Chevron

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

December 9, 1994

Ms. Amy Leech
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94501

Re: Former Chevron Service Station #9-1153
3126 Fernside Boulevard, Alameda, CA

Dear Ms. Leech:

Enclosed is the quarterly Groundwater Monitoring and Sampling Activities report dated November 4, 1994, prepared by our consultant Groundwater Technology, Inc. for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) and BTEX. Benzene was detected in monitor wells C-1, MW-5, and MW-7 at concentrations of 23,000, 840, and 2400 ppb, respectively. Depth to ground water was measured at approximately 4.0 feet to 5.6 feet below grade and the direction of flow is to the east.

As we discussed in our meeting of August 29, 1994, our consultant Weiss Associates is currently preparing a comprehensive site review document which will call out appropriate future actions for this site. We look forward to meeting with your office on ~~January 6~~, 1995, to discuss this document. Jan 11 or 12, '95

We will continue to monitor and sample all wells at this site on a quarterly basis. The ground water extraction system has been temporarily shut down due to a failed pressure regulator. Weiss Associates will include an analysis of system effectiveness in their site review and propose appropriate next actions in regards to this system.

If you have any questions or comments, please do not hesitate to contact me at (510) 842-8134.

Sincerely,
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Mike Cooke - Weiss Associates
Ms. Alison Watts - Weiss Associates
Ms. B.C. Owen

Mr. Larry Bolton
State Farm Insurance
2509 Santa Clara Avenue
Alameda, CA 94501

File: 9-1153 QM9

GROUNDWATER TECHNOLOGY, INC.

4057 Port Chicago Highway, Concord, CA 94520 (415) 671-2387

FAX: (415) 685-9148

November 4, 1994 Project No. 020104100

Mr. Mark Miller
Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, CA 94583-0804

SUBJECT: *Groundwater Monitoring and Sampling Activities*
Chevron Service Station No. 9-1153
3126 Fernside Boulevard, Alameda, California

Dear Mr. Miller:

Groundwater Technology, Inc. presents the quarterly groundwater monitoring and sampling data collected on October 5, 1994. The six groundwater monitoring wells at the site were gauged to measure depth to groundwater (DTW) and to check for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not detected in the monitoring wells. A potentiometric surface map and a summary of groundwater monitoring data are presented in attachments 1 and 2, respectively. After the DTW was measured, each monitoring well was purged and sampled. Groundwater monitoring and sample collection protocol and field data sheets are presented in attachment 3. The groundwater samples collected were analyzed for benzene, toluene, ethylbenzene, and xylenes and for total petroleum hydrocarbons-as-gasoline. Results of the chemical analyses are summarized in attachment 2. The laboratory report and chain-of-custody record are included in attachment 4. Monitoring-well purge water was transported by Groundwater Technology to the Chevron Terminal in Richmond, California, for recycling.

Groundwater Technology is pleased to assist Chevron on this project. If you have any questions or comments, please contact our Concord office at (510) 671-2387.

Sincerely,
Groundwater Technology, Inc.
Written/Submitted by

Kenneth P. Johnson
Project Manager

PR

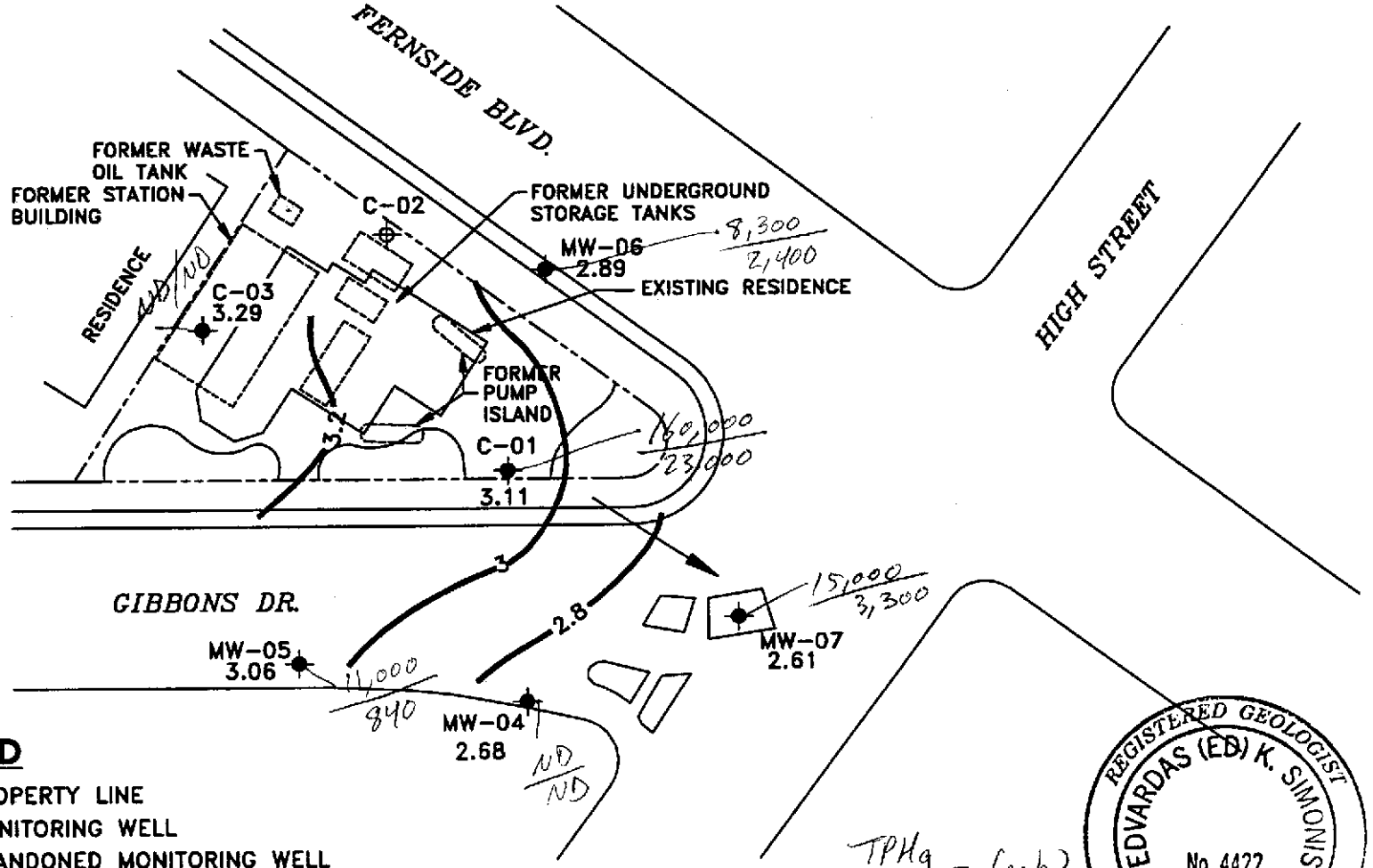
For:
Wendell W. Lattz
Vice President, General Manager
West Region

Attachment 1 Figure
Attachment 2 Table
Attachment 3 Protocol and Field Data Sheets
Attachment 4 Laboratory Report

4100qmsr.494

ATTACHMENT 1

Figure



LEGEND

———	PROPERTY LINE
✦	MONITORING WELL
⊕	ABANDONED MONITORING WELL
NA	NOT AVAILABLE
X.XX	POTENTIOMETRIC SURFACE ELEVATION (FT)
⌒	POTENTIOMETRIC SURFACE CONTOUR
←	GROUNDWATER FLOW DIRECTION

NOTE:
1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.

REGISTERED GEOLOGIST
EDVARDAS (ED) K. SIMONIS
No. 4422
STATE OF CALIFORNIA

GROUNDWATER TECHNOLOGY

0 FEET 40
SCALE

CLIENT: CHEVRON U.S.A. PRODUCTS CO.
SERVICE STATION NO. 9-1153

LOCATION: 3126 FERNSIDE BLVD.
ALAMEDA, CALIFORNIA

POTENTIOMETRIC SURFACE MAP (10/05/94)

FILE:	PROJECT NO.:	REV.:	DES.:	DET.:	DATE:	PM:	PE/RG:	FIGURE:
4100PSM, (1:40)	02010-4100		KM	KM	10/10/94	KO	EKS	1

ATTACHMENT 2

Table

TABLE 1
HISTORICAL GROUNDWATER MONITORING AND ANALYTICAL RESULTS
Chevron Service Station No. 9-1153
3126 Fernside Boulevard, Alameda, California

Well ID/ Elev	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
C-1	08/18/86	---	---	---	---	---	4.10	---	---
	09/04/86	15,000	760	820	1,500[1]	---[1]	---	---	---
	07/22/87	1,100	250	7	40[1]	---[1]	---	---	---
	05/03/89	6,900	3,800	190	229[1]	---[1]	4.46	---	---
	12/04/89	17,000	8,000	490	470[1]	---[1]	4.16	---	---
	02/14/90	19,000	12,000	990	1,050[1]	---[1]	3.64	---	---
	03/07/90	---	4,260	261	430[1]	---[1]	3.36	---	---
	09/06/91	21,000	10,000	100	240	560	4.43	0.00[2]	---
	12/15/91	20,000	4,900	43	110	330	4.78	0.00[2]	---
	03/03/92	13,000	5,800	730	340	1,200	2.39	0.00[2]	---
4.08	06/04/92	34,000	9,400	350	290	1,200	4.08	0.00	0.00
	10/13/92	24,000	11,000	98	280	530	4.75	0.00	-0.67
	01/11/93	7,100	1,500	130	150	700	2.26	Sheen	1.82
	04/14/93	29,000	7,300	4,000	640	2,300	2.90	Sheen	1.18
	07/13/93	650,000	27,000	18,000	6,300	29,000	3.97	Sheen	0.11
	10/19/93	40,000	12,000	730	1,100	3,600	4.50	0.00	-0.42
7.50	11/30/93	---	---	---	---	---	4.27	0.00	3.23
	01/27/94	36,000	8,600	220	670	1,900	3.35	0.00	4.15
	04/07/94	53,000	12,000	3,500	480	3,300	3.42	0.00	4.08
	07/01/94	65,000	19,000	5,900	1,000	9,000	3.96	0.00	3.54
	10/05/94	160,000	23,000	12,000	2,200	11,000	4.39	0.00	3.11
C-2	08/18/86	---	---	---	---	---	---	---	---
	09/04/86	1,100	49	18	84[1]	---[1]	---	---	---
	07/22/87	<50	1.8	<1.0	<4.0[1]	---[1]	---	---	---
	05/03/89	Abandoned	---	---	---	---	---	---	---

GROUNDWATER TECHNOLOGY

TABLE 1
HISTORICAL GROUNDWATER MONITORING AND ANALYTICAL RESULTS
Chevron Service Station No. 9-1153
3126 Fernside Boulevard, Alameda, California

Well ID/ Elev	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
C-3	08/18/86	---	---	---	---	---	4.00	---	---
	09/04/86	50	3.2	5.4	5.8[1]	---[1]	---	---	---
	07/22/87	<50	<0.5	<1.0	<4.0[1]	---[1]	---	---	---
	05/03/89	<50	<0.5	<1.0	<2.0[1]	---[1]	4.15	---	---
	12/04/89	<250	<0.5	<0.5	<0.5[1]	---[1]	4.24	---	---
	02/14/90	<50	<0.5	<0.5	<0.5[1]	---[1]	3.57	---	---
	03/07/90	NA	<5	<5	<5[1]	---[1]	3.31	---	---
	09/06/91	<50	<0.5	<0.5	<0.5	<0.5	4.59	0.00[2]	---
	12/15/91	<50	<0.5	<0.5	<0.5	<0.5	4.84	0.00[2]	---
	03/03/92	<50	<0.5	<0.5	<0.5	<0.5	2.17	0.00[2]	---
4.41	06/04/92	<50	<0.5	<0.5	<0.5	<0.5	4.01	0.00	0.40
	10/13/92	<50	<0.5	<0.5	<0.5	<0.5	4.79	0.00	-0.38
	01/11/93	<50	<0.5	<0.5	<0.5	<0.5	2.01	0.00	2.40
	04/14/93	<50	<0.5	<0.5	<0.5	<0.5	2.76	0.00	1.65
	07/13/93	<50	<0.5	<0.5	<0.5	<1.5	3.96	0.00	0.45
	10/19/93	66	12	1.4	1.0	8.4	4.53	0.00	-0.12
7.83	11/30/93	---	---	---	---	---	4.04	0.00	3.79
	01/27/94	<50	<0.5	<0.5	<0.5	<0.5	3.17	0.00	4.66
	04/07/94	<50	<0.5	<0.5	<0.5	<0.5	3.20	0.00	4.63
	07/01/94	<50	<0.5	<0.5	<0.5	<0.5	3.99	0.00	3.84
	10/05/94	<50	<0.5	<0.5	<0.5	<0.5	4.54	0.00	3.29
MW-4	06/04/92	<50	0.8	<0.5	<0.5	<0.5	3.63	0.00	-0.05
3.58	10/13/92	---	---	---	---	---	---	---	---
	01/11/93	<50	<0.5	<0.5	<0.5	<0.5	1.89	0.00	1.69
	04/14/93	<50	<0.5	<0.5	<0.5	<1.5	2.20	0.00	1.38
	07/13/93	54	2.6	1.6	<0.5	<1.5	3.51	0.00	0.07
	10/19/93	<50	<0.5	<0.5	<0.5	<0.5	4.22	0.00	-0.64
7.01	11/30/93	---	---	---	---	---	4.01	0.00	3.00
	01/27/94	<50	<0.5	<0.5	<0.5	<0.5	2.89	0.00	4.12
	04/07/94	<50	<0.5	<0.5	<0.5	<0.5	3.06	0.00	3.95
	07/01/94	<50	<0.5	<0.5	<0.5	<0.5	3.59	0.00	3.42
	10/05/94	<50	<0.5	<0.5	<0.5	<0.5	4.33	0.00	2.68

TABLE 1
HISTORICAL GROUNDWATER MONITORING AND ANALYTICAL RESULTS
Chevron Service Station No. 9-1153
3126 Fernside Boulevard, Alameda, California

Well ID/ Elev	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
MW-5	06/04/92	560	110	0.5	37	2.2	3.25	0.00	0.36
3.61	10/13/92	1,200	150	<2.5	84	8.6	4.20	0.00	-0.59
	01/11/93	1,300	48	1.0	83	33	1.30	0.00	2.31
	04/14/93	2,600	240	6.1	250	170	1.20	0.00	2.41
	07/13/93	1,700	260	7.8	160	100	3.15	0.00	0.46
	10/19/93	1,900	190	3.3	200	93	3.82	0.00	-0.21
7.04	11/30/94	---	---	---	---	---	3.56	0.00	3.48
	01/27/94	4,000	100	12	210	110	2.42	0.00	4.62
	04/07/94	2,600	170	10	150	88	2.33	0.00	4.71
	07/01/94	2,300	350	9.1	110	76	3.18	0.00	3.86
	10/05/94	11,000	840	150	130	340	3.98	0.00	3.06
MW-6	06/04/92	210	54	<0.5	1.9	2.4	3.89	0.00	-0.04
3.85	10/13/92	*10,000	5,300	<10	70	<10	4.56	0.00	-0.71
	01/11/93	100	50	<0.5	<0.5	<0.5	2.36	0.00	1.49
	04/14/93	<50	<0.5	<0.5	<0.5	<0.5	3.15	0.00	0.70
	07/13/93	<50	1.8	<0.5	<0.5	<1.5	3.94	0.00	-0.09
	10/19/93	320	150	<0.5	0.8	0.5	4.40	0.00	-0.55
7.27	11/30/94	---	---	---	---	---	4.16	0.00	3.11
	01/27/94	120	45	<0.5	<0.5	<0.5	3.33	0.00	3.94
	04/07/94	<50	<0.5	<0.5	<0.5	<0.5	3.43	0.00	3.84
	07/01/94	<50	<0.5	<0.5	<0.5	<0.5	3.94	0.00	3.33
	10/05/94	8,300	2,400	160	42	190	4.38	0.00	2.89

TABLE 1
HISTORICAL GROUNDWATER MONITORING AND ANALYTICAL RESULTS
Chevron Service Station No. 9-1153
3126 Fernside Boulevard, Alameda, California

Well ID/ Elev	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
MW-7	11/30/93	480	110	41	4.4	38	5.33	0.00	2.89
8.22	01/27/94	120	21	1.1	2.2	4.8	4.50	0.00	3.72
	04/07/94	2,600	630	39	56	94	4.62	0.00	3.60
	07/01/94	2,200	770	42	<10	92	5.13	0.00	3.09
	10/05/94	15,000	3,300	90	130	320	5.61	0.00	2.61
TMW-1	11/11/93	<1	<0.5	<0.5	<0.5	<0.5	---	0.00	----

TBLB	02/14/90	<50	<0.5	1.1	<0.5	<0.5	---	---	---
	09/06/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	12/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	03/03/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	06/04/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/13/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/11/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/14/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/13/93	<50	<0.5	<0.5	<0.5	<1.5	---	---	---
	10/19/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/27/94	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/07/94	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/01/94	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/05/94	<50	<0.5	<0.5	<0.5	<0.5	---	---	---

TPH-G	=	Total petroleum hydrocarbons-as-gasoline
DTW	=	Depth to water
SPT	=	Separate-phase hydrocarbon thickness
WTE	=	Groundwater elevation in feet above mean sea level
---	=	Not applicable/not sampled/not measured
*	=	Gasoline range concentration reported. The chromatogram shows only a single peak in the gasoline range.
1	=	Ethylbenzene and xylenes were reported together.
2	=	Product thickness was measured with an MMC flexi-dip interface probe.

Before June 4, 1992, the top-of-casing elevations were unknown.
Analytical results are in micrograms per liter or parts per billion.

ATTACHMENT 3

Groundwater Monitoring and Sample Collection Protocol
and
Field Data Sheets

Project Name: Chevron - Fernside

Date: 10/5/94

Site Address: 3126 Fernside Ave. Oakland

Page 1 of 6

Project Number: 020104100.0610

Project Manager: Ken Johnson

Well ID: C-3

Well Diameter: 3

DTW Measurements: DTB 14.6
Initial: 4.57
Recharge: ______

Calc Well Volume: 5.53 gal
Well Volume: 16.58 gal

Purge Method
Peristaltic ______
Gear Drive ______
Submersible ______

Pump Depth ______ ft.
Hand Bailed X
Air Lift ______
Other ______

Instruments Used
YSI: X
Hydac: ______
Omega: ______

Other: ______

Time	Temp (C / F)	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
15:50	17.6	0.53	7.38	3	Cloudy	
15:53	17.3	0.52	7.24	6	"	
15:56	17.2	0.54	7.23	9	Cloudy	[illegible] Brown
15:58	17.1	0.54	7.17	13	Cloudy	
16:01	17.0	0.55	7.37	17	Cloudy	

~~New Cap New Lock~~ Stn Backyard do first - fighting traffic 8/4

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Project Name: Chevron - Fernside

Site Address: 3126 Fernside Ave, Oakland

Project Number: 020104100.0610

Date: 10/5/94

Page 2 of 6

Project Manager: Ken Johnson

Well ID: MW-7

Well Diameter: 2

DTW Measurements: DTB 14.60 8.99

Initial: 5.61

Recharge:

Calc Well Volume: 1.53 gal

Well Volume: 4.58 gal

Purge Method
Peristaltic
Gear Drive
Submersible

Pump Depth ft.
Hand Bailed ✓
Air Lift
Other

Instruments Used
YSI: ✓
Hydac:
Omega:
Other:

Time	Temp ✓ C / F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
14:30	22.9	1.09	6.66	1	Cloudy	odor greenish
14:33	23.0	1.10	6.72	2	"	"
14:35	22.8	1.08	6.79	3	"	"
14:37	22.8	1.07	6.80	4	less cloudy	"
14:38	22.8	1.07	6.84	5	"	"

on median in intersection

Q

Project Name: Chevron - Fernside

Site Address: 3126 Fernside Ave, Oakland

Project Number: 020104100.0610

Date: 10/5/94

Page 3 of 6

Project Manager: Ken Johnson

Well ID: MW-1

Well Diameter: 2

DTW Measurements:
Initial: 4:33
Recharge:

Calc Well Volume: 1.81 gal
Well Volume: 5.44 gal

Purge Method
Peristaltic
Gear Drive
Submersible X

Pump Depth ft.
Hand Bailed
Air Lift
Other

Instruments Used
YSI: X
Hydac:
Omega:
Other:

Time	Temp X C / F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
9:12	17.7	0.79	6.67	2	Cloudy	
9:13	17.6	0.78	6.70	3	cloudy	
9:13	18.1	0.79	6.75	4	cloudy	
9:14	18.6	0.79	6.79	5	"	
9:14	18.9	0.78	6.85	6	Cloudy	

Car parked on it

Q

Project Name: Chevron - Fernside

Site Address: 3126 Fernside Ave, Oakland

Project Number: 020104100.0610

Date: 10/5/94

Page 4 of 6

Project Manager: Ken Johnson

Well ID: MW-6

Well Diameter: 2"

DTW Measurements: DTB 14.34
Initial: 4.38
Recharge:

Calc Well Volume: 1.69 gal
Well Volume: 5.06 gal

Purge Method
Peristaltic
Gear Drive
Submersible X

Pump Depth ft.
Hand Bailed
Air Lift
Other

Instruments Used
YSI: X
Hydac:
Omega:
Other:

Time	Temp C / F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
14:51	21.4	093	7.06	2	clear	
14:52	21.7	1.46	6.71	3	Cloudy	grey
14:53	21.7	1.52	6.68	4	"	"
14:53	21.6	1.50	6.69	5	"	"
14:54	21.6	1.49	6.70	6	Cloudy	grey

On Fernside

Q

Project Name: Chevron - Fernside

Site Address: 3126 Fernside Ave, Oakland

Project Number: 020104100.0610

Date: 10/5/04

Page 5 of 6

Project Manager: Ken Johnson

Well ID: MW-5

Well Diameter: 2"

DTW Measurements: DTB 15'

Initial: 3.98

Recharge:

Calc Well Volume: 1.87 gal

Well Volume: 5.62 gal

Purge Method
Peristaltic
Gear Drive
Submersible X

Pump Depth ft.
Hand Bailed
Air Lift
Other

Instruments Used
YSI: X
Hydac:
Omega:
Other:

Time	Temp C / F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
15:00	21.9	0.85	6.74	2	Very cloudy	grey/green
15:02	21.9	0.84	6.67	3	cloudy	
15:03	21.9	0.84	6.61	4	cloudy	green
15:04	21.8	0.85	6.59	5	cloudy	
15:05	21.8	0.84	6.58	6	4	

A. Gibbons

9

Project Name: Chevron - Fernside

Site Address: 3126 Fernside Ave, Oakland

Project Number: 020104100.0610

Date: 10/5/94

Page 6 of 6

Project Manager: Ken Johnson

Well ID: C-1

Well Diameter: 3"

DTW Measurements: DTB 20'

Initial: 4.39

Recharge:

Calc Well Volume: ~~20~~ 5.73 gal

Well Volume: 17.19 gal

Purge Method
Peristaltic
Gear Drive
Submersible X

Pump Depth ft.
Hand Bailed
Air Lift
Other

Instruments Used
YSI: ✓
Hydac:
Omega:
Other:

Time	Temp C / F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
15:30	23.0	0.97	6.68	4	Cloudy	Sheen Grey
15:32	23.6	1.06	6.71	8	Cloudy	dark grey
15:33	23.2	1.32	6.72	12	Cloudy	almost black
15:34	23.0	1.16	6.73	15	"	" Well Running dry
15:36	22.5	1.16	6.74	18	"	"

New Cap New Lock Strong odor w/ Sheen
In driveway to East

ATTACHMENT 4

Laboratory Report

Superior Precision Analytical, Inc.
A member of ESSCON Environmental Support Service Consortium

Groundwater Technology Inc.
Attn: KEN JOHNSON

Project 9-1153
Reported 10/18/94

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed	Matrix
15846- 1	C-3	10/05/94	10/11/94	Water
15846- 2	MW-7	10/05/94	10/18/94	Water
15846- 3	MW-5	10/05/94	10/17/94	Water
15846- 4	C-1	10/05/94	10/17/94	Water
15846- 5	TB-LB	10/05/94	10/11/94	Water
15846- 6	MW-4	10/06/94	10/18/94	Water
15846- 7	MW-6	10/05/94	10/14/94	Water

RESULTS OF ANALYSIS

Laboratory Number:	15846- 1	15846- 2	15846- 3	15846- 4	15846- 5
Gasoline_Range:	ND<50	15000	11000	160000	ND<50
Benzene:	ND<0.5	3300	840	23000	ND<0.5
Toluene:	ND<0.5	90	150	12000	ND<0.5
Ethyl Benzene:	ND<0.5	130	130	2200	ND<0.5
Total Xylenes:	ND<0.5	320	340	11000	ND<0.5
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number:	15846- 6	15846- 7
Gasoline_Range:	ND<50	8300
Benzene:	ND<0.5	2400
Toluene:	ND<0.5	160
Ethyl Benzene:	ND<0.5	42
Total Xylenes:	ND<0.5	190
Concentration:	ug/L	ug/L

Certified Laboratories

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Superior Precision Analytical, Inc.
A member of ESSCON Environmental Support Service Consortium

C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

QA/QC INFORMATION
SET: 15846

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline_Range:	99/93	6%	56-117
Benzene:	116/116	0%	59-149
Toluene:	112/112	0%	59-149
Ethyl Benzene:	117/114	3%	59-149
Total Xylenes:	123/120	2%	59-149

10/18/94
Senior Chemist
Account Manager

Superior Precision Analytical, Inc.
A member of ESSCON Environmental Support Service Consortium

GROUNDWATER TECHNOLOGY, INC.
Attn: KEN JOHNSON

Project 9-1153
Reported 21-October-1994

HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.

Chronology

Laboratory Number 15846

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-6	10/05/94	10/07/94	10/19/94	10/19/94		7

Certified Laboratories

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GROUNDWATER TECHNOLOGY, INC.
Attn: KEN JOHNSON

Project 9-1153
Reported 21-October-1994

HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.

Laboratory Number	Sample Identification	Matrix
15846- 7	MW-6	Water

RESULTS OF ANALYSIS

Laboratory Number: 15846- 7

Chloromethane:	ND<0.5
Vinyl Chloride:	ND<0.5
Bromomethane:	ND<0.5
Chloroethane:	ND<0.5
Trichlorofluoromethane:	ND<0.5
1,1-Dichloroethene:	ND<0.5
Dichloromethane:	ND<1.0
t-1,2-Dichloroethene:	ND<0.5
1,1-Dichloroethane:	ND<0.5
c-1,2-Dichloroethene:	ND<0.5
Chloroform:	ND<0.5
1,1,1-Trichloroethane:	ND<0.5
Carbon tetrachloride:	ND<0.5
1,2-Dichloroethane:	ND<0.5
Trichloroethene:	ND<0.5
c-1,3-Dichloropropene:	ND<0.5
1,2-Dichloropropane:	ND<0.5
t-1,3-Dichloropropene:	ND<0.5
Bromodichloromethane:	ND<0.5
1,1,2-Trichloroethane:	ND<0.5
Tetrachloroethene:	ND<0.5
Dibromochloromethane:	ND<0.5
Chlorobenzene:	ND<0.5
Bromoform:	ND<0.5
1,1,2,2-Tetrachloroeth:	ND<0.5
1,3-Dichlorobenzene:	ND<0.5
1,2-Dichlorobenzene:	ND<0.5
1,4-Dichlorobenzene:	ND<0.5

Concentration: ug/L

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HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.
Quality Assurance and Control Data - Water

Laboratory Number 15846

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Chloromethane:	ND<0.5	0.5			
Vinyl Chloride:	ND<0.5	0.5			
Bromomethane:	ND<0.5	0.5			
Chloroethane:	ND<0.5	0.5			
Trichlorofluoromethane:	ND<0.5	0.5			
1,1-Dichloroethene:	ND<0.5	0.5	50/52	48-189	4%
Dichloromethane:	ND<1.0	1.0			
t-1,2-Dichloroethene:	ND<0.5	0.5			
1,1-Dichloroethane:	ND<0.5	0.5			
c-1,2-Dichloroethene:	ND<0.5	0.5			
Chloroform:	ND<0.5	0.5			
1,1,1-Trichloroethane:	ND<0.5	0.5			
Carbon tetrachloride:	ND<0.5	0.5			
1,2-Dichloroethane:	ND<0.5	0.5			
Trichloroethene:	ND<0.5	0.5	76/85	53-161	11%
c-1,3-Dichloropropene:	ND<0.5	0.5			
1,2-Dichloropropane:	ND<0.5	0.5			
t-1,3-Dichloropropene:	ND<0.5	0.5			
Bromodichloromethane:	ND<0.5	0.5			
1,1,2-Trichloroethane:	ND<0.5	0.5			
Tetrachloroethene:	ND<0.5	0.5			
Dibromochloromethane:	ND<0.5	0.5			
Chlorobenzene:	ND<0.5	0.5	110/118	57-171	7%
Bromoform:	ND<0.5	0.5			
1,1,2,2-Tetrachloroeth:	ND<0.5	0.5			
1,3-Dichlorobenzene:	ND<0.5	0.5			
1,2-Dichlorobenzene:	ND<0.5	0.5			
1,4-Dichlorobenzene:	ND<0.5	0.5			

Definitions:
ND = Not Detected
RPD = Relative Percent Difference
RL = Reporting Limit
ug/L = Parts per billion (ppb)
QC File No. 15846

10/21/9

Senior Chemist
Account Manager

Certified Laboratories

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Fax copy of Lab Report and COC to Chevron Contact: ☐ No 15596

Chain-of-Custody-Reco

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number 9-1153
Facility Address 3126 Fernside, Alameda
Consultant Project Number 020104100
Consultant Name Groundwater Technology, Inc.
Address 4057 Port Chicago Hwy, Concord
Project Contact (Name) Ken Johnson
(Phone) (671-2387 (Fax Number) 685-9148

Chevron Contact (Name) Mark Miller
(Phone) 510 842 8134
Laboratory Name Superior
Laboratory Release Number 540-1420
Samples Collected by (Name) TERRY JONES
Collection Date 10/5/94
Signature Terry James

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)						Remarks
C-3		3	W	C	1640	HCl	Yes	X										2° C			MW-6 is on a separate COC
MW-7		3	W		1645																
MW-5		3	W		1650																
C-1		3	W		1655											2					
TBLB		2	W												NH						
MW-4		3	W	C	918	HCl	~~Yes~~	X													MW-4 done next day

Analyses To Be Performed

NOTE: Do Not Bill TB-LB SAMPLE

Comments: Follow instructions in letter. Samples stored in ice. Use appropriate containers. Preservation as noted. VOAs with headspace absent.

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Terry James	GTI	10/5/94 1930		AERO	10-7 12:25
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	AERO	10-7 12:40			
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
			Mike Heath / Mike Kuhn SPL SF		10/7/94 12:40 10/7/94 SPL SF

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No 1546

Chain-of-Custody-Record

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number 9-1157
Facility Address 3126 Fernside Alameda
Consultant Project Number 620104100
Consultant Name Groundwater Technology, Inc.
Address 4057 Port Chicago Hwy, Concord
Project Contact (Name) Ken Johnson
(Phone) 671-2387 (Fax Number) 685-9148

Chevron Contact (Name) Mark Miller
(Phone) (510) 842-8134
Laboratory Name Superior
Laboratory Release Number 590-1420
Samples Collected by (Name) Terry James
Collection Date 10/5/94
Signature Terry James

Analyses To Be Performed

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Hold				Remarks
MW-6		3	W	G	1630	HCl	Yes	✓												MW-6 Hold is to be tested for 8010 upon Notification to Ken Johnson pending results of BTEX, TPH-G contact Ken Johnson (510) 671-2387
MW-6		3	|	|	1630	ND	|									X				

NOTE: Do NOT BILL TB-LB SAMPLE

2.2°C

Ice Initials: NH
Samples Stored in ice. ✓
Appropriate containers ✓
Samples preserved ✓
VOA's without Headspace ✓
Comments:

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Turn Around Time (Circle Choice)
Terry James	GTI	10/5/94 1900	Rick K AERO	AERO	12:25 10-7	24 Hrs.
Rick M.	AERO	10-7-94 12:40	Received By (Signature)	Organization	Date/Time	48 Hrs.
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature): Nicki Hinsch SPRSE		Date/Time 10/7/94 12:40	5 Days (circled) / 10 Days / As Contracted