

4

HAZMAT
SH 813-2 PH 4:01



August 1, 1994

Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, CA 94583
P.O. Box 5004
San Ramon, CA 94583-0804

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

Marketing Department
Phone 510 842 9500

**Re: Former Chevron Service Station #9-2384
15526 Hesperian Boulevard, San Lorenzo, CA**

Dear Ms. Shin:

Enclosed is the quarterly Groundwater Monitoring and Sampling Activities report dated May 31, 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. Dissolved concentrations of these constituents observed during the past quarter are consistent with historical results. Depth to ground water was measured at approximately 12.1 to 12.9 feet below grade and the direction of flow is to the west-southwest.

Chevron will coordinate the abandonment/relocation of several of the monitor wells at the site in conjunction with the proposed construction as discussed in my letters of March 1 and March 7, 1994. We are currently awaiting a construction schedule from the new property owner.

Until we receive such a schedule, Chevron will continue to monitor and sample this site on a quarterly basis. If you have any questions or comments, please do not hesitate to contact me at (510) 842-8134.

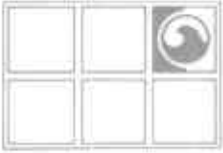
Sincerely,
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Kevin Graves, RWQCB - Bay Area
Ms. B.C. Owen

Mr. Alan Gordon
Gordon Real Estate
524 30th Avenue
San Francisco, CA 94121



GROUNDWATER TECHNOLOGY, INC.

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

FAX: (415) 685-9148

May 31, 1994 .

Project No. 020104094

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. 9-2384
15526 Hesperian Boulevard, San Lorenzo, California

Dear Mr. Miller:

Groundwater Technology, Inc. presents the groundwater monitoring and sampling data collected on March 10 and April 12, 1994. Six groundwater monitoring wells at this 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, the monitoring wells were purged and sampled. Groundwater monitoring and sample collection protocol and field data sheets are presented in Attachment 3. The groundwater samples were analyzed for benzene, toluene, ethylbenzene, and xylenes and for total petroleum hydrocarbons-as-gasoline. Results of the chemical analyses are summarized in Table 1. The laboratory report and chain-of-custody record are included in Attachment 4. Monitoring-well purge water was removed by Groundwater Technology and transported 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 call our Concord office at (510) 671-2387.

Sincerely,
Groundwater Technology, Inc.
Written/Submitted by

Tim Watchers
Project Manager

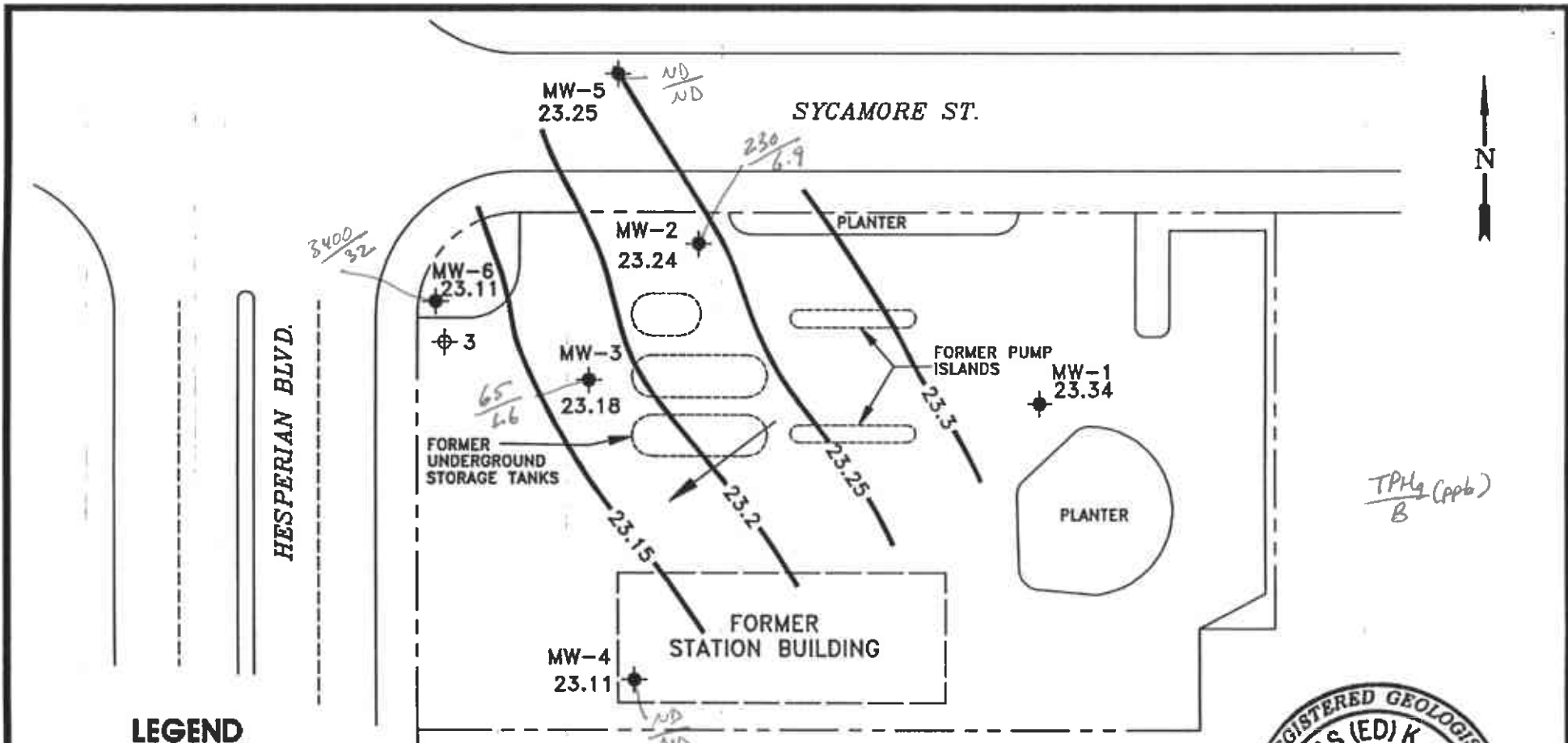
PR *KJ*

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

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

ATTACHMENT 1

Figure



LEGEND

- PROPERTY LINE
- MONITORING WELL
- ABANDONED MONITORING WELL (FORMER LOCATION OF MW-3)
- POTENTIOMETRIC SURFACE ELEVATION (FT)
- POTENTIOMETRIC SURFACE CONTOUR
- GROUNDWATER FLOW DIRECTION

NOTE:

1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.



GROUNDWATER TECHNOLOGY



CLIENT:
CHEVRON U.S.A. PRODUCTS CO.
SERVICE STATION NO. 9-2384

**POTENTIOMETRIC SURFACE MAP
(4/12/94)**

FILE:
4094PSM, (1:30)

PROJECT NO.:
02010-4094

LOCATION:
15526 HESPERIAN BLVD.
SAN LORENZO, CALIFORNIA

PM:

JAW

PE/RG:

ELI

FIGURE:

1

REV.:

DES.:
SS

DET.:
TW

DATE:
5/31/94

ATTACHMENT 2

Table

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-2384
15526 Hesperian Boulevard, San Lorenzo, California

Well ID/ Elevation	Date	TPH-as- Gasoline	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	GWE (ft)
MW-1 35.64 35.65	06/04/92	<50	<0.5	<0.5	<0.5	<0.5	13.12	0.00	22.52
	07/30/92	---	---	---	---	---	13.82	0.00	21.82
	08/25/92	---	---	---	---	---	14.20	0.00	21.44
	09/23/92	<50	<0.5	<0.5	<0.5	<0.5	14.59	0.00	21.05
	12/29/92	<50	<0.5	<0.5	<0.5	<0.5	14.28	0.00	21.36
	03/19/93	<50	<0.5	<0.5	<0.5	<1.5	10.90	0.00	24.74
	07/02/93	<50	<0.5	<0.5	<0.5	<1.5	11.41	0.00	24.24
	09/22/93	<50	0.9	0.9	<0.5	<1.5	12.77	0.00	22.88
	10/01/93	---	---	---	---	---	12.93	0.00	22.72
	03/10/94	<50	<0.5	<0.5	<0.5	<0.5	12.13	0.00	23.52
04/12/94	---	---	---	---	---	12.31	0.00	23.34	
MW-2 35.85 35.86	06/04/92	6,700	910	17	210	30	13.48	0.00	22.73
	07/30/92	---	---	---	---	---	14.17	0.00	21.68
	08/25/92	---	---	---	---	---	14.56	0.00	21.29
	09/23/92	1,500	110	1.2	81	<0.5	14.95	0.00	20.90
	12/29/92	1,200	51	1.1	27	<0.5	14.61	0.00	21.24
	03/19/93	750	37	1.0	34	1.6	11.24	0.00	24.61
	07/02/93	2,100	45	1.4	87	4.8	11.76	0.00	24.10
	09/22/93	880	23	2.8	38	<1.5	13.12	0.00	22.74
	10/01/93	---	---	---	---	---	13.30	0.00	22.56
	03/10/94	230	6.9	1.9	12	0.6	12.43	0.00	23.43
04/12/94	---	---	---	---	---	12.62	0.00	23.24	

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-2384
15526 Hesperian Boulevard, San Lorenzo, California

Well ID/ Elevation	Date	TPH-as- Gasoline	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	GWE (ft)
MW-3 35.42	06/04/92	460	12	0.8	5.8	14	13.12	0.00	22.30
	07/30/92	---	---	---	---	---	13.81	0.00	21.61
35.43	08/25/92	---	---	---	---	---	14.20	0.00	21.22
	09/23/92	1,100	62	1.5	110	4.0	14.58	0.00	20.84
	12/29/92	450	21	0.7	12	3.0	14.22	0.00	21.20
	03/19/93	1,200	67	1.3	96	5.5	10.87	0.00	24.55
	07/02/93	610	73	0.5	42	<1.5	11.37	0.00	24.06
	09/22/93	400	<0.5	0.6	2.7	<1.5	12.71	0.00	22.72
	10/04/93	---	---	---	---	---	12.88	0.00	22.55
	03/10/94	65	1.6	1.3	1.3	1.1	12.08	0.00	23.35
04/12/94	---	---	---	---	---	12.25	0.00	23.18	
MW-4 35.73	07/02/93	80	<0.5	0.6	<0.5	<1.5	11.77	0.00	23.96
	09/22/93	---	---	---	---	---	---	---	---
	10/01/93	<50	<0.5	<0.5	<0.5	<0.5	13.12	0.00	22.61
	03/10/94	---	---	---	---	---	---	---	---
	04/12/94	<50	<0.5	<0.5	<0.5	<0.5	12.62	0.00	23.11
**MW-5 35.50	07/02/93	<50	<0.5	<0.5	<0.5	<1.5	11.42	0.00	24.08
	09/22/93	---	---	---	---	---	---	---	---
	10/01/93	---	---	---	---	---	---	---	---
	03/10/94	---	---	---	---	---	---	---	---
	04/12/94	<50	<0.5	<0.5	<0.5	<0.5	12.25	0.00	23.25
MW-6 36.01	07/02/93	14,000	330	28	980	580	12.07	0.00	23.94
	09/22/93	---	---	---	---	---	---	---	---
	10/01/93	<50	<0.5	<0.5	<0.5	<0.5	12.71	0.00	23.30
	03/10/94	---	---	---	---	---	---	---	---
	04/12/94	3400	32	<0.5	0.7	67	12.90	0.00	23.11

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-2384
15526 Hesperian Boulevard, San Lorenzo, California

Well ID/ Elevation	Date	TPH-as- Gasoline	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	GWE (ft)
TBLB	06/04/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	09/23/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	12/29/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	03/19/93	<50	<0.5	<0.5	<0.5	<1.5	---	---	---
	07/02/93	<50	<0.5	<0.5	<0.5	<1.5	---	---	---
	09/22/93	<50	<0.5	<0.5	<0.5	<1.5	---	---	---
	10/01/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	03/10/94	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/12/94	<50	<0.5	<0.5	<0.5	<0.5	---	---	---

All elevations are given as feet above mean sea level.
 Concentrations shown in parts per billion.

- TPH = Total petroleum hydrocarbons
- DTW = Depth to water
- SPT = Separate-phase hydrocarbon thickness
- GWE = Groundwater elevation in feet above mean sea level
- = Not applicable, not sampled, not measured
- ** = Well Paved Over

ATTACHMENT 3

**Groundwater monitoring and Sample Collection Protocol
and
Field Data Sheets**

GROUNDWATER TECHNOLOGY GROUNDWATER MONITORING AND SAMPLE COLLECTION PROTOCOL

Groundwater Monitoring

Groundwater monitoring is accomplished using a INTERFACE PROBE™ Well Monitoring System. The INTERFACE PROBE™ Well Monitoring System is a hand held, battery operated device for measuring the depth to separate-phase hydrocarbons and depth to water. The INTERFACE PROBE™ Well Monitoring System consists of a dual-sensing probe which utilizes an optical liquid sensor and electrical conductivity to distinguish between water and petroleum products.

Monitoring is accomplished by measuring from the surveyed top of well casing or grade to groundwater and separate-phase hydrocarbons if present. The static water elevation is then calculated for each well and a potentiometric surface map is constructed. If separate-phase hydrocarbons are detected the water elevation is adjusted by the following calculation:

$$(\text{Product thickness}) \times (0.8) + (\text{Water elevation}) = \text{Corrected water elevation}$$

Groundwater monitoring wells are monitored in order of wells with lowest concentrations of volatile organic compounds to wells with the highest concentrations, based upon historical concentrations. If separate-phase hydrocarbons are encountered in a well, the product is visually inspected to confirm and note color, amount, and viscosity. Monitoring equipment is washed with laboratory grade detergent and rinsed with distilled or deionized water before monitoring each well.

Groundwater Sampling

Before groundwater samples are collected, sufficient water is purged from each well to ensure representative formation water is entering the well. Wells are purged and sampled in the same order as monitoring, from wells with the lowest concentrations of volatile organic compounds to wells with the highest concentrations. Wells are purged using either a polyvinyl chloride (PVC) bailer fitted with a check valve or with a stainless steel submersible Grundfos pump. The purge equipment is decontaminated before use in each well by washing with laboratory grade detergent and tripled rinsing with deionized or distilled water. A minimum of 3 well-casing volumes of water are removed from each well while pH, electrical conductivity, and temperature are recorded to verify that "fresh" formation water is being sampled and the parameters have stabilized. If the well is low yielding, it may be purged dry and sampled before 3 casing volumes are purged. The wells are then allowed to recharge to approximately 80 percent of the initial water level before a sample is collected.

Groundwater samples are collected from each well using a new, prepackaged disposable bailer and string. The water sample is decanted from the bailer into laboratory-provided containers (appropriate for the analyses required) so that there is no headspace in the containers. Samples collected for benzene, toluene, ethylbenzene, xylene, and total petroleum hydrocarbons (TPH)-as-gasoline analyses are collected in 40-milliliter vials fitted with Teflon® septum lids. Samples are preserved with hydrochloric acid (HCL) to a pH of less than 2. Dissolved metals samples are filtered through a 0.45-micron paper filter in the field and preserved as required before submitting to the laboratory for analyses. All samples are labeled immediately upon collection and logged on the chain-of-custody record. Sample label and chain-of-custody recorded information includes the project name and number, sample identification, date and time of collection, analyses requested, and the sampler's name. Sample bottles are placed in plastic bags (to protect the bottles and labels) and on ice (frozen water) in an insulated cooler and are shipped under chain-of-custody protocol to the laboratory.

The chain-of-custody record documents who has possession of the samples until the analyses is performed. Other pertinent information is also noted for the laboratory use on the chain-of-custody record.

Trip blanks (TBLBs) are used for each project as a quality assurance/quality control measure. The TBLBs are prepared by the laboratory and are placed in the insulated cooler and accompany the field samples throughout the sampling event.

Project Name: Chevron - San Lorenzo

Date: 3/10/94

Site Address: 15526 Hesperian, San Lorenzo

Page 1 of 3

Project Number: 020104094.0610

Project Manager: Tim Watchers

Well ID: MW-1

DTW Measurements:

Initial: 12.13 Calc Well Volume: 2 gal

Well Diameter: 2"

Recharge: _____ Well Volume: 6 gal

Purge Method Submersible ✓ Pump Depth _____ ft.
 Peristaltic _____ Hand Bailed _____
 Gear Drive _____ Air Lift _____
 Submersible ✓ Other _____

Instruments Used
 YSI: ✓ _____ Other: _____
 Hydac: _____
 Omega: _____

Time	Temp	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
	<u>✓</u> C F					
0820	14.3	.39	6.28	2	cloudy	brown
0821	16.6	.80	6.78	3	"	"
0822	17.2	.80	6.91	4	"	"
0823	17.7	.80	6.96	5	"	"
0824	17.9	.81	7.02	6	"	"

Project Name: Chevron - San Lorenzo

Date: 3/10/94

Site Address: 15526 Hesperian, San Lorenzo

Page 2 of 3

Project Number: 020104094.0610

Project Manager: Tim Watchers

Well ID: MW-3

DTW Measurements:

Well Diameter: 2"

Initial: 12.08 Calc Well Volume: 2 gal

Recharge: _____ Well Volume: 6 gal

Purge Method Pump Depth _____ ft.

Peristaltic _____ Hand Bailed _____

Gear Drive _____ Air Lift _____

Submersible Other _____

Instruments Used

YSI: _____ Other: _____

Hydac: _____

Omega: _____

Time	Temp	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
	<input checked="" type="checkbox"/> C _____ F					
0830	17.6	.94	7.08	2	Cloudy	gray
0831	17.9	1.30	7.03	3	"	"
0832	17.8	1.32	7.06	4	"	"
0833	17.8	1.31	7.07	5	Clear	clear
0834	17.9	1.30	7.07	6	"	"

Project Name: Chevron - San Lorenzo

Date: 3/10/94

Site Address: 15526 Hesperian, San Lorenzo

Page _____ of _____

Project Number: 020104094.0610

Project Manager: Tim Watchers

Well ID: MW-2

DTW Measurements:

Initial: 12.43 Calc Well Volume: 2 gal

Well Diameter: 2"

Recharge: _____ Well Volume: 6 gal

Purge Method _____ Pump Depth _____ ft.
 Peristaltic _____ Hand Bailed _____
 Gear Drive Air Lift _____
 Submersible Other _____

Instruments Used
 YSI: _____ Other: _____
 Hydac: _____
 Omega: _____

Time	Temp	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
	<input checked="" type="checkbox"/> C _____ F					
0845	18.9	1.29	7.08	2	cloudy	brown
0846	19.6	1.30	7.14	3	"	"
0847	19.8	1.31	7.19	4	"	"
0848	20.0	1.31	7.23	5	"	"
0849	20.1	1.32	7.26	6	clearer	"

Project Name: Chevron - San Lorenzo

Date: 4/12/94

Site Address: 15526 Hesperian, San Lorenzo

Page 1 of 3

Project Number: 020104094.0610

Project Manager: Tim Watchers

Well ID: MW-5

DTW Measurements:

Well Diameter: 2"

Initial: 12.25 Calc Well Volume: 2 gal

Recharge: 14.60 Well Volume: 6 gal

Purge Method Peristaltic Pump Depth ft.
 Hand Bailed
 Gear Drive Air Lift
 Submersible Other

Instruments Used
 YSI:
 Hydac:
 Omega:
 Other:

Time	Temp	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
	<input checked="" type="checkbox"/> C <input type="checkbox"/> F					
0908	19.6	1.17	7.36	2	Cloudy	Brown
0912	19.7	1.17	7.59	3	"	"
0915	19.6	1.15	7.58	4	"	"
0917	19.8	1.17	7.59	5	"	"
0919	19.7	1.18	7.61	6	"	"

Project Name: Chevron - San Lorenzo

Date: 4/12/94

Site Address: 15526 Hesperian, San Lorenzo

Page 2 of 3

Project Number: 020104094.0610

Project Manager: Tim Watchers

Well ID: MW-4

DTW Measurements:

Initial: 12.62 Calc Well Volume: 2 gal

Well Diameter: 2"

Recharge: 14.90 Well Volume: 6 gal

Purge Method Pump Depth _____ ft.

Peristaltic _____ Hand Bailed

Gear Drive _____ Air Lift _____

Submersible _____ Other _____

Instruments Used

YSI: Other: _____

Hydac: _____

Omega: _____

Time	Temp C F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
0930	17.3	1.03	7.81	2	Cloudy	brown
0933	17.5	1.06	7.61	3	"	"
0935	17.5	1.08	7.57	4	"	"
0937	17.4	1.10	7.57	5	"	"
0939	17.3	1.11	7.57	6	"	"

Project Name: Chevron - San Lorenzo

Date: 4/12/94

Site Address: 15526 Hesperian, San Lorenzo

Page 3 of 3

Project Number: 020104094.0610

Project Manager: Tim Watchers

Well ID: MW-6

DTW Measurements:

Initial: 12.90 Calc Well Volume: 2 gal

Well Diameter: 2"

Recharge: 15.12 Well Volume: 6 gal

Purge Method Pump Depth ft.
 Peristaltic Hand Bailed
 Gear Drive Air Lift
 Submersible Other

Instruments Used
 YSI:
 Hydac:
 Omega:
 Other:

Time	Temp	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
	<input checked="" type="checkbox"/> C <u> </u> F					
0947	18.9	1.15	7.60	2	Cloudy	brown
0950	19.0	1.18	7.53	3	↓	↓
0952	19.0	1.17	7.49	4		
0954	19.0	1.18	7.54	5		
0956	19.0	1.18	7.53	6		

ATTACHMENT 4

Laboratory Report



Superior Precision Analytical, Inc.

1555 Burke, Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

GROUND WATER TECHNOLOGY INC.
Attn: BRUCE EPPLER

Project 020104094.0610
Reported 03/21/94

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
15308- 1	MW-1	03/10/94	03/17/94 Water
15308- 2	MW-3	03/10/94	03/17/94 Water
15308- 3	MW-2	03/10/94	03/17/94 Water
15308- 4	TB-LB	03/10/94	03/17/94 Water

RESULTS OF ANALYSIS

Laboratory Number: 15308- 1 15308- 2 15308- 3 15308- 4

Gasoline:	ND<50	65	230	ND<50
Benzene:	ND<0.5	1.6	6.9	ND<0.5
Toluene:	ND<0.5	1.3	1.9	ND<0.5
Ethyl Benzene:	ND<0.5	1.3	12	ND<0.5
Total Xylenes:	ND<0.5	1.1	0.6	ND<0.5
Concentration:	ug/L	ug/L	ug/L	ug/L



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

A N A L Y S I S F O R T O T A L P E T R O L E U M H Y D R O C A R B O N S

Page 2 of 2
QA/QC INFORMATION
SET: 15308

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

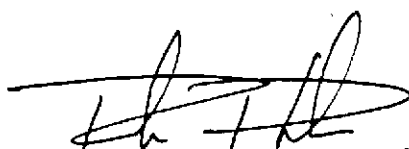
OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

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:	88/103	16%	67-129
Benzene:	81/102	23%	74-125
Toluene:	87/111	24%	74-125
Ethyl Benzene:	85/107	23%	74-125
Total Xylenes:	86/108	23%	74-125


3/22/94
Senior Chemist
Account Manager



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

GROUNDWATER TECHNOLOGY, INC.
Attn: TIM WATCHERS

Project 9-2384
Reported 04/17/94

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
30421- 1	MW-5	04/12/94	04/15/94 Water
30421- 2	MW-4	04/12/94	04/15/94 Water
30421- 3	MW-6	04/12/94	04/15/94 Water
30421- 4	TB-LB	04/12/94	04/15/94 Water

RESULTS OF ANALYSIS

Laboratory Number: 30421- 1 30421- 2 30421- 3 30421- 4

	5	4	6	
Gasoline:	ND<50	ND<50	3400	ND<50
Benzene:	ND<0.5	ND<0.5	32	ND<0.5
Toluene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Ethyl Benzene:	ND<0.5	ND<0.5	0.7	ND<0.5
Total Xylenes:	ND<0.5	ND<0.5	67	ND<0.5
Concentration:	ug/L	ug/L	ug/L	ug/L



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

Page 2 of 2
QA/QC INFORMATION
SET: 30421

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

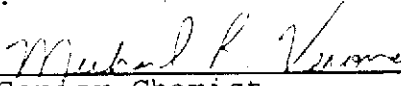
OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

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:	116/109	6%	70-130
Benzene:	83/77	8%	70-130
Toluene:	87/83	5%	70-130
Ethyl Benzene:	80/76	5%	70-130
Total Xylenes:	94/90	4%	70-130


Senior Chemist

