



May 24, 1995

Chevron U.S.A. Products Company 6001 Bollinger Canyon Rd., Bldg. L P.O. Box 5004 San Ramon, CA 94583-0804

Site Assessment & Remediation Group Phone (510) 842-9500

Ms. Jennifer Eberle Alameda County Health Care Services Department of Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Re: Former Gulf Service Station #0006 460 Grand Avenue, Oakland, CA

Dear Ms. Eberle:

Enclosed is the quarterly Groundwater Sampling report dated April 27, 1995, prepared by our consultant Gettler-Ryan, Inc. for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline and BTEX. Benzene concentrations were below method detection limits in all samples analyzed. Depth to ground water was measured at approximately 2.3 to 2.9 feet below grade and the direction of flow is to the south.

Pacific Environmental Group has recently completed the off site investigation. Due to the presence of off-site utilities, only the permanent monitor well was installed. We will forward a report documenting the results of the field investigation to your office shortly. Chevron will continue to monitor and sample this site on a quarterly basis.

If you have any questions or comments, please feel free to call me at (510) 842-8134.

male M. Minde

Sincerely,

CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller

Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Jon Robbins - CHVPK/V1156

Ms. B.C. Owen

Mr. John C. Gibson Adams & Gibson 160 Sansome Street, Suite 1200 San Francisco, CA 94104-3718

File: GULF6Q4

April 27, 1995

Mark Miller Chevron USA Products Company P.O. Box 5004 San Ramon, CA 94583

Re:

Former Gulf Service Station #0006

460 Grand Avenue Oakland, CA Job #5208.80

Dear Mr. Miller:

This report documents the quarterly groundwater sampling event performed by Gettler-Ryan (G-R) personnel. On March 22, 1995, field personnel were on-site to gauge and sample three wells (C-1, C-2 and C-3) at Former Gulf Service Station #0006 located at 460 Grand Avenue in Oakland, California.

Static groundwater levels were measured on March 22, 1995. All wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the site wells. Static water level data and groundwater elevations are presented in Table 1. A potentiometric map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Quarterly Groundwater Sampling (attached). The field data sheets for this event are also attached. The samples were analyzed by Superior Precision Analytical, Inc. Analytic results are presented in Table 1. The chain of custody document and laboratory analytic report are enclosed. G-R is not responsible for laboratory omissions or errors.

Thank you for allowing Gettler-Ryan to provide environmental services to Chevron. Please call if you have any questions or comments regarding this report.

Respectfully submitted,

Argy Leyton

Environmental Project Manager

Stephen J. Carter

Senior Geologist, R.G. 5577

AML/SJC/aml 5208.QML

Plate 1:

Potentiometric Map

Table 1:

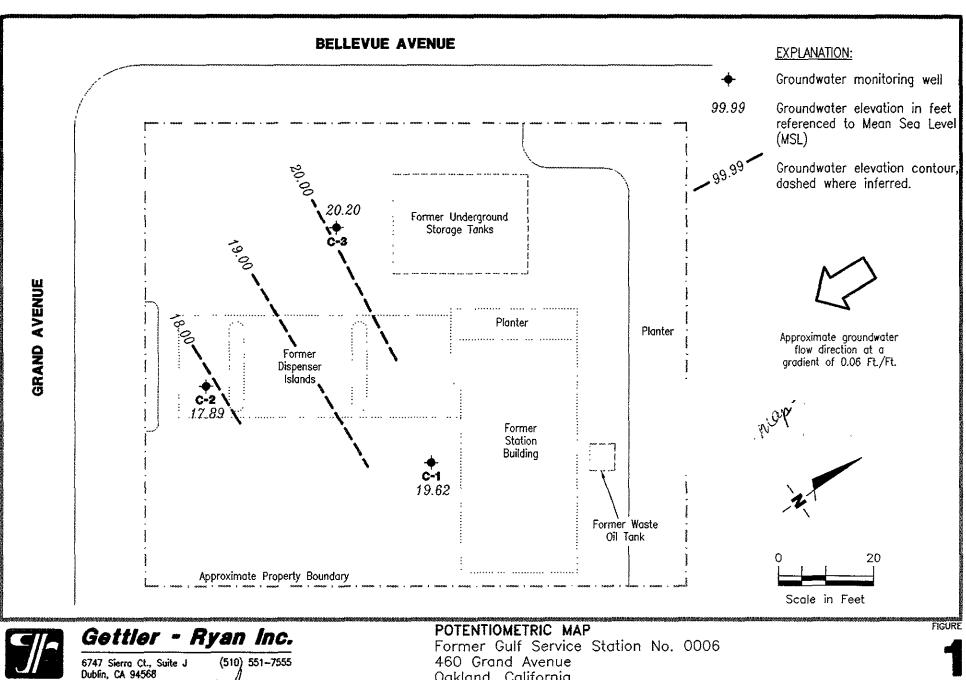
Water Level Data and Groundwater Analytic Results

Attachments:

Standard Operating Procedure

Field Data Sheets

Chain of Custody Document and Laboratory Analytic Reports



JOB NUMBER 5208.80

REVIEWED BY

Oakland, California

DATE 3/22/95 REVISED DATE



Table 1. Water Level Data and Groundwater Analytic Results - Former Gulf Service Station #0006, 460 Grand Avenue, Oakland, California

Well ID/ TOC (ft)	Data	DTW	GWE	Product	Analytic	TPPH(G)	В	T	E	X
10C (ii)	Date	(ft)	(msl)	Thickness* (ft)	Method	<u> </u>		ppb		
C-1/	12/16/92	5.68	16.80	0	8015/8020 ^{2,3,4,5}	<50	<0.5	<0.3	< 0.3	<0.4
22.48¹	6/22/94	5.55	16.93	0	8015/8020	<50	<0.5	<0.5	<0.5	< 0.5
	9/26/94	6.07	16.41	0	8015/8020	<50	< 0.5	< 0.5	< 0.5	< 0.5
	12/12/94	5.28	17.20	0	8015/8020	<50	2.9	3.8	<0.5	< 0.5
	3/22/95	2.86	19.62	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
C-2/	12/16/92	7.49	13.00	0	8015/80202,3,6,7	640	63	83	37	90
0.49 ¹	6/22/94	5.48	15.01	0	8015/8020	200	2.8	4.5	1.5	15
	9/26/94	6.02	14.47	0	8015/8020	<50	1.1	1.1	< 0.5	0.5
	12/12/94	5.17	15.32	0	8015/8020	<i>7</i> 7	2.8	4.6	3.4	15
	3/22/95	2.60	17.89	0	8015/8020	590	<0.5 _	<0.5	38	130
C-3/	12/16/92	5.17	17.34	0	8015/8020 ^{2,5,5,8}	<50	<0.4	<0.3	<0.3	<0.4
22.51 ¹	6/22/94	5.10	17.41	0	8015/8020	140	5.6	3	4.2	4.4
	9/26/94	5.66	16.85	0	8015/8020	51	4.2	4.2	0.7	1.5
	12/12/94	4.60	17.91	0	8015/8020	<50	2.6	3.6	1.1	4.2
	3/22/95	2.31	20.20	0	8015/8020	<50	< 0.5	<0.5	< 0.5	- <0.5
Trip Blank										
rb-lb	6/22/94			_	8015/8020	<50	< 0.5	<0.5	< 0.5	< 0.5
	9/26/94		,		8015/8020	<50	< 0.5	<0.5	<0.5	< 0.5
	12/12/94			_	8015/8020	<50	< 0.5	<0.5	<0.5	< 0.5
	3/22/95				8015/8020	<50	< 0.5	< 0.5	< 0.5	< 0.5

bata



Table 1. Water Level Data and Groundwater Analytic Results - Former Gulf Service Station #0006, 460 Grand Avenue, Oakland, California (continued)

EXPLANATION:

DTW = Depth to water

TOC = Top of casing elevation

GWE = Groundwater elevation

TPPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

ppb = Parts per billion

--- = Not analyzed/not applicable

ANALYTIC METHODS:

8015 = EPA Method 8015/5030 for TPPH(G)

8020 = EPA Method 8020 for BTEX

NOTES:

Water level data and analytic results prior to June 22, 1994 were compiled from the subsurface investigation report prepared for Chevron by Pacific Environmental Group, January 15, 1993.

NOTES: (continued)

Analytic Methods prior to 1994 are assumed to be 8015/8020.

- Product thickness was measured with an MMC flexi-dip interface probe on and after June 22, 1994.
- ¹ TOC elevation is actually top of box elevation.
- ² TPH(D) was also analyzed but not detected at detection limits of 50 ppb.
- Motor oil was also analyzed but not detected at detection limits of 200 pph.
- 4 Cadmium, chromium, lead, nickel and zinc were also analyzed but not detected at detection limits of 0.005, 0.01, 0.05, 0.02, and 0.01 ppm, respectively.
- 5 Analysis by EPA method 8010 for Halogenated Volatile Organic Compounds (HVOCs) was also performed. HVOCs were not detected at detection limits of 0.2 to 4.0 ppb.
- ⁶ Cadmium, chromium, lead, nickel and zinc were also analyzed. Chromium, Nickel and zinc were detected at 0.05, 0.08 and 0.08 ppm, respectively. Other metals not detected.
- Analysis by EPA method 8010 for HVOCs was also performed. 1,2-Dichloroethane was detected at 3.5 ppb. Other HVOCs were not detected at detection limits of 0.2 to 4.0 ppb.
- Cadmium, chromium, lead, nickel and zinc were also analyzed. Chromium, lead, nickel and zinc were detected at 0.19, 0.07, 0.36 and 0.38 ppm, respectively. Cadmium was not detected at detection limits of 0.005 ppm.

5208.TQM



STANDARD OPERATING PROCEDURE QUARTERLY GROUNDWATER SAMPLING

Gettler-Ryan 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 pevention 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 a MMC flexi-dip 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 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 analytic 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, preservative (if any), and the sample collector's initials. The water samples are placed in cooler maintained at 4 C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivery 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 USA Products Company, the purge and decontamination water generated during sampling activities is taken to Chevron's Richmond Refinery for disposal.

GETTLER-RYAN INC.

General and Environmental Contractors

WELL SAMPLING FIELD DATA SHEET

COMPANY Chev	ron e	0006	Job # <u>52</u>	08.80
LOCATION 460	GRAND	AVE	DATE <u>3</u> -	22.95
CITYOAKIANO	, CA.		TIME	
Well ID.	C-1	Well Cond	ition <u>600d</u>	
Well Diameter		in. Hydrocarl	oon Thickness	ft.
Total Depth		ft. Volume Factor	2" = 0.17 $6" = 1.503" = 0.38$ $8" = 2.60$	
Depth to Liquid-	2.86	ft. (VF)	$4" = 0.66 10" \doteq 4.10$	
(# of casing volumes) 3 x	11.74	x(VF)	= (Estimated Purge Volume)	,99 5.97 gal.
Purging Equipment	STACK Pu	мр		
Sampling Equipment	Dispose	able Bail	ERS	
-	•			
			125	
Starting Time 143.	//Purg		w Rate $\frac{1.25}{\text{gpm.}} = \frac{\text{Anticipated}}{\text{Purging}}$	gpm.
Purge Volume	gal. / (Purg	te)	gpm Purging)-	min.
Time	рН	Conductivity	Temperature	Volume
1437	(0.4	800	61.9	2
1439	6.3	790	61.0	4
1442	6.3	730	42.0	10
Did well dewater?		If yes, time	Volume	
Sampling Time 14	44	Weather Cond	litions KAIN IN	JQ
Analysis GAS - B				<i></i>
Chain of Custody Num				<u>, , , , , , , , , , , , , , , , , , , </u>
	<u> </u>			**************************************
COMMENTS				
FOREMAN R. NEA	/			
FOREVAN /C. NEA			ASSISTANT	

GETTLER-RYAN INC.

General and Environmental Contractors

WELL SAMPLING FIELD DATA SHEET

COMPANY Che	ron	0006	JOB # <u>52</u> 0	08.80
		AVE	DATE <u>22 M</u>	
CITY OAKIAN		=		
Well ID.	C-2	Well Condi	tion Plooded	
Well Diameter	$\mathcal{Z}_{\mathrm{ir}}$	hydrocarb	on Thickness	ft
Total Depth	14.2 1	Volume 2 Factor 3	" = 0.17 6" = 1.50 " = 0.38 8" = 2.60	12" = 5.80
Depth to Liquid-	2.60 st	<u> </u>	" = 0.66 10" = 4.10	
(# of casing volumes)	× 1160	_ x(VF)	=(Estimated) // Purge Volume	97 5.9/gal.
Purging Equipment_				
Sampling Equipment	·			
Starting Time 14	50	Purging Flo	w Rate 1:25	gpm.
(Estimated Purge Volume	gal. / Purgir Flow Rate	(P. g.)	$\underline{\underline{gpm.}} = \begin{pmatrix} \underline{\text{Anticipated}} \\ \underline{\text{Purging}} \\ \underline{\text{Time}} \end{pmatrix} \underline{\hspace{1cm}}$	min.
Time	рН	Conductivity	Temperature	Volume
1452	6.3	610	60.9	
1454	6.3	<u>580</u>	61.7	
1456	6.3	570	61.2	
				
				· · · · · · · · · · · · · · · · · · ·
Did well dewater?		If ves. time	Volume	
Sampling Time /				a
Analysis GAS	_	 -		<i>J</i>
Chain of Custody No				
COMMENTS	***			
				
FOREMAN K. N/E	FAL		ASSISTANT	

GETTLER-RYAN INC. General and Environmental Contractors

WELL SAMPLING FIELD DATA SHEET

				The second secon
COMPANY Che	vron	0006	JOB #5	208.80
LOCATION 46C	GRAND	AVE	DATE <u>22</u>	MARCH 95
CITY OAKIANO	L, Ca.		TIME	· · · · · · · · · · · · · · · · · · ·
				<u>, - 1, - 1, - 1, - 1</u>
Well ID.	<u>C-3</u>	Well Conditi	on Good	
Well Diameter		in. Hydrocarbor	Thickness	ft.
Total Depth	14.4	ft. Volume 2" Factor 3"	= 0.17 6" = 1.50 = 0.38 8" = 2.60	12" = 5.80
Depth to Liquid-	2.31	ft (VF) 4"	= 0.66 10" = 4.10	
(# of casing volumes) 3	x <u>12.29</u>	x(VF)/7	$= \frac{\text{Estimated}}{\text{Purge}} \frac{\textbf{2}}{\text{Volume}}$.08 6.24 gal.
Purging Equipment_	Stack D	имр		
Sampling Equipment				
		70	D. 1 25	an m
Starting Time 145 (Estimated) Purge			Rate $ \begin{bmatrix} .25 \\ -Purging \end{bmatrix} $	gpm.
Volume /	gal. / (Purg Flo Rat	te g	Time)	min.
Time	pН	Conductivity	Temperature	Volume
1426	6.5	660	<u>61-0</u>	
1428	6-1	640	60.5	9
1430	4.5	<u>6.30</u>	60.9	6
Did well dewater?	431	If yes, time	Volume	
Sampling Time	 	Weather Condit	ions RAINIA) a
		Bottles		J
	_			
COMMENTS				W. C. State of the Control of the Co
1) M/-	· · · · · · · · · · · · · · · · · · ·			
FOREMAN L. NE	9		SSISTANT	

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Chevron U.S	S.A. Inc.		Facili	ity Addres	<u> 4</u> 4	O GR	ANO	H	VΕ	_		_ l	(Phone) 842-8134 Laboratory Name SUPERIOR Loboratory Release Number 2719070								
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Sample Number	Sample Number	Con	1 K ≺∪ '×	111 202		Sample Preservation	or No)	BTEX + TPH GAS (8020 + 8015)	_	Oil and Grease (5520)	urgeable Halocarbons (8010)	Purgeable Aromotica (8020)	Purgeable Organics (8240)	Extractable Organica (8270)	<u> </u>			}			TB-LB SAMPLES
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Sem	do	Mum	Motrix S I I	₽d.	Hm.	Sam	P8 5	BITEX (802	문왕	(SS)	Purg (80)	Purg (86)	Purg (82	Extra (82	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)						Remarke
C-3	8	3	W	G	1424	HÇL	Y	X													ANALYZE
<u>C-1</u>					1444			X													ĺ
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GETTLER RYAN INC. 6747 SIERRA CT, SUITE G DUBLIN, CA 94568

Attn: ARGY LEYTON

Laboratory Number: 80940

Date: March 31, 1995

BETER. VANIN

Project Number/Name : 5208.80

This report has been reviewed and approved for release.

Senior Chemist Account Manager

Certified Laboratories -

Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

GETTLER RYAN INC. Attn: ARGY LEYTON Project 5208.80 Reported on March 31, 1995

Gasoline Range Petroleum Hydrocarbons and BTXE by EPA SW-846 5030/8015M/8020 Gasoline Range quantitated as all compounds from C6-C10

Chronology					Labo	ratory Numl	oer 80940
Sample ID		Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
c-3		03/22/95	03/24/95	03/30/95	03/30/95	BC301.05	01
C-1		03/22/95	03/24/95	03/30/95	03/30/95	BC301.05	02
c-2		03/22/95	03/24/95	03/30/95	03/30/95	BC301.05	03
TB-LB		03/22/95	03/24/95	03/30/95	03/30/95	BC301.05	04
QC Samples							,
QC Batch #	QC Sample ID		Ту	peRef.	Matrix	Extract. A	Analyzed
BC301.05-01	Method Blank		MB		Water	03/30/95	03/30/95
BC301.05-02	MW - 7		MS	80928-0	l Water	03/30/95	03/30/95
BC301.05-03	MW - 7		MS	D 80928-0	l Water	03/30/95 (03/30/95

Page 1 of 4

Certified Laboratories -



GETTLER RYAN INC. Attn: ARGY LEYTON Project 5208.80 Reported on March 31, 1995

Gasoline Range Petroleum Hydrocarbons and BTXE by EPA SW-846 5030/8015M/8020 Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID					Matrix	Dil.	Factor	Moisture
80940-01	c-3					Water		1.0	
80940-02	c-1					Water		1.0	-
80940-03	c-2					Water		1.0	_
80940-04	TB-LB					Water		1.0	-
		RESU	L,TS	OF JA	NALY	s I s	7		
Compound		80940-	01	80940-	02	80940-	03	80940	-04
		Conc.	RL	Conc.	RL	Conc.	RL	Conc.	\mathtt{RL}
		ug/L		ug/L		ug/L		ug/L	
Gasoline_Range		ND	50	ND	50	590 /	50	ND	50
Benzene		ND ´	0.5	ND	0.5 /	ND /	0.5	ND	0.5
Toluene		ND	0.5	ND	0.5	ND -	0.5	ND	0.5
Ethyl Benzene		ND	0.5	ND	0.5 /	38 /	0.5	ND	0.5
Total Xylenes		ND	0.5	ND	0.5	130	0.5	ND	0.5
>> Surrogate Rec	coveries (%) <	<	*						
Trifluorotoluen		101		100		97		104	

Page 2 of 4

Certified Laboratories –

Gasoline Range Petroleum Hydrocarbons and BTXE by EPA SW-846 5030/8015M/8020 Gasoline Range quantitated as all compounds from C6-C10

Quality Assurance and Control Data

Laboratory Number: 80940 Method Blank(s)

BC301.05-01 Conc. RL ug/L

Gasoline_Range	ND	50
Benzene	ND	0.5
Toluene	ND	0.5
Ethyl Benzene	ND	0.5
Total Xylenes	ND	0.5

>> Surrogate Recoveries (%) << Trifluorotoluene (SS) 102

Page 3 of 4



Gasoline Range Petroleum Hydrocarbons and BTXE by EPA SW-846 5030/8015M/8020 Gasoline Range quantitated as all compounds from C6-C10

Quality Assurance and Control Data

Laboratory Number: 80940

Compound	Sample conc.	e SPK Lev	vel SPK Result	Recovery %	Limits %	RPD %
	Fo	or Water Mat	rix (ug/L)	· · · · · · · · · · · · · · · · · · ·	· ••	
			ole Spiked: 8092	8 - 01		
Gasoline_Range	ND	360	310/320	86/89	65-135	3
Benzene	ND	20	20/21	100/105	65-135	5
Toluene	ND	20	20/21	100/105	65-135	5
Ethyl Benzene	ND	20	20/21	100/105	65-135	5
Total Xylenes	ND	60	62/62	103/103	65-135	0
>> Surrogate Recoveries	(%) <<					
Trifluorotoluene (SS)				97/99	50-150	

Definitions:

= Not Detected ND RL= Reporting Limit NA = Not Analysed

RPD = Relative Percent Difference

ug/L = parts per billion (ppb) mg/L = parts per million (ppm) ug/kg = parts per billion (ppb) mg/kg = parts per million (ppm)

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Certified Laboratories —

825 Arnold Dr., Suite 114 Martinez, California 94553

1555 Burke St., Unit l San Francisco, California 94124

309 S. Cloverdale St., Suite B-24 Seattle, Washington 98108