

ALSO
HAZMAT
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Chevron

August 25, 1994

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

Marketing - Northwest Region
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: Chevron Service Station #9-2506
2630 Broadway, Oakland, CA**

Dear Ms. Eberle:

Enclosed is the quarterly Ground Water Sampling report dated July 15, 1994, prepared by our consultant Sierra Environmental Services for the above referenced site. Ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline and BTEX. Dissolved concentrations of these constituents observed during this sampling event are consistent with historical results. Depth to ground water was measured at approximately 5.6 to 9.9 feet below grade and the direction of flow is to the north.

Our consultant, RESNA Industries, has recently installed the additional ground water monitor wells as proposed in our work plan of November 18, 1993. The report documenting field activities will be forwarded to your office shortly.

Chevron will continue to monitor and sample all wells at this site and report findings 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
Mr. S.A. Willer

File: 9-2506 QM4



July 15, 1994

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

Re: Chevron Service Station #9-2506
2630 Broadway
Oakland, California
SES Project #1-364-04

Dear Mr. Miller:

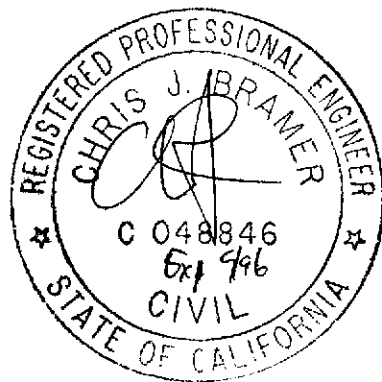
This report presents the results of the quarterly ground water sampling at Chevron Service Station #9-2506, located at 2630 Broadway in Oakland, California. Eight wells, B-1 through B-8, were sampled (Figure 1).

On June 10, 1994, SES personnel visited the site. Water level measurements were collected in all site wells and all wells were checked for the presence of free-phase hydrocarbons. Free-phase hydrocarbons were not present in any of the site wells checked. Water level data are shown in Table 1 and ground water elevation contours are included on Figure 1.

The ground water samples were collected on June 10, 1994 in accordance with SES Standard Operating Procedure - Ground Water Sampling (attached). The field water sampling forms for this event are included. All analyses were performed by Superior Precision Analytical, Inc. of San Francisco, California. Analytic results for ground water are presented in Table 1. The chain of custody document and laboratory analytic reports are attached. SES is not responsible for laboratory omissions or errors.

Thank you for allowing us to provide services to Chevron. Please call if you have any questions.

Sincerely,
Sierra Environmental Services




Argy Meria
Staff Geologist


Chris J. Bramer
Professional Engineer #C48846

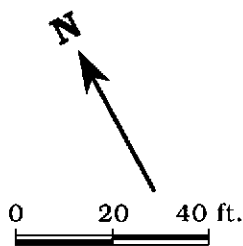
AJM/CJB/lmo
364049M.JL4

cc: Sheldon Nelson, CRTIC

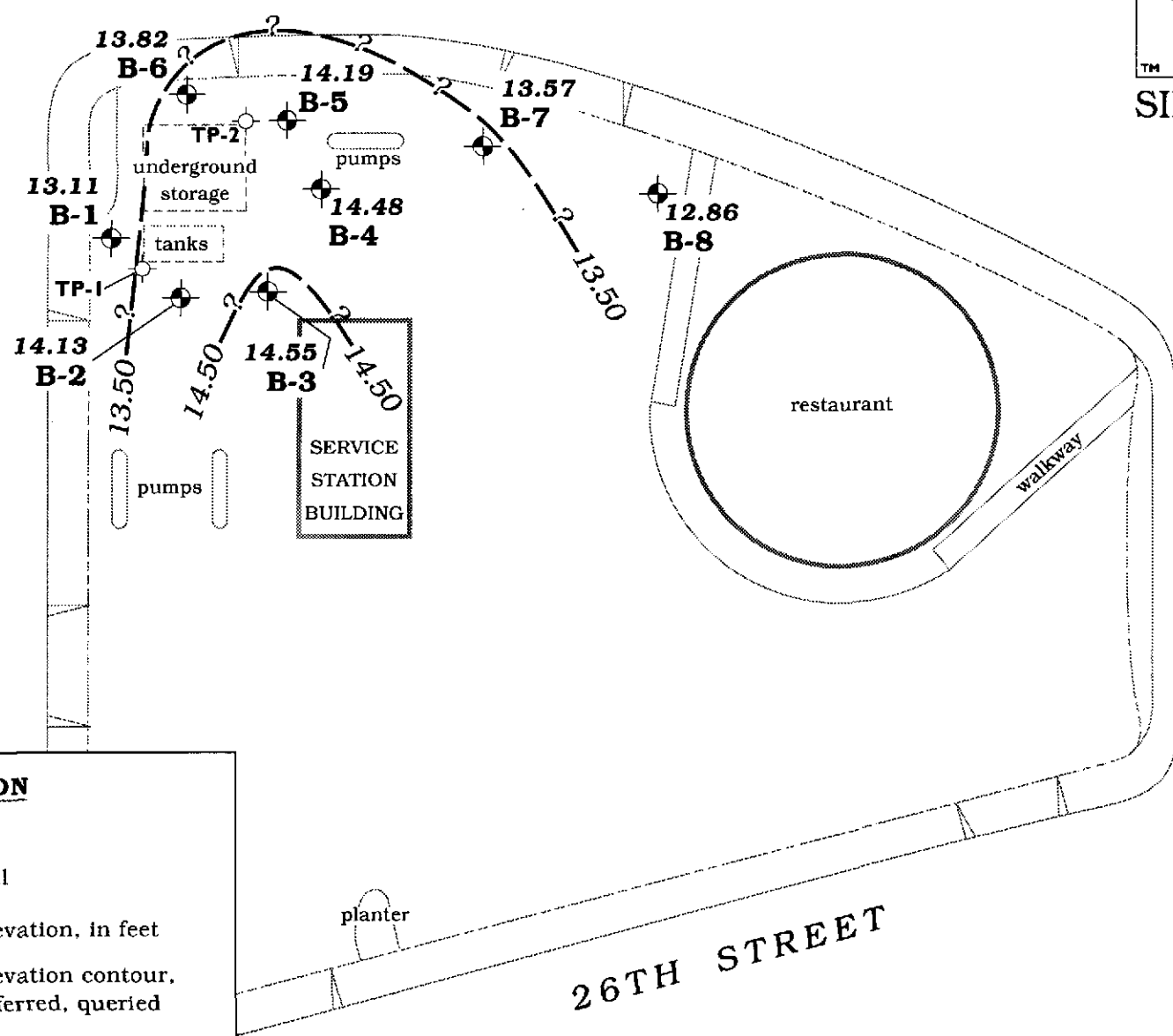
Attachments Figure
 Table
 SES Standard Operating Procedure
 Field Water Sampling Forms
 Chain of Custody Document and Laboratory Analytic Reports



Approximate
ground water
flow direction
at a gradient of
0.018-0.042 ft/ft



BROADWAY

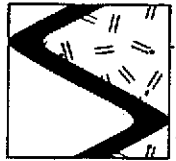


EXPLANATION

- B-8** Monitoring well
- TP-2** Tank backfill well
- 12.86** Ground water elevation, in feet
- 13.50** Ground water elevation contour, dashed where inferred, queried where uncertain

Base map after IT Enviroscience

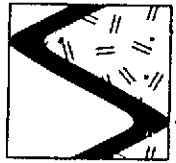
Figure 1. Monitoring Well Locations and Ground Water Elevation Contour Map - June 10, 1994 - Chevron Service Station #9-2506, 2630 Broadway, Oakland, California



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Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #9-2506, 2630 Broadway, Oakland, California

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G) B T E X				
						←-----ppb----->				
B-1/ 23.00 ¹	3/18/82	7.81	15.19	0	---	---	---	---	---	---
	3/25/82	8.67	14.33	0	---	---	---	---	---	---
	5/21/82	9.30	13.70	0	---	---	---	---	---	---
	5/26/82	10.18	12.82	0	---	---	---	---	---	---
	6/24/82	9.92	13.08	0	---	---	---	---	---	---
	9/9/93	9.90	13.10	0	8015/8020	8,800 ²	240	280	<2.5	<7.5
	12/2/93	9.10	13.90	0	8015/8020	1,100	100	7.9	3.4	3.9
	3/17/94	9.41	13.59	0	8015/8020	1,600	370	13	13	26
	6/10/94	9.89	13.11	0	8015/8020	1,400 ✓	270 ✓	24	18	78
B-2/ 22.28 ¹	3/18/82	3.83	18.45	0	---	---	---	---	---	---
	3/25/82	5.79	16.49	0	---	---	---	---	---	---
	5/21/82	4.85	17.43	0	---	---	---	---	---	---
	5/26/82	8.53	13.75	0	---	---	---	---	---	---
	6/24/82	8.40	13.88	0	---	---	---	---	---	---
	9/9/93	6.46	15.82	0	8015/8020	4,700	470	630	180	590
	12/2/93	5.41	16.87	0	8015/8020	2,200	59	27	110	350
	3/17/94	7.44	14.84	0	8015/8020	1,800	52	33	97	320
	6/10/94	8.15	14.13	0	8015/8020	1,200 ✓	37 ✓	48	20	93
B-3/ 21.78 ¹	3/18/82	5.65	16.13	0	---	---	---	---	---	---
	3/25/82	5.75	16.03	0	---	---	---	---	---	---
	5/21/82	5.58	16.20	0	---	---	---	---	---	---
	5/26/82	7.99	13.79	0	---	---	---	---	---	---
	6/24/82	7.68	14.10	0	---	---	---	---	---	---
	9/9/93	5.99	15.79	0	8015/8020	7,800	500	760	180	720
	12/2/93	5.70	16.08	0	8015/8020	9,800	790	870	380	1,500
	3/17/94	6.50	15.28	0	8015/8020	2,400	88	55	74	270
	6/10/94	7.23	14.55	0	8015/8020	2,300 ✓	110 ✓	95	84	240
B-4/ 21.35 ¹	3/18/82	4.65	16.70	0	---	---	---	---	---	---
	3/25/82	5.08	16.27	0	---	---	---	---	---	---



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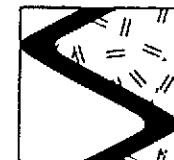
Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #9-2506, 2630 Broadway, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G) B T E X				
						←-----ppb----->				
B-4 (cont)	5/21/82	---	---	2.5	---	---	---	---	---	---
	5/26/82	9.21	12.14	---	---	---	---	---	---	---
	6/24/82	8.22	13.13	0.5	---	---	---	---	---	---
	9/9/93	6.09	15.26	0	8015/8020	88,000	3,200	16,000	2,000	9,500
	12/2/93	5.54	15.81	0	8015/8020	110,000	3,600	25,000	2,800	15,000
	3/17/94	6.00	15.35	0	8015/8020	60,000	1,400	16,000	1,800	8,900
	6/10/94	6.87	14.48	0	8015/8020	25,000	770	880	190	1,100
B-5/ 21.53 ¹	3/18/82	5.13	16.40	0	---	---	---	---	---	---
	3/25/82	5.27	16.26	0	---	---	---	---	---	---
	5/21/82	4.40	17.13	0	---	---	---	---	---	
	5/26/82	7.55	13.98	0	---	---	---	---	---	
	6/24/82	7.27	14.26	0	---	---	---	---	---	
	9/9/93	6.45	15.08	0	8015/8020	110,000	1,800	1,800	6,300	25,000
	12/2/93	5.13	16.40	0	8015/8020	81,000	4,400	3,800	6,700	28,000
	3/17/94	6.55	14.98	0	8015/8020	38,000	2,100	3,100	1,800	9,100
	6/10/94	7.34	14.19	0	8015/8020	110,000	5,100	7,000	5,400	27,000
	B-6/ 22.03 ¹	3/18/82	7.56	14.47	0	---	---	---	---	---
3/25/82		6.08	15.95	0	---	---	---	---	---	---
5/21/82		4.85	17.18	0	---	---	---	---	---	
5/26/82		8.31	13.72	0	---	---	---	---	---	
6/24/82		8.03	14.00	0	---	---	---	---	---	
9/9/93		8.12	13.91	0	8015/8020	6,800 ²	<0.5	<0.5	<0.5	<1.5
12/2/93		7.06	14.97	0	8015/8020	320	29	<0.5	<0.5	<0.5
3/17/94		7.57	14.46	0	8015/8020	570	130	6.2	4.7	14
6/10/94		8.21	13.82	0	8015/8020	1,500	100	81	51	240
B-7/ 19.54 ¹		3/18/82	4.08	15.46	0	---	---	---	---	---
	3/25/82	4.00	15.54	0	---	---	---	---	---	
	5/21/82	3.00	16.54	0	---	---	---	---	---	
	5/26/82	4.96	14.58	0	---	---	---	---	---	
	6/24/82	4.90	14.64	0	---	---	---	---	---	



Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #9-2506, 2630 Broadway, Oakland, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	Analytic Method	TPPH(G) B T E X				
						-----ppb----->				
B-7 (cont)	9/9/93	6.54	13.00	0	8015/8020	230	1.3	2.3	0.6	2.1
	12/2/93	6.20	13.34	0	8015/8020	190	4.7	<0.5	1.1	1.9
	3/17/94	5.19	14.35	0	8015/8020	320	15	3.3	1.0	3.0
	6/10/94	5.97	13.57	0	8015/8020	210	6.1	5.7	2.3	5.8
B-8/ 18.49 ¹	3/18/82	4.27	14.22	0	---	---	---	---	---	---
	3/25/82	4.06	14.43	0	---	---	---	---	---	---
	5/21/82	4.86	13.63	0	---	---	---	---	---	---
	5/26/82	4.96	13.53	0	---	---	---	---	---	---
	6/24/82	4.87	13.62	0	---	---	---	---	---	---
	9/9/93	5.20	13.29	0	8015/8020	<50	3.4	<0.5	<0.5	<1.5
	12/2/93	5.31	13.18	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	3/17/94	4.87	13.62	0	8015/8020	<50	1.7	0.5	<0.5	0.6
	6/10/94	5.63	12.86	0	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	TP-1/ ---	9/9/93	7.33	---	0	8015/8020	8,500	770	890	120
TP-2/ ---	9/9/93	6.18	---	0	8015/8020	13,000	2,400	3,200	380	1,900
Trip-Lab Blank										
TB-LB	9/9/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5
	12/2/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	3/17/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	6/10/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
Bailer Blank										
BB	9/9/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<1.5
	12/2/93	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	<0.5
	3/17/94	---	---	---	8015/8020	<50	<0.5	<0.5	<0.5	0.6



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Table 1. Water Level Data and Ground Water Analytic Results - Chevron Service Station #9-2506, 2630 Broadway, Oakland, California (continued)

EXPLANATION:

DTW = Depth to water
TOC = Top of casing elevation
GWE = Ground water elevation
msl = Measurements referenced relative to mean sea level
TPPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
ppb = Parts per billion
--- = Not analyzed/Not applicable

NOTES:

Water level data prior to September 9, 1993, compiled from IT Enviroscience Progress Report, prepared for Chevron, August 2, 1982.

- * Product thickness was measured on and after September 9, 1993, with an MMC flexi-dip interface probe.
- ¹ Top of casing elevations were compiled from IT Enviroscience Program Report, August 2, 1982. TOC for MW-1 was assumed to be 23 feet MSL.
- ² Laboratory indicates a non-typical gasoline pattern.

ANALYTIC METHODS:

8015 = EPA Method 8015/5030 for TPPH(G)
8020 = EPA Method 8020 for BTEX



SES STANDARD OPERATING PROCEDURE GROUND WATER SAMPLING

The following describes sampling procedures used by SES field personnel to collect and handle ground water samples. Before samples are collected, careful consideration is given to the type of analysis to be performed so that precautions are taken to prevent loss of volatile components or contamination of the sample, and to preserve the sample for subsequent analysis. Wells will be sampled no less than 24 hours after well development. Collection methods specific to ground water sampling are presented below.

Prior to sampling, each well is checked for the presence of free-phase hydrocarbons using an MMC flexi-dip interface probe. Product thickness (measured to the nearest 0.01 foot) is noted on the sampling form. Water level measurements are also made using either a water level meter or the interface probe. The water level measurements are also noted on the sampling form.

Prior to sampling, each well is purged of a minimum of three well casing volumes of water using a steam-cleaned PVC bailer, or a pre-cleaned pump. Temperature, pH and electrical conductivity are measured at least three times during purging. Purging is continued until these parameters have stabilized (i.e., changes in temperature, pH or conductivity do not exceed $\pm 0.5^\circ\text{F}$, 0.1 or 5%, respectively).

The purge water is taken to Chevron's Richmond Refinery for disposal.

Ground water samples are collected from the wells with Chevron designated disposable bailers. The water samples are decanted into the appropriate container for the analysis to be performed. Pre-preserved sample containers may be used or the analytic laboratory may add preservative to the sample upon arrival. Duplicate samples are collected from each well as a back-up sample and/or to provide quality control. The samples are labeled to include the project number, sample ID, date, preservative, and the field person's initials. The samples are placed in polyethylene bags and in an ice chest (maintained at 4°C) for transport under chain of custody to the laboratory.

The chain of custody form includes the project number, analysis requested, sample ID, date analysis and the SES field person's name. The form is signed and dated (with the transfer time) by each person who yields or receives the samples beginning with the field personnel and ending with the laboratory personnel.

A trip blank accompanies each sampling set, or 5% trip blanks are included for sets of greater than 20 samples. The trip blank is analyzed for some or all of the same compounds as the ground water samples.



WATER SAMPLING DATA

Job Name: 26th E Broadway, Oakland Lab Number: 1-364-04
 Well Number: B-1 Date: 6/16/94
 Sample Point Location/Description: on Broadway
 Depth to Water (static): 9.89 Well Depth (sounded): 29
 Initial height of water in casing: 20 Volume: 3.26 gallons
 Volume to be purged: 10 gallons
 Purged With: sub pump Sampled With: disposable bailer
 Pumped or Bailed Dry? Yes No Time: _____ After _____ gallons
 Water level at sampling: _____ Percent Recovery: _____

Sample: JG
 Well Diameter: 2"
 Well Depth (spec.): _____

Formulas/Conversions
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 V_{2"} casing = 0.163 gal/ft
 V_{3"} casing = 0.367 gal/ft
 V_{4"} casing = 0.653 gal/ft
 V_{4.5"} casing = 0.826 gal/ft
 V_{6"} casing = 1.47 gal/ft
 V_{8"} casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
3:53	3:55	3	3	7.31	24	770	
	3:58	4.5	7.5	7.33	24	750	
	4:00	2.5	10	7.33	24	700	

SAMPLES COLLECTED Time: 4:03 Total volume purged (gal.): 10
 Water color: clear Odor: none
 Description of sediments or material in sample: none
 Additional Comments: _____

Sample ID	# of Cont.	Container Type	Filtered (size. u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-1	3	1	-	HCL	Y	SPA	g/b TTX

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);
 5 = Other _____; 6 = Other _____



WATER SAMPLING DATA

Job Name: 26th E Broadway, Oakland Job Number: 1-364-04
 Well Number: B-2 Date: 6/16/94
 Sample Point Location/Description: W of B-3
 Depth to Water (static): 8.15 Well Depth (sounded): 17
 Initial height of water in casing: 9 Volume: 1.5 gallons
 Volume to be purged: 4.5 gallons
 Purged With: sub pump Sampled With: disposable bailer
 Pumped or Bailed Dry? Yes No Time: 3:51 After 3 gallons
 Water level at sampling: _____ Percent Recovery: _____

Sampler: JG
 Well Diameter: 2"
 Well Depth (spec.): _____

Formulas/Conversions
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 V_{2"} casing = 0.163 gal/ft
 V_{3"} casing = 0.367 gal/ft
 V_{4"} casing = 0.653 gal/ft
 V_{4.5"} casing = 0.826 gal/ft
 V_{6"} casing = 1.47 gal/ft
 V_{8"} casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
3:49	3:50	1.5	1.5	6.93	23	630	
	3:51	1.5	3	6.90	23	620	

SAMPLES COLLECTED Time: 4:26 Total volume purged (gal.): 3
 Water color: clear Odor: none
 Description of sediments or material in sample: none
 Additional Comments: _____

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-2	3	1	-	HCL	Y	SPA	g/b <u>TR</u>

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);
 5 = Other: _____; 6 = Other: _____



WATER SAMPLING DATA

Job Name 26th E Broadway, Oakland Job Number 1-364-04
 Well Number B-3 Date 6/16/94
 Sample Point Location/Description by BLDG
 Depth to Water (static) 7.23 Well Depth (sounded) 17
 Initial height of water in casing 10 Volume 1.63 gallons
 Volume to be purged 5 gallons
 Purged With sub pump Sampled With disposable bailer
 Pumped or Bailed Dry? Yes No Time 3:48 After 4 gallons
 Water level at sampling _____ Percent Recovery _____

Sample JG
 Well Diameter 2"
 Well Depth (spec.) _____

Formulas/Conversions
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 $V_{2"}$ casing = 0.163 gal/ft
 $V_{3"}$ casing = 0.367 gal/ft
 $V_{4"}$ casing = 0.653 gal/ft
 $V_{4.5"}$ casing = 0.826 gal/ft
 $V_{6"}$ casing = 1.47 gal/ft
 $V_{8"}$ casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
3:45	3:47	3	3	7.57	25	190	
	3:48	1	4	7.50	25	950	

SAMPLES COLLECTED Time 4:20 Total volume purged (gal.) 4
 Water color black Odor none
 Description of sediments or material in sample: some sediment
 Additional Comments: -

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-3	3	1	-	HCL	Y	SPA	g/b ttx

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);
 5 = Other _____; 6 = Other _____



WATER SAMPLING DATA

Job Name 26th E Broadway, Oakland Job Number 1-364-04
 Well Number B-4 Date 6/16/94
 Sample Point Location/Description By Pump
 Depth to Water (static) 6.87 Well Depth (sounded) 16
 Initial height of water in casing 10 Volume 1.63 gallons
 Volume to be purged 5 gallons
 Purged With sub pump Sampled With disposable bailer
 Pumped or Bailed Dry? Yes No Time 3:43 After 4.5 gallons
 Water level at sampling _____ Percent Recovery _____

Sampler JG
 Well Diameter 2"
 Well Depth (spec.) _____

Formulas/Conversions
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 V_{2"} casing = 0.163 gal/ft
 V_{3"} casing = 0.367 gal/ft
 V_{4"} casing = 0.653 gal/ft
 V_{4.5"} casing = 0.826 gal/ft
 V_{6"} casing = 1.47 gal/ft
 V_{8"} casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
3:40	3:42	3	3	6.82	25	880	
	3:43	1.5	4.5	6.80	25	970	

SAMPLES COLLECTED Time 4:15 Total volume purged (gal.) 4.5
 Water color clear Odor none
 Description of sediments or material in sample: none
 Additional Comments: _____

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-	3	1	-	HCL	Y	SPA	g/b ttx

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);
 5 = Other _____; 6 = Other _____



WATER SAMPLING DATA

Job Name: 26th E Broadway, Oakland Job Number: 1-364-04
 Well Number: B-5 Date: 6/16/94
 Sample Point Location/Description: N of B7
 Depth to Water (static): 7.34 Well Depth (sounded): 18
 Initial height of water in casing: 11 Volume: 1.8 gallons
 Volume to be purged: 5.4 gallons
 Purged With: sub pump Sampled With: disposable bailer
 Pumped or Bailed Dry? Yes No Time: 3:28 After 4.5 gallons
 Water level at sampling: _____ Percent Recovery: _____

Sample: JG
 Well Diameter: 2"
 Well Depth (spec.): _____

Formulas/Conversions
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 $V_{2"}$ casing = 0.163 gal/ft
 $V_{3"}$ casing = 0.367 gal/ft
 $V_{4"}$ casing = 0.653 gal/ft
 $V_{4.5"}$ casing = 0.826 gal/ft
 $V_{6"}$ casing = 1.47 gal/ft
 $V_{8"}$ casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
3:25	3:27	3	3	7.31	25	550	
	3:28	1.5	4.5	7.29	25	530	

SAMPLES COLLECTED Time: 4:06 Total volume purged (gal.): 4.5
 Water color: gray Odor: none
 Description of sediments or material in sample: none
 Additional Comments: _____

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Inil)	Analysis Requested
B-5	3	1	-	HCL	Y	SPA	g/b <u>TX</u>

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);
 5 = Other _____; 6 = Other _____



WATER SAMPLING DATA

Job Name: 26th E Broadway, Oakland Lab Number: 1-364-04 Sample: JG
 Well Number: B-6 Date: 6/16/94 Well Diameter: 2"
 Sample Point Location/Description: corner of Broadway & 27th Well Depth (spec.): _____
 Depth to Water (static): 8.21 Well Depth (sounded): 20
 Initial height of water in casing: _____ Volume: 2 gallons
 Volume to be purged: 6 gallons
 Purged With: sub pump Sampled With: disposable bailer
 Pumped or Bailed Dry? Yes No Time: 2:34 After 5 gallons
 Water level at sampling: _____ Percent Recovery: _____

Formulas/Conversions
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 $V_{2"}$ casing = 0.163 gal/ft
 $V_{3"}$ casing = 0.367 gal/ft
 $V_{4"}$ casing = 0.653 gal/ft
 $V_{4.5"}$ casing = 0.826 gal/ft
 $V_{6"}$ casing = 1.47 gal/ft
 $V_{8"}$ casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
2:31	2:33	3	3	7.01	25	750	
	2:34	1.5	4.5	6.87	25	730	

SAMPLES COLLECTED Time: 4:10 Total volume purged (gal.): 5
 Water color: clear Odor: none
 Description of sediments or material in sample: none
 Additional Comments: _____

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-6	3	1	-	HCL	Y	SPA	g/b TX

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);
 5 = Other _____; 6 = Other _____



WATER SAMPLING DATA

Job Name: 26th E Broadway, Oakland Job Number: 1-364-04
 Well Number: B-7 Date: 6/10/94
 Sample Point Location/Description: N of B-8
 Depth to Water (static): 5.97 Well Depth (sounded): 20
 Initial height of water in casing: 14 Volume: 2.5 gallons
 Volume to be purged: 7.5 gallons
 Purged With: sub pump Sampled With: disposable bailer
 Pumped or Bailed Dry? Yes No Time: _____ After _____ gallons
 Water level at sampling: _____ Percent Recovery: _____

Sampler: JG
 Well Diameter: 2"
 Well Depth (spec.): _____

Formulas/Conversions
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft^3
 $V_{2"} \text{ casing} = 0.163 \text{ gal/ft}$
 $V_{3"} \text{ casing} = 0.367 \text{ gal/ft}$
 $V_{4"} \text{ casing} = 0.653 \text{ gal/ft}$
 $V_{4.5"} \text{ casing} = 0.826 \text{ gal/ft}$
 $V_{6"} \text{ casing} = 1.47 \text{ gal/ft}$
 $V_{8"} \text{ casing} = 2.61 \text{ gal/ft}$

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
3:17	3:19	3	3	7.23	24	780	
	3:20	3	6	7.22	25	790	
	3:21	1.5	7.5	7.21	25	860	

SAMPLES COLLECTED Time: 3:23 Total volume purged (gal.): 7.5
 Water color: clear Odor: none
 Description of sediments or material in sample: none
 Additional Comments: _____

Sample ID	# of Cont.	Container Type	Filtered (size, u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-7	3	1	-	HCL	Y	SPA	g/b ttx

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);
 5 = Other _____; 6 = Other _____



WATER SAMPLING DATA

Job Name: 26th E Broadway, Oakland Job Number: 1-364-04
 Well Number: B-8 Date: 6/16/94
 Sample Point Location/Description: by Restaurant
 Depth to Water (static): 5.63 Well Depth (sounded): 18
 Initial height of water in casing: 13 Volume: 2.2 gallons
 Volume to be purged: 6.6 gallons
 Purged With: sub pump Sampled With: disposable bailer
 Pumped or Bailed Dry? Yes No Time: After: gallons
 Water level at sampling: Percent Recovery:

Operator: JG
 Well Diameter: 2"
 Well Depth (spec.):

Formulas/Conversions
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 V_{2"} casing = 0.163 gal/ft
 V_{3"} casing = 0.367 gal/ft
 V_{4"} casing = 0.653 gal/ft
 V_{4.5"} casing = 0.826 gal/ft
 V_{6"} casing = 1.47 gal/ft
 V_{8"} casing = 2.61 gal/ft

CHEMICAL DATA

Purge Time		Purge Volume (gal.)	Cumulative (gal.)	pH	Temp (°C)	Specific Conductance	
Start	Stop					Measurement	x umhos/cm
3:02	3:04	3	3	7.01	25	770	
	3:06	3	6				
	3:07	1	7				

SAMPLES COLLECTED Time: 3:10 Total volume purged (gal.): 7
 Water color: muddy Odor: none
 Description of sediments or material in sample: some sediment
 Additional Comments:

Sample ID	# of Cont.	Container Type	Filtered (size. u)	Preservative (type)	Refrig. (Y/N)	Lab (Init)	Analysis Requested
B-8	3	1	-	HCL	Y	SPA	g/b test

Container Type Codes: 1 = 40 ml clear VOA/Teflon septa; 2 = Brown glass/teflon lined cap (specify size);
 3 = Clear glass/teflon lined cap (specify size); 4 = Polyethylene/polyethylene cap (specify size);
 5 = Other: ; 6 = Other:



Superior Precision Analytical, Inc.

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Sierra Environmental
Attn: ED MORALES

Project 1-364-04
Reported 06/22/94

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
30578- 1	TB-LB	06/10/94	06/16/94 Water
30578- 2	B-1	06/10/94	06/16/94 Water
30578- 3	B-2	06/10/94	06/16/94 Water
30578- 4	B-3	06/10/94	06/16/94 Water
30578- 5	B-4	06/10/94	06/20/94 Water
30578- 6	B-5	06/10/94	06/18/94 Water
30578- 7	B-6	06/10/94	06/16/94 Water
30578- 8	B-7	06/10/94	06/16/94 Water
30578- 9	B-8	06/10/94	06/16/94 Water

RESULTS OF ANALYSIS

Laboratory Number: 30578- 1 30578- 2 30578- 3 30578- 4 30578- 5

	B1	B2	B3	B4	
Gasoline:	ND<50	1400	1200	2300	25000
Benzene:	ND<0.5	270	37	110	770
Toluene:	ND<0.5	24	48	95	880
Ethyl Benzene:	ND<0.5	18	20	84	190
Total Xylenes:	ND<0.5	78	93	240	1100
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number: 30578- 6 30578- 7 30578- 8 30578- 9

	B5	B6	B7	B8
Gasoline:	110000	1500	210	ND<50
Benzene:	5100	100	6.1	ND<0.5
Toluene:	7000	81	5.7	ND<0.5
Ethyl Benzene:	5400	51	2.3	ND<0.5
Total Xylenes:	27000	240	5.8	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

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2
QA/QC INFORMATION
SET: 30578

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

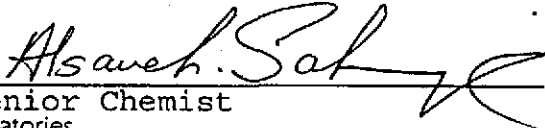
OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

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:	120/114	5%	70-130
Benzene:	113/121	7%	70-130
Toluene:	105/113	7%	70-130
Ethyl Benzene:	99/101	2%	70-130
Total Xylenes:	113/117	3%	70-130


Senior Chemist
Certified Laboratories