PACIFIC
ENVIRONMENTAL
GROUP INC.

R0415

May 5, 1995
Project 305-131.2C

Mr. Dan Kirk
Shell Oil Company
P.O. Box 4023
Concord, California 94524

Re: Quarterly Report - First Quarter 1995
Shell Service Station
4411 Foothill Boulevard at High Street
Oakland, California
WIC No 204-5508-3400

Dear Mr. Kirk:

The following presents the results of the first quarter 1995 monitoring program for the site referenced above. This letter has been prepared for Shell Oil Company (Shell) by Pacific Environmental Group, Inc. (PACIFIC).

FINDINGS

Groundwater monitoring wells were gauged and sampled by Blaine Tech Services, Inc. (Blaine) at the direction of PACIFIC on March 30, 1995. Groundwater elevation contours for the sampling date are shown on Figure 1 and include data for the Chevron U.S.A. Products Company station and the BP Oil station. Table 1 presents groundwater elevation data for the Shell service station.

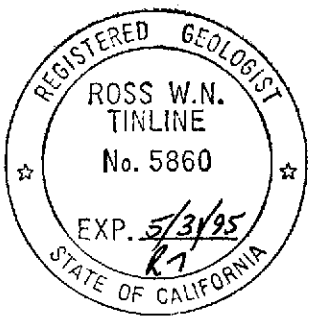
Groundwater analytical data are presented in Table 2. Total petroleum hydrocarbons calculated as gasoline (TPH-g), benzene, and TPH calculated as diesel (TPH-d) concentrations for the March 1995 sampling event are shown on Figure 2. The laboratory, National Environmental Testing, Inc. (NET) noted that Wells S-1 and S-2 were analyzed within hold time, but further dilutions were required and subsequent analyses were performed out of hold time. NET suggests these results to be minimum concentrations. NET also noted the diesel concentration reported in Well S-1 appears to be a lighter

hydrocarbon than diesel. Blaine's groundwater sampling report, which includes field data and the certified analytical report, is presented as Attachment A.

If you have any questions regarding the contents of this letter, please call.

Sincerely,

Pacific Environmental Group, Inc.



Ross W.N. Tinline
Project Geologist
RG 5860

Attachments:
- Table 1 - Groundwater Elevation Data
- Table 2 - Groundwater Analytical Data - Total Petroleum Hydrocarbons (TPH as Gasoline, BTEX Compounds, TPH as Diesel, and TPH as Motor Oil)
- Figure 1 - Groundwater Elevation Contour Map
- Figure 2 - TPH-g/Benzene/TPH-d Concentration Map
- Attachment A - Groundwater Sampling Report

cc: Mr. Barney Chan, Alameda County Department of Environmental Health
Mr. Richard Hiett, Regional Water Quality Control Board - S.F. Bay Region

Table 1
Groundwater Elevation Data

Shell Service Station
4411 Foothill Boulevard at High Street
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)
S-1	12/18/92	NM	9.06	NA
	05/26/93	38.31	NM	NA
	05/28/93		12.13	26.18
	06/03/93		8.89	29.42
	06/08/93		8.80	29.51
	09/21/93		10.40	27.91
	12/14/93		9.66	28.65
	03/17/94		8.20	30.11
	06/16/94		9.41	28.90
	09/22/94		11.13	27.18
	12/15/94		7.15	31.16
	03/30/95		6.09	32.22
S-2	05/28/93	38.79	9.51	29.28
	06/03/93		9.51	29.28
	06/08/93		9.57	29.22
	09/21/93		10.54	28.25
	12/14/93		9.76	29.03
	03/17/94		9.92	28.87
	06/16/94		10.11	28.68
	09/22/94		10.51	28.28
	12/15/94		9.12	29.67
	03/30/95		7.86	30.93
S-3	05/28/93	37.33	8.45	28.88
	06/03/93		8.36	28.97
	06/08/93		8.41	28.92
	09/21/93		10.08	27.25
	12/94/93		8.80	28.53
	03/17/94		8.34	28.99
	06/16/94		9.12	28.21
	09/22/94		10.27	27.06
	12/15/94		7.81	29.52
	03/30/95		7.06	30.27

MSL = Mean sea level
TOB = Top of box
NM = Not measured
NA = Not available

Table 2

Groundwater Analytical Data

Total Petroleum Hydrocarbons

(TPH as Gasoline, BTEX Compounds, TPH as Diesel, and TPH as Motor Oil)

Shell Service Station

4411 Foothill Boulevard at High Street

Oakland, California

Well Number	Date Sampled		TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	TPH as Diesel (ppb)		TPH as Motor Oil (ppb)
S-1	12/18/92	a	41,000	3,100	1,100	1,200	8,700	NA		9,400
	05/26/93		39,000	1,300	4,700	1,500	7,800	6,000		370
	09/21/93		34,000	480	5,000	3,800	18,000	5,900		ND
	12/14/93		25,000	1,100	5,000	2,200	11,000	13,000		ND
	03/17/94		57,000	1,300	5,400	2,100	11,000	1,600		2,300
	06/16/94		57,000	1,600	6,000	2,000	13,000	3,000		210
	09/22/94		39,000	1,300	2,100	1,500	7,100	ND		ND
	12/15/94		30,000	1,100	4,700	1,600	10,000	3,100	b	ND
	03/30/95	e	30,000	1,400	4,000	1,500	11,000	3,100	b	ND
S-2	06/29/93		1,300	290	35	38	130	NA		NA
	09/21/93		3,300	870	24	190	120	NA		NA
	12/14/93		1,300	400	16	36	27	NA		NA
	03/17/94		4,500	610	27	92	110	NA		NA
	03/17/94(D)		4,000	610	26	93	120	NA		NA
	06/16/94		2,800	690	45	97	140	NA		NA
	09/22/94		4,000	630	94	64	230	NA		NA
	12/15/94		1,600	450	300	67	130	NA		NA
	03/30/95	e	8,200	2,800	190	240	700	NA		NA
S-3	06/29/93		29,000	1,500	1,800	950	6,200	NA		NA
	09/21/93		15,000	900	2,200	2,600	11,000	NA		NA
	12/14/93		20,000	1,100	2,400	1,800	8,500	NA		NA
	03/17/94		14,000	580	190	750	1,700	NA		NA
	06/16/94		20,000	700	690	1,400	4,100	NA		NA
	06/16/94(D)		19,000	680	560	1,300	3,700	NA		NA
	09/22/94		24,000	630	1,100	1,400	5,700	NA		NA
	09/22/94(D)		25,000	720	1,100	1,500	6,100	NA		NA
	12/15/94		18,000	520	800	1,100	4,200	NA		NA
	12/15/94(D)		23,000	1,000	1,900	2,000	8,600	NA		NA
	03/30/95	e	8,800	360	730	700	3,700	NA		NA
	03/30/95(D)	e	7,600	330	570	600	2,600	NA		NA

ppb = Parts per billion

NA = Not analyzed

ND = Not detected

(D) = Duplicate sample

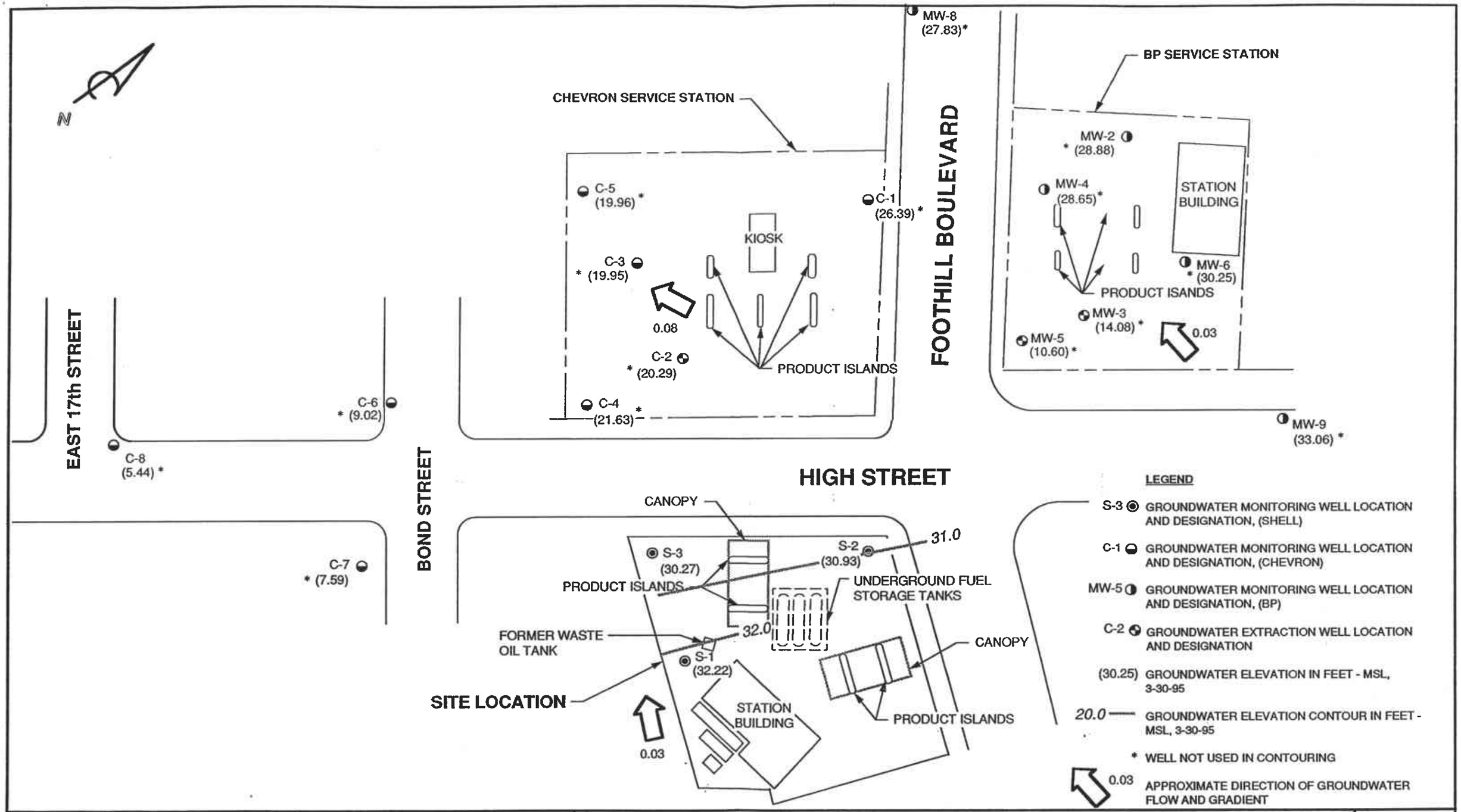
a. Phenolic and napthalene compounds detected in Sample S-1 by semi-volatile organics (EPA Method 8270).

b. Laboratory noted that concentrations appears to be a lighter hydrocarbon than diesel.

c. Laboratory noted concentration due to a lighter petroleum product of hydrocarbon range C6 to C12.

d. Laboratory noted concentration due to hydrocarbon range C6 - C12.

e. National Environmental Testing, Inc., analyzed within hold time but further dilutions were required and analyzed out of hold time. NET suggests that these should be considered minimum concentrations.



PACIFIC ENVIRONMENTAL GROUP, INC.

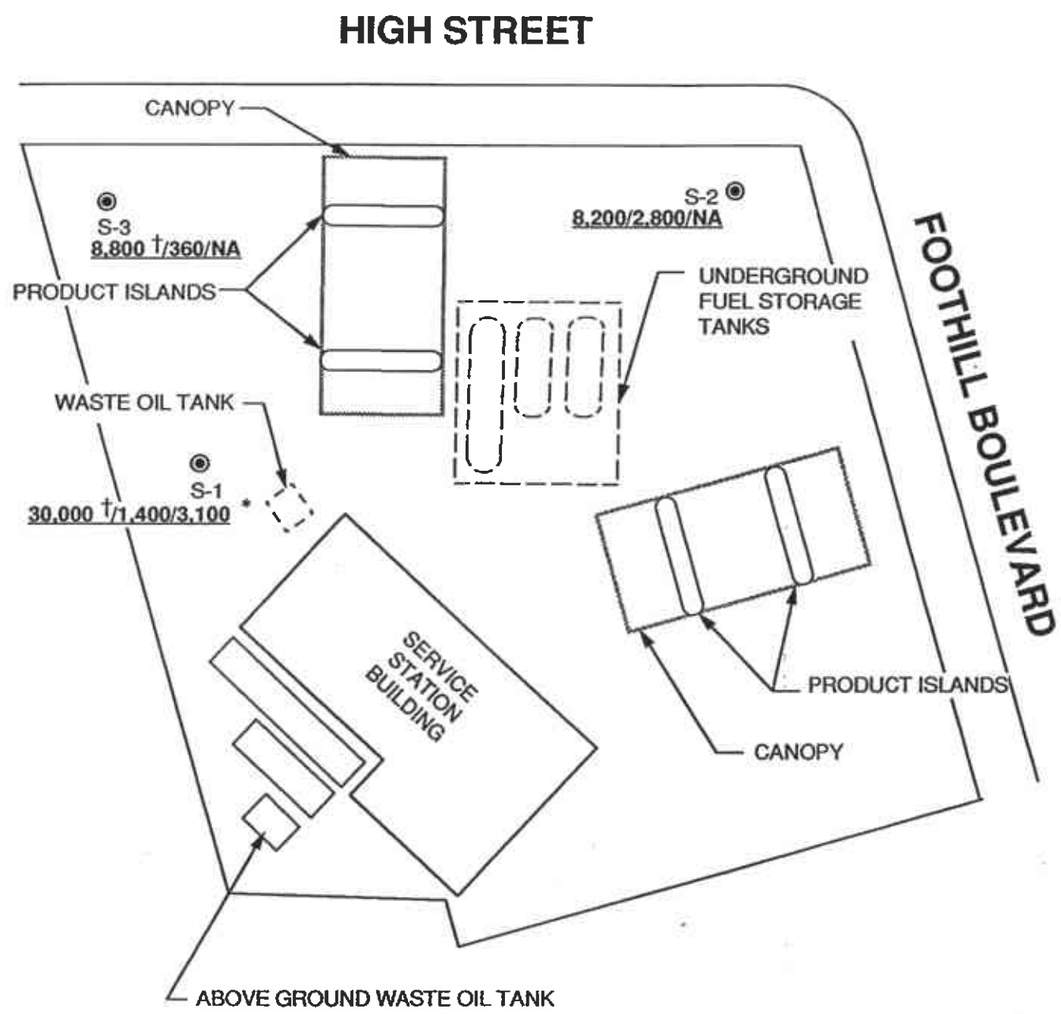
SCALE
0 50 100 FEET

SHELL SERVICE STATION
4411 Foothill Boulevard at High Street
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE: 1
PROJECT: 305-131.2C

N



LEGEND

S2 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

8,200/2,800/NA TPH-g/BENZENE/TPH-d CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION, 3-30-95

NA NOT ANALYZED

* LABORATORY REPORTED CONCENTRATION TO BE A LIGHTER HYDROCARBON THAN DIESEL

† LABORATORY NOTED THAT SAMPLE WAS ANALYZED OUT OF HOLD TIME. FURTHER DILUTION WAS REQUIRED AND ANALYZED OUT OF HOLD TIME.

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE
0 30 60 FEET

SHELL SERVICE STATION
4411 Foothill Boulevard At High Street
Oakland, California

TPH-g/BENZENE/TPH-d CONCENTRATION MAP

FIGURE: 2
PROJECT: 305-131.2C

ATTACHMENT A

GROUNDWATER SAMPLING REPORT

BLAINE
TECH SERVICES INC.

985 TIMOTHY DRIVE
SAN JOSE, CA 9513
(408) 995-553
FAX (408) 293-877

April 20, 1995

Shell Oil Company
P.O. Box 4023
Concord, CA 94524

Attn: Daniel T. Kirk

SITE:
Shell WIC #204-5508-3400
4411 Foothill Blvd.
Oakland, California

QUARTER:
1st quarter of 1995

QUARTERLY GROUNDWATER SAMPLING REPORT 950330-J-2

This report contains data collected during routine inspection, gauging and sampling of groundwater monitoring wells performed by Blaine Tech Services, Inc. in response to the request of the consultant who is overseeing work at this site on behalf of our mutual client, Shell Oil Company. Data collected in the course of our field work is presented in a TABLE OF WELL GAUGING DATA. The field information was collected during our preliminary gauging and inspection of the wells, the subsequent evacuation of each well prior to sampling, and at the time of sampling.

Measurements taken include the total depth of the well and the depth to water. The surface of water was further inspected for the presence of immiscibles which may be present as a thin film (a sheen on the surface of the water) or as a measurable free product zone (FPZ). At intervals during the evacuation phase, the purge water was monitored with instruments that measure electrical conductivity (EC), potential hydrogen (pH), temperature (degrees Fahrenheit), and turbidity (NTU). In the interest of simplicity, fundamental information is tabulated here, while the bulk of the information is turned over directly to the consultant who is making professional interpretations and evaluations of the conditions at the site.

STANDARD PROCEDURES

Evacuation

Groundwater wells are thoroughly purged before sampling to insure that the sample is collected from water that has been newly drawn into the well from the surrounding geologic formation. The selection of equipment to evacuate each well is based on the physical characteristics of the well and what is known about the performance of the formation in which the well has been installed. There are several suitable devices which can be used for evacuation. The most commonly employed devices are air or gas actuated pumps, electric submersible pumps, and hand or mechanically actuated bailers. Our personnel frequently employ USGS/Middleburg positive displacement pumps or similar air actuated pumps which do not agitate the water standing in the well.

Normal evacuation removes three case volumes of water from the well. More than three case volumes of water are removed in cases where more evacuation is needed to achieve stabilization of water parameters and when requested by the local implementing agency. Less water may be removed in cases where the well dewaters and does not recharge to 80% of its original volume within two hours and any additional time our personnel have reason to remain at the site. In such cases, our personnel return to the site within twenty four hours and collect sample material from the water which has recharged into the well case.

Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site. Effluent water from purging and on-site equipment cleaning is collected and transported to Shell's Martinez Manufacturing Complex in Martinez, California.

Free Product Skimmer

The column headed, VOLUME OF IMMISCIBLES REMOVED (ml) is included in the TABLE OF WELL GAUGING DATA to cover situations where a free product skimming device must be removed from the well prior to gauging. Skimmers are installed in wells with a free product zone on the surface of the water. The skimmer is a free product recovery device which often prevents normal well gauging and free product zone measurements. The 2.0" and 3.0" PetroTraps fall into the category of devices that obstruct normal gauging. In cases where the consultant elects to have our personnel pull the skimmers out of the well and gauge the well, our personnel perform the additional task of draining the accumulated free product out of the PetroTrap before putting it back in the well. This

recovered free product is measured and logged in the VOLUME OF IMMISCIBLES REMOVED column. Gauging at such sites is performed in accordance with specific directions from the professional consulting firm overseeing work at the site on Shell's behalf.

Sample Containers

Sample material is collected in specially prepared containers which are provided by the laboratory that performs the analyses.

Sampling

Sample material is collected in stainless steel bailer type devices normally fitted with both a top and a bottom check valve. Water is promptly decanted into new sample containers in a manner which reduces the loss of volatile constituents and follows the applicable EPA standard for handling volatile organic and semi-volatile compounds.

Following collection, samples are promptly placed in an ice chest containing prefrozen blocks of an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

Sample Designations

All sample containers are identified with a site designation and a discrete sample identification number specific to that particular groundwater well. Additional standard notations (e.g. time, date, sampler) are also made on the label.

Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under a standard Shell Oil Company chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of the person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to National Environmental Testing, Inc. in Santa Rosa, California. NET is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #178.

Objective Information Collection

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. performs no consulting and does not become involved in the marketing or installation of remedial systems of any kind. Blaine Tech Services, Inc. is concerned only with the generation of objective information, not with the use of that information to support evaluations and recommendations concerning the environmental condition of the site. Even the straightforward interpretation of objective analytical data is better performed by interested regulatory agencies, and those engineers and geologists who are engaged in the work of providing professional opinions about the site and proposals to perform additional investigation or design remedial systems.

Reportage

Submission of this report and the attached laboratory report to interested regulatory agencies is handled by the consultant in charge of the project. Any professional evaluations or recommendations will be made by the consultant under separate cover.

Please call if we can be of any further assistance.

James Blaine Jr.

Richard C. Blaine

RCB/lp

attachments: table of well gauging data
chain of custody
certified analytical report

cc: Pacific Environmental Group, Inc.
2025 Gateway Place, Suite #440
San Jose, CA 95110
ATTN: Rhonda Barrick

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S-1	3/30/95	TOB	--	NONE	--	--	6.09	24.69
S-2	3/30/95	TOB	--	NONE	--	--	7.86	22.41
S-3 *	3/30/95	TOB	--	NONE	--	--	7.06	20.52

* Sample DUP was a duplicate sample taken from well S-3.

#6256

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 950336J2

Date: 3/30/95
Page 1 of 1

Site Address: 4411 Foothill Blvd., Oakland

WIC#: 204-5508-3400

Shell Engineer: Dan Kirk — Phone No.: (510) 675-6168 Fax #: 675-6160

Consultant Name & Address: Blaine Tech Services, Inc. 985 Timothy Drive San Jose, CA 95133

Consultant Contact: Jim Keller — Phone No.: (408) 995-5535 Fax #: 293-8773

Comments:

Sampled by:

Printed Name: JEAN GATINEAU

LAB. NET

CHECK ONE (1) BOX ONLY	C1/01
Quarterly Monitoring	X 6441
Site Investigation	6441
Soil Closure/Disposal	6442
Water Closure/Disposal	6443
Soil/Air Rem. or Sys. O & M	6462
Water Rem. or Sys. O & M	6463
Other	

TURN AROUND TIME: 24 hours ☐ 48 hours ☐ 15 days X (Normal) Other ☐

NOTE: Notify Lab as soon as Possible for 24/48 hr. TAT.

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	MOTOR OIL		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-2	3/30			X		3						X								
E/B.												X								
S-3												X								
DUP						↓						X								
S-1						5		X				X	X							
T/B.	↓			↓		2						X							3/31/95	
																			Seal Intact. 4/1/95 BJ	

Relinquished By (Signature):	Printed Name: JEAN GATINEAU	Date: 3/31 Time: 7:15	Received (Signature):	Printed Name: G P LUMBRE	Date: 3/31 Time: 7:15
Relinquished By (Signature):	Printed Name: G P LUMBRE	Date: 3/31 Time: 16:00	Received (Signature):	Printed Name:	Date: Time:
Relinquished By (Signature):	Printed Name:	Date: Time:	Received (Signature):	Printed Name: PHIL PROSSER	Date: 4/1/95 Time: 0900

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

NET NATIONAL ENVIRONMENTAL TESTING, INC.®

Santa Rosa Division
3636 North Laughlin Road
Suite 110
Santa Rosa, CA 95403-8226
Tel: (707) 526-7200
Fax: (707) 541-2333

Jim Keller
Blaine Tech Services
985 Timothy Dr.
San Jose, CA 95133

Date: 04/20/1995
NET Client Acct. No: 1821
NET Pacific Job No: 95.01424
Received: 04/01/1995

Client Reference Information

Shell 4411 Foothill Blvd., Oakland, CA./950330J2

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Thomas F. Cullen, Jr.
Division Manager

Linda DeMartino
Project Coordinator

Enclosure(s)

Ref: Shell 4411 Foothill Blvd., Oakland, CA./950330J2

SAMPLE DESCRIPTION: S-2
Date Taken: 03/30/1995
Time Taken:
NET Sample No: 239495

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)	*							
METHOD 5030/M8015	--						04/12/1995	2751
DILUTION FACTOR*	20						04/12/1995	2751
as Gasoline	8,200		1,000	ug/L	5030		04/12/1995	2751
Carbon Range:	C5-C14						04/12/1995	2751
METHOD 8020 (GC,Liquid)	--						04/12/1995	2751
Benzene	2,800	FF	10	ug/L	8020		04/14/1995	2756
Toluene	190		10	ug/L	8020		04/12/1995	2751
Ethylbenzene	240		10	ug/L	8020		04/12/1995	2751
Xylenes (Total)	700		10	ug/L	8020		04/12/1995	2751
SURROGATE RESULTS	--						04/12/1995	2751
Bromofluorobenzene (SURR)	86			% Rec.	5030		04/12/1995	2751

* : Sample was originally analyzed within the method specified holding time.
Further dilutions were required and analyzed after the holding time had expired.
This data should be considered a minimum concentration.

FF : Compound quantitated at a 100X dilution factor.

Ref: Shell 4411 Foothill Blvd., Oakland, CA./950330J2

SAMPLE DESCRIPTION: E.B.
Date Taken: 03/30/1995
Time Taken:
NET Sample No: 239496

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						04/11/1995	2754
DILUTION FACTOR*	1						04/11/1995	2754
as Gasoline	ND		50	ug/L	5030		04/11/1995	2754
Carbon Range:	--						04/11/1995	2754
METHOD 8020 (GC,Liquid)	--						04/11/1995	2754
Benzene	ND		0.5	ug/L	8020		04/11/1995	2754
Toluene	ND		0.5	ug/L	8020		04/11/1995	2754
Ethylbenzene	ND		0.5	ug/L	8020		04/11/1995	2754
Xylenes (Total)	ND		0.5	ug/L	8020		04/11/1995	2754
SURROGATE RESULTS	--						04/11/1995	2754
Bromofluorobenzene (SURR)	77			% Rec.	5030		04/11/1995	2754

Ref: Shell 4411 Foothill Blvd., Oakland, CA./950330J2

SAMPLE DESCRIPTION: S-3
Date Taken: 03/30/1995
Time Taken:
NET Sample No: 239497

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						04/12/1995	2751
DILUTION FACTOR*	20						04/12/1995	2751
as Gasoline	8,800		1,000	ug/L	5030		04/12/1995	2751
Carbon Range:	C5-C12						04/12/1995	2751
METHOD 8020 (GC,Liquid)	--						04/12/1995	2751
Benzene	360		10	ug/L	8020		04/12/1995	2751
Toluene	730		10	ug/L	8020		04/12/1995	2751
Ethylbenzene	700		10	ug/L	8020		04/12/1995	2751
Xylenes (Total)	3,700	FE	10	ug/L	8020		04/13/1995	2757
SURROGATE RESULTS	--						04/12/1995	2751
Bromofluorobenzene (SURR)	97			% Rec.	5030		04/12/1995	2751

FE : Compound quantitated at a 50X dilution factor.

Ref: Shell 4411 Foothill Blvd., Oakland, CA./950330J2

SAMPLE DESCRIPTION: DUP
Date Taken: 03/30/1995
Time Taken:
NET Sample No: 239498

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						04/12/1995	2751
DILUTION FACTOR*	20						04/12/1995	2751
as Gasoline	7,600		1,000	ug/L	5030		04/12/1995	2751
Carbon Range:	C5-C12						04/12/1995	2751
METHOD 8020 (GC,Liquid)	--						04/12/1995	2751
Benzene	330		10	ug/L	8020		04/12/1995	2751
Toluene	570		10	ug/L	8020		04/12/1995	2751
Ethylbenzene	600		10	ug/L	8020		04/12/1995	2751
Xylenes (Total)	2,600		10	ug/L	8020		04/12/1995	2751
SURROGATE RESULTS	--						04/12/1995	2751
Bromofluorobenzene (SURR)	96			% Rec.	5030		04/12/1995	2751

Ref: Shell 4411 Foothill Blvd., Oakland, CA./950330J2

SAMPLE DESCRIPTION: S-1
Date Taken: 03/30/1995
Time Taken:
NET Sample No: 239499

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)	*							
METHOD 5030/M8015	--						04/14/1995	2751
DILUTION FACTOR*	100						04/14/1995	2751
as Gasoline	30,000		5,000	ug/L	5030		04/14/1995	2751
Carbon Range:	C5-C12						04/14/1995	2751
METHOD 8020 (GC,Liquid)	--						04/14/1995	2751
Benzene	1,400		50	ug/L	8020		04/14/1995	2751
Toluene	4,000	FH	50	ug/L	8020		04/17/1995	2760
Ethylbenzene	1,500	FH	50	ug/L	8020		04/17/1995	2760
Xylenes (Total)	11,000		50	ug/L	8020		04/14/1995	2756
SURROGATE RESULTS	--						04/14/1995	2751
Bromofluorobenzene (SURR)	95			% Rec.	5030		04/14/1995	2751
METHOD M8015 (EXT., Liquid)						04/04/1995		
DILUTION FACTOR*	1						04/05/1995	962
as Diesel	3,100	DL	50	ug/L	3510		04/05/1995	962
as Motor Oil	ND		500	ug/L	3510		04/05/1995	962
Carbon Range:	<C10-C26						04/05/1995	962

* : Sample was originally analyzed within the method specified holding time.
Further dilutions were required and analyzed after the holding time had expired.
This data should be considered a minimum concentration.

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
FH : Compound quantitated at a 500X dilution factor.

Ref: Shell 4411 Foothill Blvd., Oakland, CA./950330J2

SAMPLE DESCRIPTION: T.B.
Date Taken: 03/30/1995
Time Taken:
NET Sample No: 239500

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						04/11/1995	2755
DILUTION FACTOR*	1						04/11/1995	2755
as Gasoline	ND		50	ug/L	5030		04/11/1995	2755
Carbon Range:	--						04/11/1995	2755
METHOD 8020 (GC,Liquid)	--						04/11/1995	2755
Benzene	ND		0.5	ug/L	8020		04/11/1995	2755
Toluene	ND		0.5	ug/L	8020		04/11/1995	2755
Ethylbenzene	ND		0.5	ug/L	8020		04/11/1995	2755
Xylenes (Total)	ND		0.5	ug/L	8020		04/11/1995	2755
SURROGATE RESULTS	--						04/11/1995	2755
Bromofluorobenzene (SURR)	79			% Rec.	5030		04/11/1995	2755

Ref: Shell 4411 Foothill Blvd., Oakland, CA./950330J2

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Liquid)							
as Gasoline	98.0	0.98	1.00	mg/L	04/12/1995	aal	2751
Benzene	103.2	5.16	5.00	ug/L	04/12/1995	aal	2751
Toluene	95.4	4.77	5.00	ug/L	04/12/1995	aal	2751
Ethylbenzene	92.4	4.62	5.00	ug/L	04/12/1995	aal	2751
Xylenes (Total)	106.0	15.9	15.0	ug/L	04/12/1995	aal	2751
Bromofluorobenzene (SURR)	95.0	95	100	% Rec.	04/12/1995	aal	2751
TPH (Gas/BTXE,Liquid)							
as Gasoline	99.0	0.99	1.00	mg/L	04/11/1995	pbg	2754
Benzene	100.6	5.03	5.00	ug/L	04/11/1995	pbg	2754
Toluene	94.0	4.70	5.00	ug/L	04/11/1995	pbg	2754
Ethylbenzene	90.4	4.52	5.00	ug/L	04/11/1995	pbg	2754
Xylenes (Total)	107.1	16.07	15.0	ug/L	04/11/1995	pbg	2754
Bromofluorobenzene (SURR)	91.0	91	100	% Rec.	04/11/1995	pbg	2754
TPH (Gas/BTXE,Liquid)							
as Gasoline	99.0	0.99	1.00	mg/L	04/11/1995	pbg	2755
Benzene	100.6	5.03	5.00	ug/L	04/11/1995	pbg	2755
Toluene	94.0	4.70	5.00	ug/L	04/11/1995	pbg	2755
Ethylbenzene	90.4	4.52	5.00	ug/L	04/11/1995	pbg	2755
Xylenes (Total)	107.1	16.07	15.0	ug/L	04/11/1995	pbg	2755
Bromofluorobenzene (SURR)	90.8	90.8	100	% Rec.	04/11/1995	pbg	2755
TPH (Gas/BTXE,Liquid)							
as Gasoline	108.0	1.08	1.00	mg/L	04/14/1995	caf	2756
Benzene	102.6	5.13	5.00	ug/L	04/14/1995	caf	2756
Toluene	90.0	4.50	5.00	ug/L	04/14/1995	caf	2756
Ethylbenzene	95.6	4.78	5.00	ug/L	04/14/1995	caf	2756
Xylenes (Total)	109.2	16.38	15.0	ug/L	04/14/1995	caf	2756
Bromofluorobenzene (SURR)	92.0	92.0	100	% Rec.	04/14/1995	caf	2756
TPH (Gas/BTXE,Liquid)							
as Gasoline	112.0	0.56	0.50	mg/L	04/13/1995	caf	2757
Benzene	96.6	4.83	5.00	ug/L	04/13/1995	caf	2757
Toluene	95.6	4.78	5.00	ug/L	04/13/1995	caf	2757
Ethylbenzene	91.4	4.57	5.00	ug/L	04/13/1995	caf	2757
Xylenes (Total)	106.5	15.97	15.0	ug/L	04/13/1995	caf	2757
Bromofluorobenzene (SURR)	110.0	110	100	% Rec.	04/13/1995	caf	2757
TPH (Gas/BTXE,Liquid)							
as Gasoline	114.0	0.57	0.50	mg/L	04/17/1995	pbg	2760
Benzene	99.8	4.99	5.00	ug/L	04/17/1995	pbg	2760
Toluene	102.0	5.10	5.00	ug/L	04/17/1995	pbg	2760
Ethylbenzene	90.8	4.54	5.00	ug/L	04/17/1995	pbg	2760
Xylenes (Total)	110.3	16.54	15.0	ug/L	04/17/1995	pbg	2760
Bromofluorobenzene (SURR)	99.0	99	100	% Rec.	04/17/1995	pbg	2760
METHOD M8015 (EXT., Liquid)							
as Diesel	110.1	1101	1000	mg/L	04/05/1995	tts	962
as Motor Oil	111.0	1110	1000	mg/L	04/05/1995	tts	962

Ref: Shell 4411 Foothill Blvd., Oakland, CA./950330J2

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	04/12/1995	aal	2751
Benzene	ND	0.5	ug/L	04/12/1995	aal	2751
Toluene	ND	0.5	ug/L	04/12/1995	aal	2751
Ethylbenzene	ND	0.5	ug/L	04/12/1995	aal	2751
Xylenes (Total)	ND	0.5	ug/L	04/12/1995	aal	2751
Bromofluorobenzene (SURR)	78		% Rec.	04/12/1995	aal	2751
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	04/11/1995	pbg	2754
Benzene	ND	0.5	ug/L	04/11/1995	pbg	2754
Toluene	ND	0.5	ug/L	04/11/1995	pbg	2754
Ethylbenzene	ND	0.5	ug/L	04/11/1995	pbg	2754
Xylenes (Total)	ND	0.5	ug/L	04/11/1995	pbg	2754
Bromofluorobenzene (SURR)	76		% Rec.	04/11/1995	pbg	2754
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	04/11/1995	pbg	2755
Benzene	ND	0.5	ug/L	04/11/1995	pbg	2755
Toluene	ND	0.5	ug/L	04/11/1995	pbg	2755
Ethylbenzene	ND	0.5	ug/L	04/11/1995	pbg	2755
Xylenes (Total)	ND	0.5	ug/L	04/11/1995	pbg	2755
Bromofluorobenzene (SURR)	76		% Rec.	04/11/1995	pbg	2755
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	04/14/1995	caf	2756
Benzene	ND	0.5	ug/L	04/14/1995	caf	2756
Toluene	ND	0.5	ug/L	04/14/1995	caf	2756
Ethylbenzene	ND	0.5	ug/L	04/14/1995	caf	2756
Xylenes (Total)	ND	0.5	ug/L	04/14/1995	caf	2756
Bromofluorobenzene (SURR)	79		% Rec.	04/14/1995	caf	2756
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	04/13/1995	caf	2757
Benzene	ND	0.5	ug/L	04/13/1995	caf	2757
Toluene	ND	0.5	ug/L	04/13/1995	caf	2757
Ethylbenzene	ND	0.5	ug/L	04/13/1995	caf	2757
Xylenes (Total)	ND	0.5	ug/L	04/13/1995	caf	2757
Bromofluorobenzene (SURR)	77		% Rec.	04/13/1995	caf	2757
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	04/17/1995	pbg	2760
Benzene	ND	0.5	ug/L	04/17/1995	pbg	2760
Toluene	ND	0.5	ug/L	04/17/1995	pbg	2760
Ethylbenzene	ND	0.5	ug/L	04/17/1995	pbg	2760
Xylenes (Total)	ND	0.5	ug/L	04/17/1995	pbg	2760
Bromofluorobenzene (SURR)	85		% Rec.	04/17/1995	pbg	2760
METHOD M8015 (EXT., Liquid)						
as Diesel	ND	0.05	mg/L	04/05/1995	tts	962
as Motor Oil	ND	0.5	mg/L	04/05/1995	tts	962

Ref: Shell 4411 Poothill Blvd., Oakland, CA./950330J2

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
TPH (Gas/BTXE,Liquid)											239493
as Gasoline	101.0	101.0	0.0	1.00	ND	1.01	1.01	mg/L	04/12/1995	2751	239493
Benzene	112.6	105.0	7.0	15.9	1.8	19.7	18.5	ug/L	04/12/1995	2751	239493
Toluene	106.6	106.6	0.0	54.3	ND	57.9	57.9	ug/L	04/12/1995	2751	239493
TPH (Gas/BTXE,Liquid)											239500
as Gasoline	94.0	95.0	1.1	1.00	ND	0.94	0.95	mg/L	04/11/1995	2755	239500
Benzene	94.6	94.0	0.6	16.8	ND	15.9	15.8	ug/L	04/11/1995	2755	239500
Toluene	95.5	96.0	0.5	57.2	ND	54.6	54.9	ug/L	04/11/1995	2755	239500
TPH (Gas/BTXE,Liquid)											239800
as Gasoline	112.0	106.0	5.5	0.50	ND	0.56	0.53	mg/L	04/14/1995	2756	239800
Benzene	107.1	101.6	5.3	8.3	ND	8.89	8.43	ug/L	04/14/1995	2756	239800
Toluene	108.4	100.8	7.3	27.9	ND	30.23	28.13	ug/L	04/14/1995	2756	239800
TPH (Gas/BTXE,Liquid)											239834
as Gasoline	100.0	94.0	6.1	0.50	ND	0.50	0.47	mg/L	04/17/1995	2760	239834
Benzene	91.1	83.5	8.7	9.85	ND	8.97	8.22	ug/L	04/17/1995	2760	239834
Toluene	90.0	88.4	1.8	32.9	ND	29.6	29.1	ug/L	04/17/1995	2760	239834
METHOD M8015 (EXT., Liquid)											239340
as Diesel				1.00	280	N/A	N/A	mg/L	04/05/1995	962	239340

Ref: Shell 4411 Foothill Blvd., Oakland, CA./950330J2

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	Duplicate LCS % Recovery	RPD	LCS Amount Found	Duplicate LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch
METHOD M8015 (EXT., Liquid)										
as Diesel	74.4			0.744		1.00	mg/L	04/05/1995	tts	962

NET®

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

COOLER RECEIPT FORM

Project: 9503303.2 Log No: 6256
Cooler received on: 4/11/95 and checked on 4/11/95 by
(signature)

Were custody papers present?..... (YES) NO
Were custody papers properly filled out?..... (YES) NO
Were the custody papers signed?..... (YES) NO
Was sufficient ice used?..... (YES) NO TEMP.: 0.2°C.
Did all bottles arrive in good condition (unbroken)?..... (YES) NO
Did bottle labels match COC?..... (YES) NO
Were proper bottles used for analysis indicated?..... (YES) NO
Correct preservatives used?..... (YES) NO
VOA vials checked for headspace bubbles?..... (YES) NO
Note which voas (if any) had bubbles:*

Sample descriptor:	Number of vials:
E.B.	1
T.B.	2

*All VOAs with headspace bubbles have been set aside so they will not be used for analysis..... YES NO

List here all other jobs received in the same cooler:

Client Job #	NET log #

(coolerrec)

SHELL WELL MONITORING DATA SHEET

Project #: 9503302	Wic # 204-5508-3400
Sampler: JG	Date Sampled: 3/30/95
Well I.D.: S-1	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 24.69 After	Depth to Water: Before 6.09 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	

Volume Conversion Factor (VCF):
$(22 * (d^2/4) * \pi)/231$
where
22 = in./foot
d = diameter (in.)
π = 3.1416
231 = in.3/gal

Well dia.	VCF
2"	0.16
3"	0.37
4"	0.65
6"	1.47
8"	2.60
12"	5.87

12.0 (1 Case Volume) x 3 (Specified Volumes) = 36.0 gallons

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☒ Suction Pump ☐ Type of Installed Pump _____

Sampling: Bailer ☒ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
14:47	70.8	8.12	600	38.	12.	
14:49	66.8	8.10	680	20.	24.	
14:51	65.6	8.10	700	36.	36.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 36

Sampling Time: 14:53

Sample I.D.: S-1 Laboratory: NET

★ Analyzed for: ~~TPHG~~, ~~BTEX~~, TPHD, M.O.

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 9503303.2 | Wic # 204-5508-3400

Sampler: J.G. | Date Sampled: 3/30/95

Well I.D.: S-2 | Well Diameter: (circle one) 2 3 (4) 6 ____

Total Well Depth: Before 22.41 After | Depth to Water: Before 7.86 After

Depth to Free Product: | Thickness of Free Product (feet):

Measurements referenced to: PVC (Grade) Other --

Volume Conversion Factor (VCF):
(12 x (d^2/4) x π)/231
Where
12 = in/foot
d = diameter (in.)
π = 3.1416
231 = in^3/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

9.4 (1 Case Volume) x 3 (Specified Volumes) = 28.2 gallons

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☒ Suction Pump ☐ Type of Installed Pump ____

Sampling: Bailer ☒ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
13:56	74.0	7.5	1000	59.	10.	
13:58	70.8	7.8	1000	57.	20.	
14:00	69.4	7.6	1100	78.	30.	

Did Well Dewater? NO. If yes, gals. Gallons Actually Evacuated: 30.

Sampling Time: 14:03

Sample I.D.: S-2 | Laboratory: NET

Analyzed for: TPHG, BTEX

Duplicate I.D.: | Cleaning Blank I.D.: E.B @ 14:08

Analyzed for: TPHG, BTEX

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 9503302	Wic # 204-5508-3400
Sampler: JG	Date Sampled: 3/30/95
Well I.D.: S-3	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 20.52 After	Depth to Water: Before 7.06 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	

Volume Conversion Factor (VCF):

$$22 = (d^2/4) \times \pi)/231$$

Where
22 = in/foot
d = diameter (in.)
π = 3.1416
231 = in3/gal

Well dia.	VCF
2"	= 0.16
3"	= 0.37
4"	= 0.65
6"	= 1.47
10"	= 4.08
12"	= 5.87

1 Case Volume		Specified Volumes		gallons
8.7	x	3	=	26.1

Purging: Bailer ☐ Middleburg ☐ Electric Submersible ☑ Suction Pump ☐ Type of Installed Pump _____

Sampling: Bailer ☑ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
14:20	70.2	8.0	450	64.	9.	
14:22	67.8	8.2	460	40.	18.	
14:24	67.0	8.2	440	46.	27.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 27.

Sampling Time: 14:26

Sample I.D.: S-3 Laboratory: NET

Analyzed for: TPHG, BTEX

Duplicate I.D.: DUP@14:26 Cleaning Blank I.D.:

Analyzed for: TPHG, BTEX

Shipping Notations:

Additional Notations: