PACIFIC
ENVIRONMENTAL
GROUP, INC.

July 25, 1995
Project 305-131.2C

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

Re: Quarterly Report - Second 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 second quarter 1995 monitoring program for the site referenced above. This letter has been prepared for Shell Oil Products 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 June 20, 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 purgeable petroleum hydrocarbons (TPPH), benzene, and total extractable petroleum hydrocarbons (TEPH) concentrations for the June 1995 sampling event are shown on Figure 2. Blaine's groundwater sampling report, which includes field data and the certified analytical report, is presented as Attachment A.

2025 Gateway Place, Suite 440, San Jose, California 95110 (408) 441-7500 FAX (408) 441-7539

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 (TPPH, BTEX Compounds, TEPH, and TPH as Motor Oil)
- Figure 1 - Groundwater Elevation Contour Map
- Figure 2 - TPPH/Benzene/TEPH Concentration Map
- Attachment A - Groundwater Sampling Report

cc: Mr. Barney Chan, Alameda County Department of Environmental Health

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
	06/20/95		7.30	31.01
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
	06/20/95		9.51	29.28
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
	06/20/95		8.15	29.18

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

Table 2
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH, BTEX Compounds, TEPH, and TPH as Motor Oil)

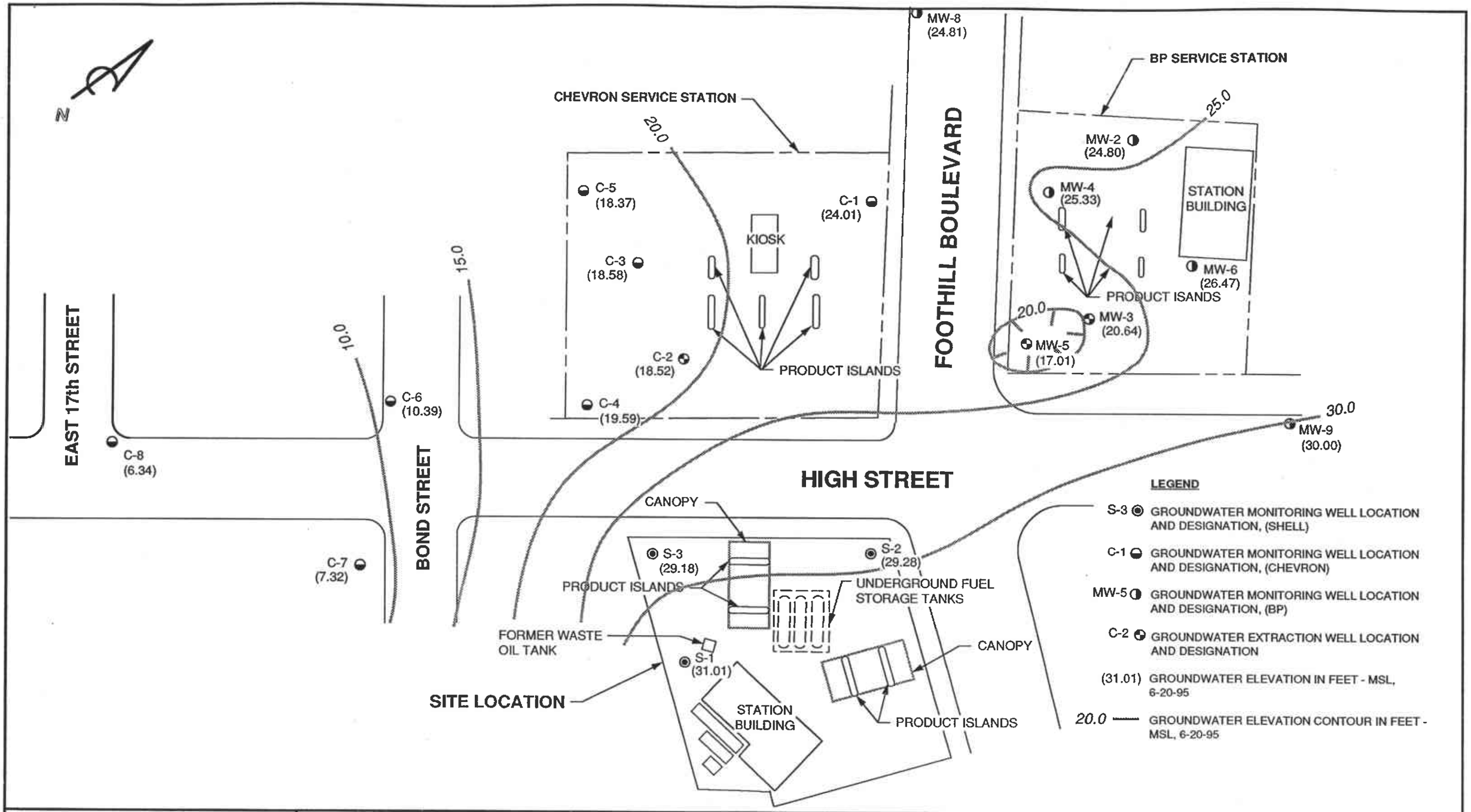
Shell Service Station
4411 Foothill Boulevard at High Street
Oakland, California

Well Number	Date Sampled		TPPH (C6 to C12) (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	TEPH (C10 to C28) (ppb)	TPH as Motor Oil (ppb)
S-1	12/18/92	a	41,000	3,100	1,100	1,200	6,700	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
	06/20/95		28,000	1,100	2,300	1,100	8,300	2,100	NC
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
	06/20/95		9,600	2,600	160	170	500	NA	NC
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
	06/20/95		9,600	510	170	960	1,700	NA	NA
	06/20/95(D)		9,800	500	170	950	1,700	NA	NC

TPPH = Total purgeable petroleum hydrocarbons
TEPH = Total extractable petroleum hydrocarbons
ppb = Parts per billion
NA = Not analyzed
ND = Not detected
NC = Not calculated, TPH as motor oil included with TEPH analysis.
(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.

Prior to June 1995, TPPH and TEPH were reported as TPH as gasoline and TPH as diesel, respectively.



PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE
0 50 100 FEET

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

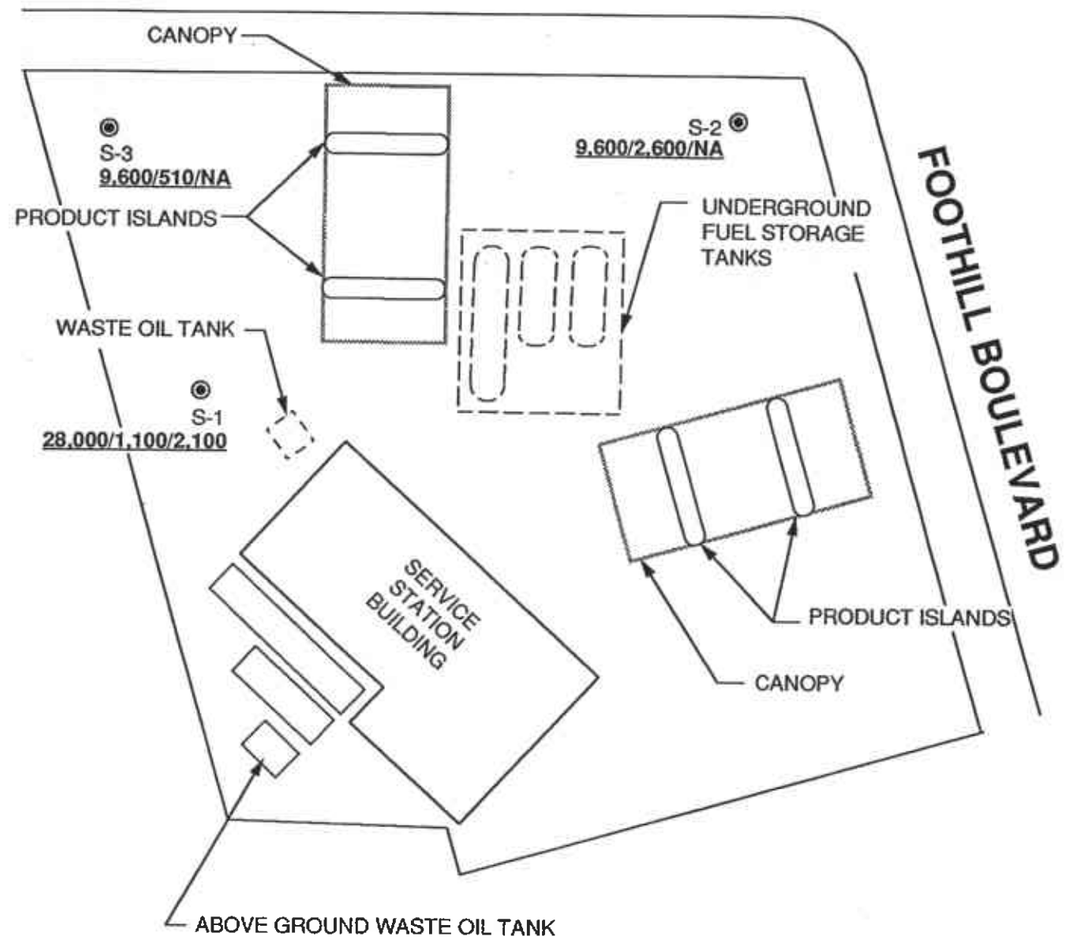
GROUNDWATER ELEVATION CONTOUR MAP

FIGURE:
1
PROJECT:
305-131.2B

07/24/95

N

HIGH STREET



LEGEND

S2 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

9,600/2,600/NA TPPH/BENZENE/TEPH CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION, 6-20-95

NA NOT ANALYZED

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

TPPH/BENZENE/TEPH CONCENTRATION MAP

FIGURE: 2
PROJECT: 305-131.2C

ATTACHMENT A

GROUNDWATER SAMPLING REPORT

BLAINE
TECH SERVICES INC.

985 TIMOTHY DRIVE
SAN JOSE, CA 95133
(408) 995-5535
FAX (408) 293-8773

July 7, 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:
2nd quarter of 1995

QUARTERLY GROUNDWATER SAMPLING REPORT 950621-K-1

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.

Carol Trench for:
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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 950620-K1

Date: 6/20/95
Page 1 of 1

#1080

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: KCB

Printed Name: Keith Brown

LAB: Nor

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-1	6/20			W		5		X				X							
S-2						3						X							
S-3						3						X							
DUP						3						X							
EB						3						X							
TB						2						X							

CHECK ONE (1) BOX ONLY — CT/01 — TURN AROUND TIME

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 of 24/48 hrs. TAT.

6/21/95 — Seal Intact

	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
Relinquished By (signature):	Keith C Brown	6/21	10:35	P Plumbre	P PLUMBRE	6/21	10:35
Relinquished By (signature):	P PLUMBRE	6/21	16:00	Pam Greene	PAM GREENE	6/22/95	07:00
Relinquished By (signature):		Date:		Received (signature):	Printed Name:	Date:	
		Time:				Time:	

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

VIA: NS

Shell Chain of Custody

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: 06/30/1995
NET Client Acct. No: 1821
NET Job No: 95.02444
Received: 06/22/1995

Client Reference Information

Shell 4411 Foothill Blvd., Oakland, CA/950620-K1

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:

Ken Larson
Division Manager

Jennifer L. Roseberry
Project Manager

Enclosure(s)

Ref: Shell 4411 Foothill Blvd., Oakland, CA/950620-K1

SAMPLE DESCRIPTION: S-1
Date Taken: 06/20/1995
Time Taken:
NET Sample No: 244422

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	10						06/27/1995	2957
Purgeable TPH	28,000		500	ug/L	5030/M8015		06/27/1995	2957
Carbon Range: C6 to C12	--						06/27/1995	2957
METHOD 8020 (GC, Liquid)	--						06/27/1995	2957
Benzene	1,100	FH	250	ug/L	8020		06/28/1995	2963
Toluene	2,300	FH	250	ug/L	8020		06/28/1995	2963
Ethylbenzene	1,100	FH	250	ug/L	8020		06/28/1995	2963
Xylenes (Total)	8,300	FH	250	ug/L	8020		06/28/1995	2963
SURROGATE RESULTS	--						06/28/1995	2963
Bromofluorobenzene (SURR)	98			% Rec.	8020		06/28/1995	2963
METHOD 3510/8015-M (Shell)						06/23/1995		
DILUTION FACTOR*	1						06/26/1995	1018
Extractable TPH	2,100		50	ug/L	3510/M8015		06/26/1995	1018
Carbon range: C10 to C28	--						06/26/1995	1018

FH : Compound quantitated at a 500X dilution factor.

Ref: Shell 4411 Foothill Blvd., Oakland, CA/950620-K1

SAMPLE DESCRIPTION: S-2
Date Taken: 06/20/1995
Time Taken:
NET Sample No: 244423

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	100						06/28/1995	2963
Purgeable TPH	9,600		5,000	ug/L	5030/M8015		06/28/1995	2963
Carbon Range: C6 to C12	--						06/28/1995	2963
METHOD 8020 (GC, Liquid)	--						06/28/1995	2963
Benzene	2,600		50	ug/L	8020		06/28/1995	2963
Toluene	160		50	ug/L	8020		06/28/1995	2963
Ethylbenzene	170		50	ug/L	8020		06/28/1995	2963
Xylenes (Total)	500		50	ug/L	8020		06/28/1995	2963
SURROGATE RESULTS	--						06/28/1995	2963
Bromofluorobenzene (SURR)	95			% Rec.	8020		06/28/1995	2963

Ref: Shell 4411 Foothill Blvd., Oakland, CA/950620-K1

SAMPLE DESCRIPTION: S-3
Date Taken: 06/20/1995
Time Taken:
NET Sample No: 244424

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	10						06/28/1995	2957
Purgeable TPH	9,600		500	ug/L	5030/M8015		06/28/1995	2957
Carbon Range: C6 to C12	--						06/28/1995	2957
METHOD 8020 (GC, Liquid)	--						06/28/1995	2957
Benzene	510	FE	25	ug/L	8020		06/28/1995	2963
Toluene	170	FE	25	ug/L	8020		06/28/1995	2963
Ethylbenzene	960	FE	25	ug/L	8020		06/28/1995	2963
Xylenes (Total)	1,700	FE	25	ug/L	8020		06/28/1995	2963
SURROGATE RESULTS	--						06/28/1995	2957
Bromofluorobenzene (SURR)	114			% Rec.	8020		06/28/1995	2957

FE : Compound quantitated at a 50X dilution factor.

Ref: Shell 4411 Foothill Blvd., Oakland, CA/950620-K1

SAMPLE DESCRIPTION: DUP
Date Taken: 06/20/1995
Time Taken:
NET Sample No: 244425

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	10						06/28/1995	2957
Purgeable TPH	9,800		500	ug/L	5030/M8015		06/28/1995	2957
Carbon Range: C6 to C12	--						06/28/1995	2957
METHOD 8020 (GC, Liquid)	--						06/28/1995	2957
Benzene	500	FE	25	ug/L	8020		06/28/1995	2963
Toluene	170	FE	25	ug/L	8020		06/28/1995	2963
Ethylbenzene	950	FE	25	ug/L	8020		06/28/1995	2963
Xylenes (Total)	1,700	FE	25	ug/L	8020		06/28/1995	2963
SURROGATE RESULTS	--						06/28/1995	2957
Bromofluorobenzene (SURR)	126	MI		% Rec.	8020		06/28/1995	2957

FE : Compound quantitated at a 50X dilution factor.
MI : Matrix Interference Suspected.

Ref: Shell 4411 Foothill Blvd., Oakland, CA/950620-K1

SAMPLE DESCRIPTION: EB
Date Taken: 06/20/1995
Time Taken:
NET Sample No: 244426

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						06/28/1995	2957
Purgeable TPH	ND		50	ug/L	5030/M8015		06/28/1995	2957
Carbon Range: C6 to C12	--						06/28/1995	2957
METHOD 8020 (GC, Liquid)	--						06/28/1995	2957
Benzene	ND		0.5	ug/L	8020		06/28/1995	2957
Toluene	ND		0.5	ug/L	8020		06/28/1995	2957
Ethylbenzene	ND		0.5	ug/L	8020		06/28/1995	2957
Xylenes (Total)	ND		0.5	ug/L	8020		06/28/1995	2957
SURROGATE RESULTS	--						06/28/1995	2957
Bromofluorobenzene (SURR)	71			% Rec.	8020		06/28/1995	2957

Ref: Shell 4411 Foothill Blvd., Oakland, CA/950620-K1

SAMPLE DESCRIPTION: TB
Date Taken: 06/20/1995
Time Taken:
NET Sample No: 244427

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						06/28/1995	2957
Purgeable TPH	ND		50	ug/L	5030/M8015		06/28/1995	2957
Carbon Range: C6 to C12	--						06/28/1995	2957
METHOD 8020 (GC, Liquid)	--						06/28/1995	2957
Benzene	ND		0.5	ug/L	8020		06/28/1995	2957
Toluene	ND		0.5	ug/L	8020		06/28/1995	2957
Ethylbenzene	ND		0.5	ug/L	8020		06/28/1995	2957
Xylenes (Total)	ND		0.5	ug/L	8020		06/28/1995	2957
SURROGATE RESULTS	--						06/28/1995	2957
Bromofluorobenzene (SURR)	87			% Rec.	8020		06/28/1995	2957

Ref: Shell 4411 Foothill Blvd., Oakland, CA/950620-K1

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
METHOD 5030/8015-M (Shell)							
Purgeable TPH	102.0	0.51	0.50	mg/L	06/27/1995	aal	2957
Benzene	89.6	4.48	5.00	ug/L	06/27/1995	aal	2957
Toluene	90.2	4.51	5.00	ug/L	06/27/1995	aal	2957
Ethylbenzene	97.0	4.85	5.00	ug/L	06/27/1995	aal	2957
Xylenes (Total)	98.7	14.8	15.0	ug/L	06/27/1995	aal	2957
Bromofluorobenzene (SURR)	96.0	96	100	% Rec.	06/27/1995	aal	2957
METHOD 5030/8015-M (Shell)							
Purgeable TPH	104.0	0.52	0.50	mg/L	06/28/1995	aal	2963
Benzene	90.8	4.54	5.00	ug/L	06/28/1995	aal	2963
Toluene	94.0	4.70	5.00	ug/L	06/28/1995	aal	2963
Ethylbenzene	101.4	5.07	5.00	ug/L	06/28/1995	aal	2963
Xylenes (Total)	103.3	15.5	15.0	ug/L	06/28/1995	aal	2963
Bromofluorobenzene (SURR)	98.0	98	100	% Rec.	06/28/1995	aal	2963
METHOD 3510/8015-M (Shell)							
Extractable TPH	101.0	1010	1000	mg/L	06/26/1995	tts	1018

Ref: Shell 4411 Foothill Blvd., Oakland, CA/950620-K1

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	06/27/1995	aal	2957
Benzene	ND	0.5	ug/L	06/27/1995	aal	2957
Toluene	ND	0.5	ug/L	06/27/1995	aal	2957
Ethylbenzene	ND	0.5	ug/L	06/27/1995	aal	2957
Xylenes (Total)	ND	0.5	ug/L	06/27/1995	aal	2957
Bromofluorobenzene (SURR)	92		% Rec.	06/27/1995	aal	2957
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	06/28/1995	aal	2963
Benzene	ND	0.5	ug/L	06/28/1995	aal	2963
Toluene	ND	0.5	ug/L	06/28/1995	aal	2963
Ethylbenzene	ND	0.5	ug/L	06/28/1995	aal	2963
Xylenes (Total)	ND	0.5	ug/L	06/28/1995	aal	2963
Bromofluorobenzene (SURR)	103		% Rec.	06/28/1995	aal	2963
METHOD 3510/8015-M (Shell)						
Extractable TPH	ND	0.05	mg/L	06/26/1995	tts	1018

Ref: Shell 4411 Foothill Blvd., Oakland, CA/950620-K1

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
METHOD 5030/8015-M (Shell)											244282
Purgeable TPH	100.0	100.0	0.0	5.0	4.3	9.3	9.3	mg/L	06/27/1995	2957	244282
Benzene	80.0	119.0	39.1	105	310	394	435	ug/L	06/27/1995	2957	244282
Toluene	95.0	94.5	0.5	343	26	352	350	ug/L	06/27/1995	2957	244282
METHOD 5030/8015-M (Shell)											244585
Purgeable TPH	104.0	98.0	5.8	0.50	ND	0.52	0.49	mg/L	06/28/1995	2963	244585
Benzene	97.2	91.6	5.9	10.7	ND	10.4	9.8	ug/L	06/28/1995	2963	244585
Toluene	98.3	95.7	2.7	35.1	ND	34.5	33.6	ug/L	06/28/1995	2963	244585
METHOD 3510/8015-M (Shell)											244512
Extractable TPH	69.0	75.0	8.3	2.00	0.30	1.68	1.80	mg/L	06/26/1995	1018	244512

Ref: Shell 4411 Foothill Blvd., Oakland, CA/950620-K1

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 3510/8015-M (Shell)										
Extractable TPH	46.9			0.469		1.00	mg/L	06/26/1995	tts	1018

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.

SHELL WELL MONITORING DATA SHEET

Project #: 950820-101	Wic #: 204-5508-3400
Sampler: KWB	Start Date: 6/20
Well I.D.: S-1	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 24.22 After	Depth to Water: Before 7.30 After
Depth to Free Product: —	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade)	Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

11.0 (1 Case Volume) x 3 (Specified Volumes) = 33.0 gallons

Purging: Bailer; Disposable Bailer; Middleburg; Electric Submersible; Extraction Pump ✓; Other ___

Sampling: Bailer ✓; Disposable Bailer; Extraction Port; Other ___

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
928	67.4	7.4	890	8.6	11	strong gas
929	67.4	7.3	1000	40.7	22	odor
930	67.6	7.4	1000	21.4	33	

Did Well Dewater? C ✓ If yes, gals. — Gallons Actually Evacuated: 330

Sampling Time: 940	Sampling Date: 6/20
Sample I.D.: S-1	Laboratory: CAL
Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER: TPH M.O.	
Duplicate I.D.:	Cleaning Blank I.D.:
Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER:	

SHELL WELL MONITORING DATA SHEET

Project #: 950620-1CL	Wic #: 204-5808-3400
Sampler: KeB	Start Date: 6/20
Well I.D.: S-2	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 22.02 After	Depth to Water: Before 9.51 After
Depth to Free Product: ___	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

8.1 (1 Case Volume) x 3 (Specified Volumes) = 24.3 gallons

Purging: Bailer / Disposable Bailer / Middleburg / Electric Submersible / Extraction Pump / Other ___

Sampling: Bailer / Disposable Bailer / Extraction Port / Other ___

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
838	70.6	7.2	1500	28.2	9	gas odor
840	70.2	7.0	1400	26.4	17	
842	71.0	7.1	1400	488	25	

Did Well Dewater? N If yes, gals. ___ Gallons Actually Evacuated: 25

Sampling Time: 850 Sampling Date: 6/20

Sample I.D.: S-2 Laboratory: Nut

Analyzed for: (TPH-G) (BTEX) TPH-D OTHER:

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

Analyzed for: TPH-G BTEX TPH-D OTHER:

SHELL WELL MONITORING DATA SHEET

Project #: 950620-K1	Wic #: 204-5508-3400
Sampler: KCB	Start Date: 6/20
Well I.D.: S-3	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 20.20 After	Depth to Water: Before 8.15 After
Depth to Free Product: ___	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

1 Case Volume	x	Specified Volumes	=	gallons
7.8	x	3	=	23.4

Purging: Bailer
Disposable Bailer
Middleburg
Electric Submersible
Extraction Pump
Other ___

Sampling: Bailer
Disposable Bailer
Extraction Port
Other ___

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
904	68.0	7.1	1200	14.3	8	gas odor
906	67.6	7.4	860	21.2	16	
908	68.2	7.3	880	13.1	24	

Did Well Dewater? N If yes, gals. — Gallons Actually Evacuated: 24

Sampling Time: 915 Sampling Date: 6/20

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

Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER:

Duplicate I.D.: DUP Cleaning Blank I.D.: EB-900

Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER: