52.2
	01/07/02 ³	4.25	190.97	7,260	723	138	492	887	$81.7/16.7^2$

Table 5

Joint Groundwater Monitoring and Analytical Results

Sheaff's Garage 5930 College Avenue Oakland, California

EXPLANATIONS:

Joint groundwater monitoring data and laboratory analytical results were provided by Golden Gate Tank Removal, Inc.

TOC = Top of Casing

TPH-G = Total Petroleum Hydrocarbons as Gasoline

MTBE = Methyl tertiary butyl ether

DTW = Depth to Water

B = Benzene

(ppb) = Parts per billion

(ft.) = Feet

T = Toluene

-- = Not Measured/Not Analyzed

GWE = Groundwater Elevation

E = Ethylbenzene

(msl) = Mean sea level

X = Xylenes

^{*} TOC elevations were surveyed on April 26, 2001, by Virgil Chavez Land Surveying. The benchmark for the survey was a City of Oakland benchmark being a cut square in the top of curb, at the curb return at the northeast corner of College Avenue and Miles Avenue, (Benchmark Elevation = 179.075 feet, msl).

Joint monitoring laboratory analytical results were not provided.

MTBE by EPA Method 8260

³ Joint monitoring was conducted on different day than Chevron.

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, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride 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 Chevron-designated 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 Products Company, the purge water and decontamination water generated during sampling activities is transported by IWM to McKittrick Waste Management located in McKittrick, California.

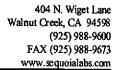
WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/CHEVRON Facility#	<u>09339</u>	<u> </u>	Job#	:	<u> 3865</u>	21	
Address: 59	4D Calle	a Ave	Date	:	13-02		
City: Ocal		42°		pler: <u>B</u>	<u>G</u>		
Well ID	<u>mw-1</u>	Well	Condition: _	ok		<u>.</u>	
Well Diameter	<u>2</u> i		ocarbon ness:		mount Ba		(Gallons)
Total Depth	20.10				3" = 0.38		4" = 0.66
Depth to Water	7.33 _f	Fact	or (VF)		0		
Purge Equipment:	Disposable Baile Bailer Stack Suction Grundfos Other:	r	⊭ X 3 (case Sampling Equipment	t: Dies Baile Pres Gral	osable Ba	iler r	<u>(gal.)</u>
Starting Time: Sampling Time: Purging Flow Rate Did well de-water	11:03 11:15 ::	V	Veather Condition Vater Color: Sediment Descri I yes; Time: _	ption:		Odor:_ <u>/</u>	
Time Vo	lume pH gal.)	Condu µmho		erature F	D.O. (mg/L)		Alkalinity (ppm)
11:07 2	6.86 6.70	611 612 615	61.8 61.6 61.3	3			
SAMPLE ID	(#) - CONTAINER		TORY INFORMA		ATORY	·AN	IALYSES -
	3 × VOFS	Υ	HCL	LANCAS	TER	TPH(G)/bte	ex/mtbe
mu-1 1	K PIST	Y	N.P.	11		S-IFALE	Alkalinity
mw-1 1	x PISt	7	N.P.	/-	·	Ferrous	s Iron
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WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/CHEVRON Facility#	09339	***		Job#:	3863	166	
Address: <u>59</u>	40 Call.	ac a A	Na .	Date:	1-13-02		
City: Oa	Kland,	CA		Sample	r: <u>BG</u>		
Well ID	mw-2	_ w	/ell Condition	on: Ok			
Well Diameter	<u> </u>		ydrocarbon hickness:		Amount E		
Total Depth Depth to Water	20.06	. tr.	Volume Factor (VF)	2" = 0.17	(feet) (product/wax 3" = 0.3 6" = 1.50		(Gallons) = 0.66
Purge Equipment:	Disposable Bail Bailer Stack Suction Grundfos Other:	ler	Sa	X 3 (case volu ampling juipment:	Disposable B Bailer Pressure Bail Grab Sample Other:	ailer er	2 (gal.)
Starting Time:	11:35	·	Weather	Conditions:	: Cloudy	-	
Sampling Time:	/1:50		_		<u> </u>	— —	
Purging Flow Rate				_	n:		
Did well de-water	·	•	n yes;	inne:	Volui	me:	(oal.)
2 27114	lume pH gal.)		nductivity nhos/cm	Temperate •F	ure D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
11:39	6.81		(62.1		<u> </u>	
11:44	1 6.76		62	62.0			
11:47- 4	(a. 7)		<u> </u>	<u> </u>			
			-				44274
		LABOF	RATORY IN	FORMATIC)N		
	(#) - CONTAINER	REFRIG.	PRESERV.	TYPE	LABORATORY	·ANALY	/SES
	XVOA'S	Y	Hel		ANCASTER	TPH(G)/btex/n	ntbe
mc 2 1	X PIST	Υ	N.P.			SUFAIR A	
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29 January, 2002

Deanna L. Harding Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin, CA 94568 RECEIVED

300 2 0 30m

GETTLEK-KYAN INC.
GENERAL CONTRACTORS

RE: Chevron

Sequoia Report: W201190

Enclosed are the results of analyses for samples received by the laboratory on 14-Jan-02 10:15. If you have any questions concerning this report, please feel free to contact me.

(CRAS

Charlie Westwater Project Manager

CA ELAP Certificate #1271



Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Project: Chevron

Project Number: Chevron # 209339 Project Manager: Deanna L. Harding Reported: 29-Jan-02 11:17

Dublin CA, 94568

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W201190-01	Water	13-Jan-02 00:00	14-Jan-02 10:15
MW-1	W201190-02	Water	13-Jan-02 11:15	14-Jan-02 10:15
MW-2	W201190-03	Water	13-Jan-02 11:50	14-Jan-02 10:15





Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J

Dublin CA, 94568

Project: Chevron

Project Number: Chevron # 209339

Project Manager: Deanna L. Harding

Reported:

29-Jan-02 11:17

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT Sequoia Analytical - Walnut Creek

Analyte	R Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (W201190-01) Water Samp	oled: 13-Jan-02 00:00	Received	<u>վ։ 14-Jan</u>	-02 10:15					
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	2A14002	15-Jan-02	15-Jan-02	EPA 8015M/8021	
Benzene	ND	0.50	**	"	#	"	"	**	
Toluene	ND	0.50	**	11	**	11	н	H	
Ethylbenzene	ND	0.50	17	11	Ħ	n	Ц		
Xylenes (total)	ND	0.50	**	11	**	Ħ	H	17	
Methyl tert-butyl ether (MTBE)	ND ND	2.5	*	11	u	"		#1	Q-28
Surrogate: a,a,a-Trifluorotoluene		103 %	70-	130	"	"	,,	"	
MW-1 (W201190-02) Water Sample	ed: 13-Jan-02 11:15	Received	: 14-Jan	-02 10:15					
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	2A14002	15-Jan-02	15-Jan-02	EPA 8015M/8021	
Benzene	ND	0.50	Ħ	ii .	n		*1		
Toluene	ND	0.50	n	**	n	71	Ħ	**	
Ethylbenzene	ND	0.50	H	41	"	11	n	"	
Xylenes (total)	ND	0.50	"	11	"	п	**	#	
Methyl tert-butyl ether (MTBE)	ND	2.5	H	11		11	n	н	Q-28
Surrogate: a,a,a-Trifluorotoluene		101 %	70-	130	"	и	n	"	
MW-2 (W201190-03) Water Sampl	ed: 13-Jan-02 11:50	Received	: 14-Jan	-02 10:15					
Purgeable Hydrocarbons (C6-C12)	410	250	ug/l	5	2A14002	15-Jan-02	15-Jan-02	EPA 8015M/8021	
Benzene	20	2.5	#	11	H	**	**	**	
Toluene	2.9	2.5	Ħ	41	. #	u	*1	. "	
Ethylbenzene	ND	2.5	н	" "	**	II.	Н	11	
Xylenes (total)	4.4	2.5	**	11	**	11	н	11	
Methyl tert-butyl ether (MTBE)	27	12	#	11	11	11	н	11	Q-28
Surrogate: a,a,a-Trifluorotoluene		111%	70-	130	"	"	n	11	



Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568

Project: Chevron

Project Number: Chevron # 209339 Project Manager: Deanna L. Harding

Reported: 29-Jan-02 11:17

Volatile Organic Compounds by EPA Method 8260B

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (W201190-03) Water	Sampled: 13-Jan-02 11:50	Received	: 14-Jan	-02 10:15					
tert-Butyl alcohol	ND	20	ug/l	1	2A23016	17-Jan-02	17-Jan-02	EPA 8260B	
Methyl tert-butyl ether (MTBE)	ND	2.0	11	n	77	n	n	n	
Di-isopropyl ether	ND	2.0	"	n	n	77		n	
Ethyl tert-butyl ether	ND	2.0	"	**	**	**	•		
tert-Amyl methyl ether	ND	2.0	71	19	77	11	"	tı	
Surrogate: Dibromofluorometha	ne	101 %	50-	·150	π	fr .	n	н	
Surrogate: 1,2-Dichloroethane-	d4	104 %	50-	150	"	"	11	If	



Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J

Dublin CA, 94568

Project: Chevron

Project Number: Chevron # 209339 Project Manager: Deanna L. Harding Reported: 29-Jan-02 11:17

Conventional Chemistry Parameters by APHA/EPA Methods

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (W201190-02) Water	Sampled: 13-Jan-02 11:15	Received:	: 14-Јат	-02 10:15					
Total Alkalinity	390	11	mg/l	10	2A28011	24-Jan-02	24-Jan-02	EPA 310.1	
MW-2 (W201190-03) Water	Sampled: 13-Jan-02 11:50	Received:	14-Jan	-02 10:15					
Total Alkalinity	630	11	mg/l	10	2A28011	24-Jan-02	24-Jan-02	EPA 310.1	· · · · · · · · · · · · · · · · · · ·



Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568 Project: Chevron

Project Number: Chevron # 209339 Project Manager: Deanna L. Harding Reported:

29-Jan-02 11:17

Anions by EPA Method 300.0 Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (W201190-02) Water	Sampled: 13-Jan-02 11:15	Received	: 14-Jan	-02 10:15		<u> </u>			
Sulfate as SO4	10	2.3	mg/l	10	2A17005	15-Jan-02	15-Jan-02	EPA 300.0	
MW-2 (W201190-03) Water	Sampled: 13-Jan-02 11:50	Received	: 14-Jan	-02 10:15					
Sulfate as SO4	7.0	2.3	mg/l	10	2A17005	15-Jan-02	15-Jan-02	EPA 300.0	



Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J

Dublin CA, 94568

Project: Chevron

Project Number: Chevron # 209339 Project Manager: Deanna L. Harding

Reported: 29-Jan-02 11:17

Conventional Chemistry Parameters by APHA/EPA Methods Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (W201190-02) Water	Sampled: 13-Jan-02 11:15	Received	: 14-Jan	-02 10:15					
Ferrous Iron	ND	0.10	mg/l	1	2010261	14-Jan-02	14-Jan-02	SM 3500 Fe D#4	HT-01
MW-2 (W201190-03) Water	Sampled: 13-Jan-02 11:50	Received	: 14-Jan	-02 10:15					
Ferrous Iron	ND	0.10	mg/l	1	2010261	14-Jan-02	14-Jan-02	SM 3500 Fe	HT-01

Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J

Dublin CA, 94568

Project: Chevron

Project Number: Chevron # 209339 Project Manager: Deanna L. Harding Reported: 29-Jan-02 11:17

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2A14002 - EPA 5030B P/T						_				
Blank (2A14002-BLK1)		-		Prepared	& Analyze	ed: 14-Jan-	-02			
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l							
Benzene	ND	0.50	n							
Toluene	ND	0.50	Ħ							
Ethylbenzene	ND	0.50	н							
Xylenes (total)	ND	0.50	н							
Methyl tert-butyl ether (MTBE)	ND	2.5	н							
Surrogate: a,a,a-Trifluorotoluene	28.2	 -	"	30.0		94	70-130			
Blank (2A14002-BLK2)				Prepared	& Analyze	ed: 15-Jan	-02			
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	n							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	n							
Methyl tert-butyl ether (MTBE)	ND	2.5	**							
Surrogate: a,a,a-Trifluorotoluene	32.1		н	30.0		107	70-130		-	, <u>, , , , , , , , , , , , , , , , , , </u>
LCS (2A14002-BS1)				Prepared	& Analyze	ed: 14-Jan	-02			
Benzene	21.0	0.50	ug/l	20.0		105	70-130			
Toluene	22.0	0.50	n	20.0	•	110	70-130			
Ethylbenzene	23.0	0.50	**	20.0		115	70-130			
Xylenes (total)	69.8	0.50		60.0		116	70-130			
Surrogate: a,a,a-Trifluorotoluene	30.1	·-·	n	30.0	,	100	70-130			
LCS (2A14002-BS2)				Prepared	& Analyz	ed: 15-Jan	-02			
Benzene	18.7	0.50	ug/l	20.0	· · ·	94	70-130			
Foluene Foluene	19.5	0.50	п	20.0		98	70-130			
Ethylbenzene	20.3	0.50	**	20.0		102	70-130			
Kylenes (total)	60.6	0.50	*1	60.0		101	70-130			
Surrogate: a,a,a-Trifluorotoluene	30.9		rr	30.0·		103	70-130			

Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568

Project: Chevron

Project Number: Chevron # 209339 Project Manager: Deanna L. Harding Reported: 29-Jan-02 11:17

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control Sequoia Analytical - Walnut Creek

Result	Reporting Limit	I Inite	Spike Level	Source Result	%REC		רוקק	RPD Limit	Notes
1.00011	Dillit	Oille	DCYC	ROSUIT	/01/LC	Lillia	NI D	Ditill	140168
-									•
So	urce: W2011:	95-03	Prepared:	14-Jan-02	Analyzed	l: 15-Jan-0	2		•
21.2	0.50	ug/I	20.0	ND	106	70-130			<u> </u>
22.3	0.50	н	20.0	ND	112	70-130			-
22.9	0.50	н	20.0	ND	114	70-130			
68.1	0.50	Ħ	60.0	ND	114	70-130			
32.2		#	30.0		107	70-130			•
So	urce: W2011	95-03	Prepared:	14-Jan-02	Analyze	i: 15-Jan-0	2		
19.7	0.50	ug/l	20.0	ND	98	70-130	7	20	
20.5	0.50	44	20.0	ND	102	70-130	8	20	
21.3	0.50	"	20.0	ND	106	70-130	7	20	
63.2	0.50	11	60.0	ND	105	70-130	7	20	
30.2		"	30.0		101	70-130		 ·	
	21.2 22.3 22.9 68.1 32.2 So 19.7 20.5 21.3 63.2	Source: W2011 21.2 0.50 22.3 0.50 22.9 0.50 68.1 0.50 32.2 Source: W2011 19.7 0.50 20.5 0.50 21.3 0.50 63.2 0.50	Source: W201195-03 21.2 0.50 ug/I 22.3 0.50 " 22.9 0.50 " 68.1 0.50 " Source: W201195-03 19.7 0.50 ug/I 20.5 0.50 " 21.3 0.50 " 63.2 0.50 "	Source: W201195-03 Prepared: 21.2 0.50 ug/l 20.0 22.3 0.50 " 20.0 22.9 0.50 " 20.0 68.1 0.50 " 60.0 32.2 " 30.0 Source: W201195-03 Prepared: 19.7 0.50 ug/l 20.0 20.5 0.50 " 20.0 21.3 0.50 " 20.0 63.2 0.50 " 60.0	Result Limit Units Level Result Source: W201195-03 Prepared: 14-Jan-02 21.2 0.50 ug/I 20.0 ND 22.3 0.50 " 20.0 ND 22.9 0.50 " 20.0 ND 68.1 0.50 " 60.0 ND 32.2 " 30.0 Source: W201195-03 Prepared: 14-Jan-02 19.7 0.50 ug/I 20.0 ND 20.5 0.50 " 20.0 ND 21.3 0.50 " 20.0 ND 63.2 0.50 " 60.0 ND	Result Limit Units Level Result %REC Source: W201195-03 Prepared: 14-Jan-02 Analyzed 21.2 0.50 ug/I 20.0 ND 106 22.3 0.50 " 20.0 ND 112 22.9 0.50 " 20.0 ND 114 68.1 0.50 " 60.0 ND 114 32.2 " 30.0 107 Source: W201195-03 Prepared: 14-Jan-02 Analyzed 19.7 0.50 ug/I 20.0 ND 98 20.5 0.50 " 20.0 ND 102 21.3 0.50 " 20.0 ND 106 63.2 0.50 " 60.0 ND 105	Result Limit Units Level Result %REC Limits Source: W201195-03 Prepared: 14-Jan-02 Analyzed: 15-Jan-0 21.2 0.50 ug/l 20.0 ND 106 70-130 22.3 0.50 " 20.0 ND 112 70-130 22.9 0.50 " 20.0 ND 114 70-130 68.1 0.50 " 60.0 ND 114 70-130 32.2 " 30.0 107 70-130 Source: W201195-03 Prepared: 14-Jan-02 Analyzed: 15-Jan-0 19.7 0.50 ug/l 20.0 ND 98 70-130 20.5 0.50 " 20.0 ND 102 70-130 21.3 0.50 " 20.0 ND 106 70-130 63.2 0.50 " 60.0 ND 105 70-130	Result Limit Units Level Result %REC Limits RPD Source: W201195-03 Prepared: 14-Jan-02 Analyzed: 15-Jan-02 21.2 0.50 ug/l 20.0 ND 106 70-130 22.3 0.50 " 20.0 ND 112 70-130 22.9 0.50 " 20.0 ND 114 70-130 68.1 0.50 " 60.0 ND 114 70-130 Source: W201195-03 Prepared: 14-Jan-02 Analyzed: 15-Jan-02 19.7 0.50 ug/l 20.0 ND 98 70-130 7 20.5 0.50 " 20.0 ND 102 70-130 8 21.3 0.50 " 20.0 ND 106 70-130 7 63.2 0.50 " 60.0 ND 105 70-130 7	Result Limit Units Level Result %REC Limits RPD Limit Source: W201195-03 Prepared: 14-Jan-02 Analyzed: 15-Jan-02 21.2 0.50 ug/l 20.0 ND 106 70-130 22.3 0.50 " 20.0 ND 112 70-130 22.9 0.50 " 20.0 ND 114 70-130 68.1 0.50 " 60.0 ND 114 70-130 Source: W201195-03 Prepared: 14-Jan-02 Analyzed: 15-Jan-02 19.7 0.50 ug/l 20.0 ND 98 70-130 7 20 20.5 0.50 " 20.0 ND 102 70-130 8 20 21.3 0.50 " 20.0 ND 106 70-130 7 20 63.2 0.50 " 60.0 ND 105 70-130 7 20



Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568 Project: Chevron

Project Number: Chevron # 209339 Project Manager: Deanna L. Harding

Reported: 29-Jan-02 11:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2A23016 - EPA 5030B (P/T)										
Blank (2A23016-BLK1)				Prepared	& Analyz	ed: 17-Jan	-02	_		
tert-Butyl alcohol	ND	20	ug/l							
Methyl tert-butyl ether (MTBE)	ND	2.0	**							
Di-isopropyl ether	ND	2.0	11							
Ethyl tert-butyl ether	ND	2.0	*							
tert-Amyl methyl ether	ND	2.0	**							
Surrogate: Dibromofluoromethane	57.1	"	n	50.0		114	50-150			
Surrogate: 1,2-Dichloroethane-d4	55.0		*	50.0		110	50-150			
LCS (2A23016-BS1)				Prepared	& Analyz	ed: 17-Jan	-02			
Methyl tert-butyl ether (MTBE)	44.3	2.0	ug/l	50.0		89	70-130			
Surrogate: Dibromofluoromethane	56.5		"	50.0		113	50-150			
Surrogate: 1,2-Dichloroethane-d4	56.8		**	50.0		114	50-150			
LCS Dup (2A23016-BSD1)				Prepared	& Analyz	ed: 17-Jan	-02			
Methyl tert-butyl ether (MTBE)	42.8	2.0	ug/l	50.0	_	86	70-130	3	200	
Surrogate: Dibromofluoromethane	53.5			50.0		107	50-150			-
Surrogate: 1,2-Dichloroethane-d4	52.6		•	50.0		105	50-150			



Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568

Project: Chevron

Project Number: Chevron # 209339 Project Manager: Deanna L. Harding

Reported:

29-Jan-02 11:17

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control Sequoia Analytical - Walnut Creek

Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
			Prepared	& Analyze	ed: 24-Jan	-02			
ND	1.1	mg/l							
			Prepared	& Analyz	ed: 24-Jan	-02			
102	1.1	mg/l	100		102	80-120			
So	urce: W2011	90-02	Prepared	& Analyz	ed: 24-Jan	-02			
1390	11	mg/l	1000	390	100	75-125			
So	urce: W2011	90-02	Prepared	& Analyz	eđ: 24-Jan	-02			
1390	11	mg/l	1000	390	100	75-125	0	20	
	102 So 1390	102 1.1 Source: W2011 1390 11 Source: W2011	102 1.1 mg/l Source: W201190-02 1390 11 mg/l Source: W201190-02	Prepared 102 1.1 mg/l 100 Source: W201190-02 Prepared 1390 11 mg/l 1000 Source: W201190-02 Prepared	Prepared & Analyze 102	Prepared & Analyzed: 24-Jan- 102 1.1 mg/l 100 102 Source: W201190-02 Prepared & Analyzed: 24-Jan- 1390 11 mg/l 1000 390 100 Source: W201190-02 Prepared & Analyzed: 24-Jan-	Prepared & Analyzed: 24-Jan-02 102	Prepared & Analyzed: 24-Jan-02 102	Prepared & Analyzed: 24-Jan-02 102



Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568 Project: Chevron

Project Number: Chevron # 209339 Project Manager: Deanna L. Harding

Reported: 29-Jan-02 11:17

Anions by EPA Method 300.0 - Quality Control Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2A17005 - General Preparation		<u> :</u>								
Blank (2A17005-BLK1)				Prepared	& Analyze	ed: 15-Jan	-02			
Sulfate as SO4	ND	0.23	mg/l							
LCS (2A17005-BS1)				Prepared	& Analyze	ed: 15-Jan	-02			
Sulfate as SO4	11.1	0.23	mg/l	10.0		111	80-120			
Matrix Spike (2A17005-MS1)	So	urce: W2012	05-04	Prepared	& Analyze	-02				
Sulfate as SO4	55.5	2.3	mg/l	50.0	2.4	106	75-125			
Matrix Spike Dup (2A17005-MSD1)	So	urce: W2012	05-04	Prepared	& Analyz	ed: 15-Jan	-02			
Sulfate as SO4	54.9	2.3	mg/l	50.0	2.4	105	75-125	1	20	



Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J

Dublin CA, 94568

Project: Chevron

Project Number: Chevron # 209339 Project Manager: Deanna L. Harding

Reported: 29-Jan-02 11:17

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2010261 - General Preparation			•				-			
Blank (2010261-BLK1)		· · · · · · · · · · · · · · · · · · ·		Prepared	& Analyze	ed: 14-Jan	-02			
Ferrous Iron	ND	0.10	mg/l							_
LCS (2010261-BS1)				Prepared	& Analyze	ed: 14-Jan	-02			
Ferrous Iron	0.790	0.10	mg/l	0.800		99	80-120			
Matrix Spike (2010261-MS1)	So	urce: W2011:	90-02	Prepared & Analyzed: 14-Jan-02						
Ferrous Iron	0.800	0.10	mg/l	0.870	ND	92	75-125			
Matrix Spike Dup (2010261-MSD1)	So	urce: W2011	90-02	Prepared	& Analyz	ed: 14-Jan	-02			
Ferrous Iron	0.826	0.10	mg/l	0.870	ND	95	75-125	3	20	



Gettler Ryan, Inc. - Dublin 6747 Sierra Court Suite J Dublin CA, 94568

Project: Chevron

Project Number: Chevron # 209339

Reported: 29-Jan-02 11:17

Project Manager: Deanna L. Harding

Notes and Definitions

HT-01 This sample was received beyond the EPA recommended holding time. The results may still be useful for their intended purpose.

Q-28 The opening calibration verification standard was outside acceptance criteria by -16%. Although the Laboratory Control Sample

verified the accuracy of the batch, this should be considered in evaluating the data for its intended purpose.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference