



PACIFIC
ENVIRONMENTAL
GROUP, INC.

January 25, 1995
Project 305-085.2B

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

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3673
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STATION 15
15
15

Re: Quarterly Report - Fourth Quarter 1994
Shell Service Station
→ 230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California
WIC No 204-5508-0703

Dear Mr. Kirk:

The following presents the results of the fourth quarter 1994 monitoring program for the site referenced above. This letter has been prepared for Shell Oil Company 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 December 15, 1994. Groundwater elevation contours for the sampling date are shown on Figure 1. Table 1 presents groundwater elevation data.

Groundwater analytical data are presented in Table 2. Total petroleum hydrocarbons calculated as gasoline (TPH-g) and benzene concentrations for the December 1994 sampling event are shown on Figure 2. The laboratory reported the positive result of TPH-g in Well MW-2 to be the result of an unknown hydrocarbon peak. Blaine's groundwater sampling report is presented as Attachment A and includes field data and the certified analytical report.

January 25, 1995

Page 2

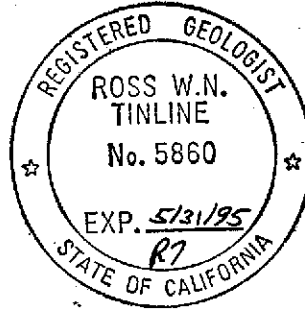
If you have any questions regarding the contents of this letter, please call.

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 and BTEX Compounds)
Figure 1 - Groundwater Elevation Contour Map
Figure 2 - TPH-g/Benzene Concentration Map
Attachment A - Groundwater Sampling Report

cc: Ms. Lisa McCann, Regional Water Quality Control Board - S.F. Bay Region
Mr. Craig Mayfield, Alameda County Flood Control and Water
Conservation District
Mr. Gil Wistar, Alameda County Health Department

Table 1
Groundwater Elevation Data

Shell Service Station
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-1	07/14/88	73.89	13.30	60.59
	10/04/88		13.65	60.24
	11/10/88		13.55	60.34
	12/09/88		13.22	60.67
	01/10/89		12.86	61.03
	01/20/89		12.91	60.98
	02/06/89		12.94	60.95
	03/10/89		12.59	61.30
	06/06/89		14.05	59.84
	09/07/89		14.92	58.97
	12/18/89		14.88	59.01
	03/08/90		14.08	59.81
	06/07/90		13.89	60.00
	09/05/90		14.83	59.06
	12/03/90		15.05	58.84
	03/01/91		14.34	59.55
	06/03/91		14.16	59.73
	09/04/91		14.60	59.29
	03/13/92		13.40	60.49
	06/03/92		13.76	60.13
	08/19/92		14.57	59.32
	11/16/92		14.78	59.11
	02/18/93		12.14	61.75
	06/01/93		13.30	60.59
	08/30/93		14.32	59.57
	12/13/93		14.06	59.83
	03/03/94		13.12	60.77
	06/06/94		14.20	59.69
09/12/94	15.72	58.17		
12/15/94	12.98	60.91		
MW-2	07/14/88	75.24	15.18	60.06
	10/04/88		15.30	59.94
	11/10/88		15.17	60.07
	12/09/88		14.82	60.42
	01/20/89		14.54	60.70
	02/06/89		14.59	60.65
	03/10/89		14.88	60.36
	06/06/89		15.30	59.94
	09/07/89		16.76	58.48
	12/18/89		16.65	58.59
	03/08/90		15.92	59.32
	06/07/90		16.10	59.14
	09/05/90		16.61	58.63
	12/03/90		17.06	58.18
	03/01/91		16.62	58.62

Table 1 (continued)
Groundwater Elevation Data

Shell Service Station
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth To Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-2 (cont.)	06/03/91		16.65	58.59
	09/04/91		16.57	58.67
	03/13/92		14.66	60.58
	06/03/92		15.90	59.34
	08/19/92		16.72	58.52
	11/16/92		16.66	58.58
	02/18/93		13.88	61.36
	06/01/93		14.74	60.50
	08/30/93		15.85	59.39
	12/13/93		15.83	59.41
	03/03/94		14.80	60.44
	06/06/94		16.65	58.59
	09/12/94		16.72	58.52
	12/15/94		15.25	59.99
MW-3	07/14/88	74.68	14.05	60.63
	10/04/88		14.60	60.08
	11/10/88		14.35	60.33
	12/09/88		14.04	60.64
	01/10/89		13.70	60.98
	01/20/89		13.72	60.96
	02/06/89		13.75	60.93
	03/10/89		13.42	61.26
	06/06/89		14.52	60.16
	09/07/89		15.52	59.16
	12/18/89		19.59	55.09
	03/08/90		14.72	59.96
	06/07/90		14.65	60.03
	09/05/90		15.51	59.17
	12/03/90		14.85	59.83
	03/01/91		14.92	59.76
	06/03/91		14.75	59.93
	09/04/91		15.14	59.54
	03/13/92		13.50	61.18
	06/03/92		14.39	60.29
	08/19/92		15.08	59.60
	11/16/92		15.43	59.25
	02/18/93		12.96	61.72
	06/01/93		13.98	60.70
	08/30/93		14.82	59.86
	12/13/93		14.70	59.98
	03/03/94		13.92	60.76
06/06/94		14.73	59.95	
09/12/94		15.42	59.26	
12/15/94		13.80	60.88	

**Table 1 (continued)
Groundwater Elevation Data**

Shell Service Station
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth To Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-4	01/23/90	73.83	14.68	59.15
	03/08/90		14.38	59.45
	06/07/90		14.27	59.56
	09/05/90		15.40	58.43
	12/03/90		15.90	57.93
	06/03/91		14.60	59.23
	09/04/91		15.25	58.58
	03/13/92		12.72	61.11
	06/03/92		14.33	59.50
	08/19/92		15.18	58.65
	11/16/92		15.39	58.44
	02/18/93		12.62	61.21
	06/01/93		13.68	60.15
	08/30/93		14.83	59.00
	12/13/93		14.50	59.33
	03/03/94		13.48	60.35
	06/06/94		14.26	59.57
09/12/94	15.42	58.41		
12/15/94	13.43	60.40		
MSL = Mean sea level				
TOC = Top of casing				

Table 2
Groundwater Analytical Data
 Total Petroleum Hydrocarbons
 (TPH as Gasoline and BTEX Compounds)

Shell Service Station
 230 West MacArthur Boulevard at Piedmont Avenue
 Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-1	07/14/88	ND	ND	ND	ND	ND
	10/04/88	ND	8	4.3	ND	9
	11/10/88	ND	ND	ND	ND	ND
	12/09/88	ND	ND	ND	ND	ND
	01/10/89	ND	ND	ND	ND	NA
	01/20/89	ND	ND	NA	NA	ND
	02/06/89	ND	ND	ND	ND	ND
	03/10/89	ND	ND	ND	ND	ND
	06/06/89	ND	ND	ND	ND	ND
	09/07/89	ND	ND	ND	ND	ND
	12/18/89	ND	ND	ND	ND	ND
	03/08/90	ND	ND	ND	ND	ND
	06/07/90	ND	ND	ND	ND	ND
	09/05/90	ND	ND	ND	ND	ND
	12/03/90	ND	ND	ND	ND	ND
	03/01/91	ND	ND	ND	ND	ND
	06/03/91	ND	ND	ND	ND	ND
	09/04/91	ND	ND	ND	ND	ND
	03/13/92	ND	ND	ND	ND	ND
	06/03/92	ND	ND	ND	ND	ND
	08/19/92	87	ND	ND	ND	ND
	11/16/92	ND	ND	ND	ND	ND
	02/18/93	59*	ND	ND	ND	ND
06/01/93	ND	ND	ND	ND	ND	
08/30/93	ND	ND	ND	ND	ND	
12/13/93	ND	ND	ND	ND	ND	
03/03/94	100	ND	ND	ND	ND	
06/06/94	ND	ND	ND	ND	ND	
09/12/94	ND	ND	ND	ND	ND	
12/15/94	ND	ND	ND	ND	ND	
MW-2	07/14/88	ND	7.9	2.6	1.1	4
	10/04/88	90	ND	1.3	2.3	12
	11/10/88	ND	ND	ND	ND	2
	12/09/88	ND	ND	0.6	ND	3
	01/20/89	ND	ND	ND	ND	ND
	02/06/89	NA	ND	ND	ND	ND
	03/10/89	ND	ND	ND	ND	ND
	06/06/89	ND	ND	0.5	ND	ND
	09/07/89	ND	ND	ND	ND	ND
	12/18/89	ND	ND	ND	ND	ND
03/08/90	ND	ND	ND	ND	ND	

Table 2 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
 (TPH as Gasoline and BTEX Compounds)

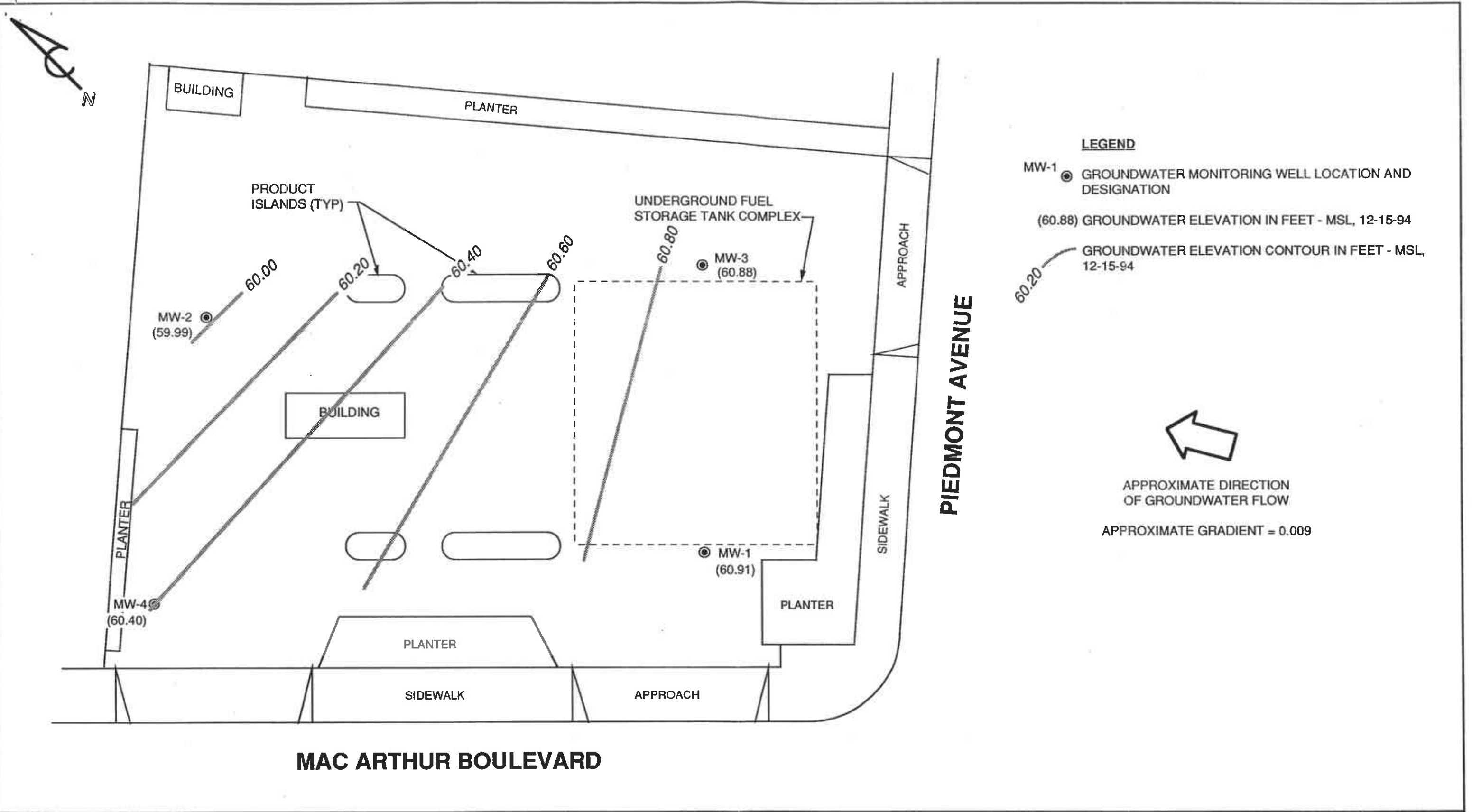
Shell Service Station
 230 West MacArthur Boulevard at Piedmont Avenue
 Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-2 (cont.)	06/07/90	ND	ND	ND	ND	ND
	09/05/90	ND	ND	ND	ND	ND
	12/03/90	ND	ND	ND	ND	ND
	03/01/91	ND	ND	ND	ND	ND
	06/03/91	ND	ND	ND	ND	ND
	09/04/91	ND	ND	ND	ND	ND
	03/13/92	ND	ND	ND	ND	ND
	06/03/92	ND	ND	ND	ND	ND
	08/19/92	67	ND	ND	ND	ND
	11/16/92	50	ND	ND	ND	1.2
	02/18/93	52*	ND	ND	ND	ND
	02/18/93(D)	52*	ND	ND	ND	ND
	06/01/93	ND	ND	ND	ND	ND
	08/30/93	70*	ND	ND	ND	ND
	12/13/93	68*	ND	ND	ND	ND
	03/03/94	280*	ND	ND	ND	ND
	06/06/94	ND	ND	ND	ND	ND
09/12/94	ND	ND	ND	ND	ND	
12/15/94	230*	ND	ND	ND	ND	
MW-3	07/14/88	ND	ND	ND	ND	ND
	10/04/88	ND	ND	ND	ND	5
	11/10/88	ND	ND	ND	ND	ND
	12/09/88	ND	ND	ND	ND	ND
	01/10/89	ND	ND	ND	ND	NA
	01/20/89	NA	NA	ND	ND	ND
	02/06/89	70	ND	ND	ND	ND
	03/10/89	150	ND	ND	ND	ND
	06/06/89	ND	ND	ND	ND	ND
	09/07/89	ND	0.65	ND	ND	ND
	12/06/89	46	1.3	ND	0.44	0.66
	03/08/90	ND	ND	ND	ND	ND
	06/07/90	ND	ND	ND	ND	ND
	09/05/91	ND	ND	ND	ND	ND
	12/03/90	ND	ND	ND	ND	ND
	03/01/91	1.9	59	ND	22	ND
	06/03/91	ND	ND	ND	ND	ND
	09/04/91	ND	ND	ND	ND	ND
	03/13/92	ND	ND	ND	ND	ND
	06/03/92	ND	ND	ND	ND	ND
08/19/92	92	ND	ND	ND	ND	
08/19/92(D)	76	ND	ND	ND	ND	
11/16/92	200*	ND	ND	ND	ND	

Table 2 (continued)
Groundwater Analytical Data
 Total Petroleum Hydrocarbons
 (TPH as Gasoline and BTEX Compounds)

Shell Service Station
 230 West MacArthur Boulevard at Piedmont Avenue
 Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	
MW-3 (cont.)	11/16/92(D)	140*	ND	ND	ND	ND	
	02/18/93	680*	ND	ND	ND	ND	
	06/01/93	160*	ND	ND	ND	ND	
	06/01/93(D)	150*	ND	ND	ND	ND	
	08/30/93	110*	ND	ND	ND	ND	
	12/13/93	140*	ND	ND	ND	ND	
	12/13/93(D)	110*	ND	ND	ND	ND	
	03/03/94	61*	ND	ND	ND	ND	
	06/06/94	ND	ND	ND	ND	ND	
	09/12/94	ND	ND	ND	ND	ND	
	12/15/94	ND	ND	0.9	ND	0.6	
MW-4	01/23/90	1,600	100	10	30	20	
	03/08/90	4,200	260	18	88	39	
	06/07/90	2,000	150	6.9	14	17	
	09/05/90	1,700	130	10	7.2	19	
	12/03/90	2,600	108	41	17	59	
	06/03/91	2,800	160	15	8.8	32	
	09/04/91	----- Separate-Phase Hydrocarbon Sheen -----					
	03/13/92	2,700	180	70	5.9	29	
	06/03/92	1,700	190	ND	30	23	
	08/19/92	170	4.2	ND	0.6	1.0	
	11/16/92	2,600	92	49	50	81	
	02/18/93	7,400	120	38	51	87	
	06/01/93	7,000	1,800	1,700	1,600	1,700	
	08/30/93	2,100	80	11	ND	11	
	08/30/93(D)	2,100	77	5.6	ND	5.5	
	12/13/93	2,000*	20	ND	21	52	
	03/03/94	3,500	150	86	85	90	
	03/03/94(D)	3,200	130	73	74	76	
	06/06/94	590	25	ND	ND	ND	
	06/06/94(D)	400	16	ND	ND	ND	
	09/12/94	1,800	42	ND	3.7	4.7	
	09/12/94(D)	2,000	40	ND	5.7	8.0	
	12/15/94	2,900	78	14	94	17	
12/15/94(D)	2,900	90	7	96	18		
ppb = Parts per billion ND = Not detected NA = Not analyzed (D) = Duplicate sample * = The concentration reported as gasoline is primarily due to the presence of a discrete hydrocarbon peak not indicative of gasoline. See certified analytical reports for detection limits.							



MAC ARTHUR BOULEVARD

PIEDMONT AVENUE

LEGEND

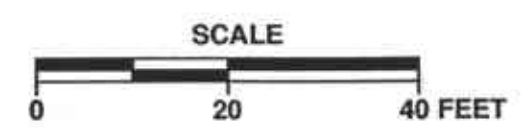
- MW-1 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- (60.88) GROUNDWATER ELEVATION IN FEET - MSL, 12-15-94
- 60.20 GROUNDWATER ELEVATION CONTOUR IN FEET - MSL, 12-15-94



APPROXIMATE DIRECTION OF GROUNDWATER FLOW
 APPROXIMATE GRADIENT = 0.009



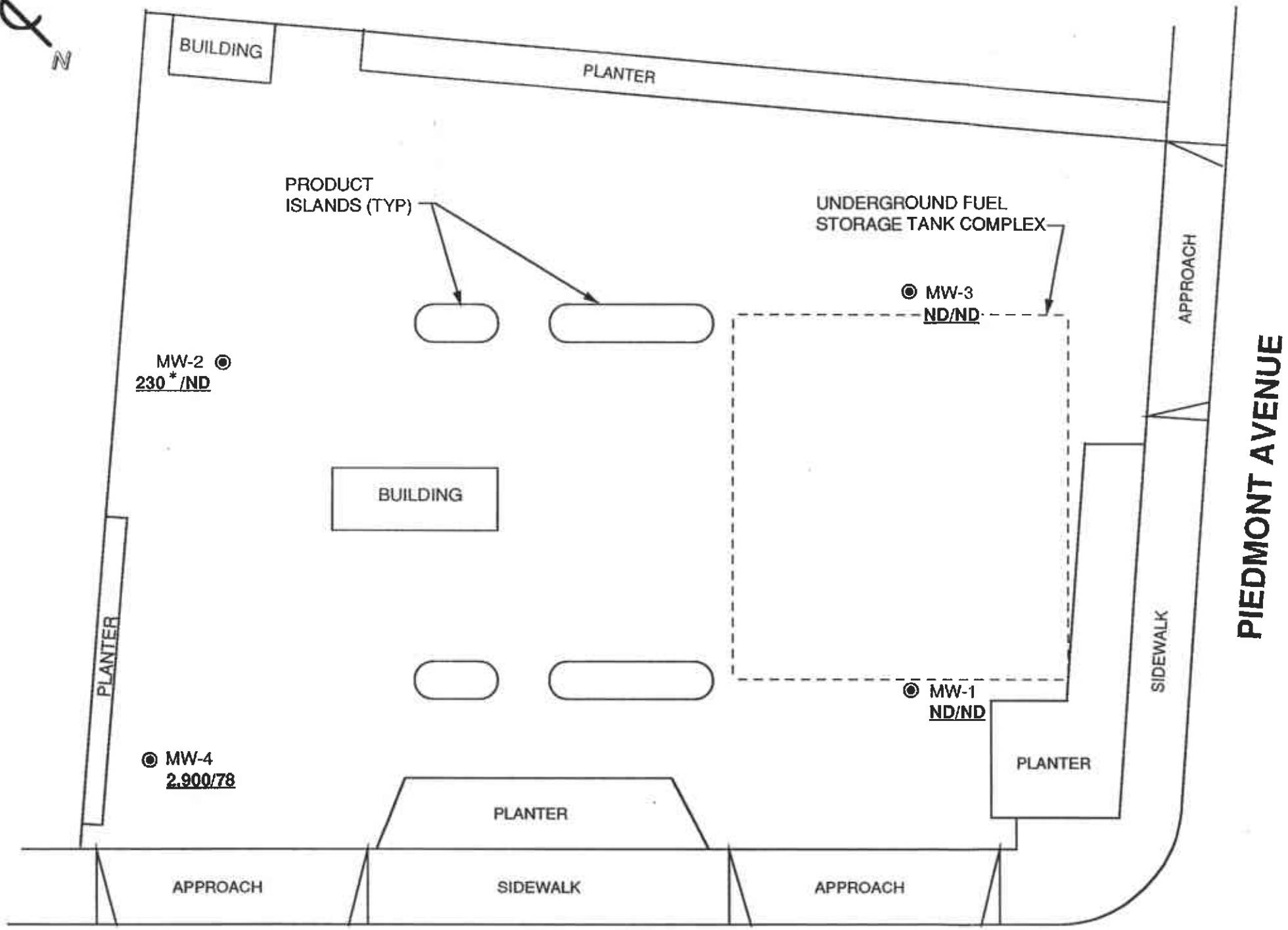
PACIFIC ENVIRONMENTAL GROUP, INC.



SHELL SERVICE STATION
 230 West MacArthur Boulevard at Piedmont Avenue
 Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE:
1
 PROJECT:
 305-085.2B



- LEGEND**
- MW-1 GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
 - 230*/ND TPH-g/BENZENE CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION, 12-15-94
 - ND NOT DETECTED
 - * LABORATORY NOTED RESULT TO CONSIST OF AN UNKNOWN HYDROCARBON PEAK

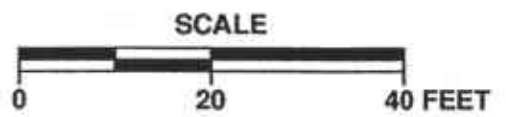


APPROXIMATE DIRECTION OF GROUNDWATER FLOW

MAC ARTHUR BOULEVARD



PACIFIC ENVIRONMENTAL GROUP, INC.

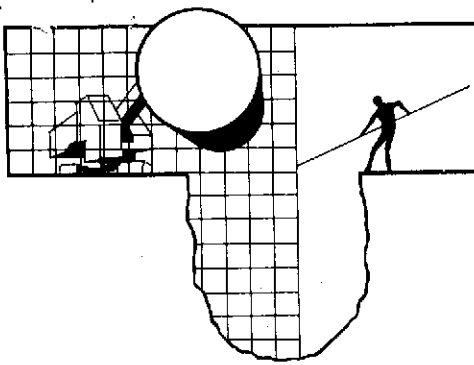


SHELL SERVICE STATION
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California

TPH-g/BENZENE CONCENTRATION MAP

FIGURE:
2
PROJECT:
305-085.2B

ATTACHMENT A
GROUNDWATER SAMPLING REPORT



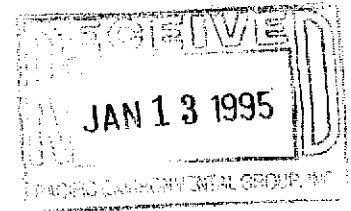
BLAINE TECH SERVICES INC.

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

January 11, 1995

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

Attn: Daniel T. Kirk



SITE:
Shell WIC #204-5508-0703
230 West MacArthur Blvd.
Oakland, California

QUARTER:
4th quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 941215-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 dewateres 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.

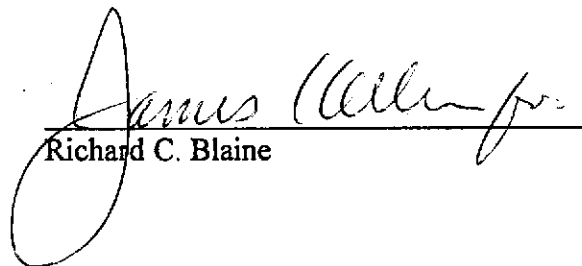
Objective Information Collection

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.


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)
MW-1	12/15/94	TOC	-	NONE	-	-	12.98	29.43
MW-2	12/15/94	TOC	-	NONE	-	-	15.25	27.68
MW-3	12/15/94	TOC	-	NONE	-	-	13.80	28.12
MW-4 *	12/15/94	TOC	-	NONE	-	-	13.43	24.03

* Sample DUP was a duplicate sample taken from well MW-4.

4514

 SHELL OIL COMPANY RETAIL ENVIRONMENTAL ENGINEERING - WEST		CHAIN OF CUSTODY RECORD Serial No: <u>941215J2</u>			Date: <u>12/15/94</u> Page of																																																										
Site Address: 230 West MacArthur Blvd., Oakland WIC#: 204-5508-0703		Analysis Required			LAB: <u>NET</u>																																																										
Shell Engineer: Dan Kirk Phone No.: (510) 675-6168 Fax #: 675-6160		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 Asbestos Container Size Preparation Used Composite Y/N	<table border="1"> <tr> <th>CHECK ONE (1) BOX ONLY</th> <th>CT/OT</th> <th>TURN AROUND TIME</th> </tr> <tr> <td>Quarterly Monitoring <input checked="" type="checkbox"/></td> <td>6441</td> <td>24 hours <input type="checkbox"/></td> </tr> <tr> <td>Site Investigation <input type="checkbox"/></td> <td>6441</td> <td>48 hours <input type="checkbox"/></td> </tr> <tr> <td>Soil Clarity/Disposal <input type="checkbox"/></td> <td>6442</td> <td>16 days <input checked="" type="checkbox"/> (Normal)</td> </tr> <tr> <td>Water Clarity/Disposal <input type="checkbox"/></td> <td>6443</td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Soil/Air Rem. or Sys. O & M <input type="checkbox"/></td> <td>6442</td> <td></td> </tr> <tr> <td>Water Rem. or Sys. O & M <input type="checkbox"/></td> <td>6443</td> <td></td> </tr> <tr> <td>Other <input type="checkbox"/></td> <td></td> <td></td> </tr> </table>			CHECK ONE (1) BOX ONLY	CT/OT	TURN AROUND TIME	Quarterly Monitoring <input checked="" type="checkbox"/>	6441	24 hours <input type="checkbox"/>	Site Investigation <input type="checkbox"/>	6441	48 hours <input type="checkbox"/>	Soil Clarity/Disposal <input type="checkbox"/>	6442	16 days <input checked="" type="checkbox"/> (Normal)	Water Clarity/Disposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>	Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	6442		Water Rem. or Sys. O & M <input type="checkbox"/>	6443		Other <input type="checkbox"/>																																				
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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:			NOTE: Notify Lab as soon as possible of 24/48 hr. TAT.																																																										
Sampled by: Printed Name: <u>JEAN GATINEAU</u>		<table border="1"> <thead> <tr> <th>Sample ID</th> <th>Date</th> <th>Sludge</th> <th>Soil</th> <th>Water</th> <th>Air</th> <th>No. of conts.</th> </tr> </thead> <tbody> <tr> <td>MW-1</td> <td>12/15</td> <td></td> <td></td> <td>X</td> <td></td> <td>3</td> </tr> <tr> <td>MW-2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>MW-3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>MW-4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>E,B.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DUP</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TiB.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2</td> </tr> </tbody> </table>			Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	MW-1	12/15			X		3	MW-2							MW-3							MW-4							E,B.							DUP							TiB.						2	MATERIAL DESCRIPTION SAMPLE CONDITION/ COMMENTS		
Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.																																																									
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Relinquished By (signature): <u>[Signature]</u> Printed Name: <u>JEAN GATINEAU</u>		Date: <u>12/16</u> Time: <u>10:50</u>		Received (signature): <u>[Signature]</u> Printed Name: <u>GT LUMBLE</u>		Date: <u>6/16</u> Time: <u>10:30</u>																																																									
Relinquished By (signature): <u>[Signature]</u> Printed Name: <u>GT LUMBLE</u>		Date: <u>12/16</u> Time: <u>17:30</u>		Received (signature): <u>[Signature]</u> Printed Name: <u>J. Sorensen</u>		Date: <u>12/15</u> Time:																																																									

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN OF CUSTODY WITH THE SAMPLES



NATIONAL
ENVIRONMENTAL
TESTING, INC.

Santa Rosa Division
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

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

Date: 01/05/1995
NET Client Acct. No: 1821
NET Pacific Job No: 94.06140
Received: 12/17/1994

Client Reference Information

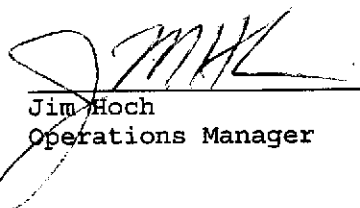
SHELL, 230 West MacArthur Blvd., Oakland, Job No. 941215-J2

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:



Judy Ridley
Project Coordinator



Jim Hoch
Operations Manager

Enclosure(s)





Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 94.06140

Date: 01/05/1995
ELAP Cert: 1386
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Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 941215-J2

SAMPLE DESCRIPTION: MW-1

Date Taken: 12/15/1994

Time Taken:

NET Sample No: 231511

Parameter	Results	Flags	Reporting		Method	Date	Date	Run
			Limit	Units		Extracted	Analyzed	Batch No.
TPH (Gas/BTXE, Liquid)								
METHOD 5030/M8015	--						12/26/1994	2420
DILUTION FACTOR*	1						12/26/1994	2420
as Gasoline	ND		50	ug/L	5030		12/26/1994	2420
METHOD 8020 (GC, Liquid)	--						12/26/1994	2420
Benzene	ND		0.5	ug/L	8020		12/26/1994	2420
Toluene	ND		0.5	ug/L	8020		12/26/1994	2420
Ethylbenzene	ND		0.5	ug/L	8020		12/26/1994	2420
Xylenes (Total)	ND		0.5	ug/L	8020		12/26/1994	2420
SURROGATE RESULTS	--						12/26/1994	2420
Bromofluorobenzene (SURR)	108			‡ Rec.	5030		12/26/1994	2420

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 94.06140

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Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 941215-J2

SAMPLE DESCRIPTION: MW-2

Date Taken: 12/15/1994

Time Taken:

NET Sample No: 231512

Parameter	Results	Flags	Reporting			Date	Date	Run
			Limit	Units	Method	Extracted	Analyzed	Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						12/26/1994	2420
DILUTION FACTOR*	1						12/26/1994	2420
as Gasoline	230	G1	50	ug/L	5030		12/26/1994	2420
Carbon Range:	C5-C8						12/26/1994	2420
METHOD 8020 (GC,Liquid)	--						12/26/1994	2420
Benzene	ND		0.5	ug/L	8020		12/26/1994	2420
Toluene	ND		0.5	ug/L	8020		12/26/1994	2420
Ethylbenzene	ND		0.5	ug/L	8020		12/26/1994	2420
Xylenes (Total)	ND		0.5	ug/L	8020		12/26/1994	2420
SURROGATE RESULTS	--						12/26/1994	2420
Bromofluorobenzene (SURR)	88			% Rec.	5030		12/26/1994	2420

G1 : The result for Gasoline is an unk. HC which consists of a single peak.

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Client Acct: 1821
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Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 941215-J2

SAMPLE DESCRIPTION: MW-3

Date Taken: 12/15/1994

Time Taken:

NET Sample No: 231513

Parameter	Results	Flags	Reporting		Method	Date	Date	Run
			Limit	Units		Extracted	Analyzed	Batch No.
TPH (Gas/BTXE, Liquid)								
METHOD 5030/M8015	--						12/26/1994	2420
DILUTION FACTOR*	1						12/26/1994	2420
as Gasoline	ND		50	ug/L	5030		12/26/1994	2420
METHOD 8020 (GC, Liquid)	--						12/26/1994	2420
Benzene	ND		0.5	ug/L	8020		12/26/1994	2420
Toluene	0.9	C	0.5	ug/L	8020		12/26/1994	2420
Ethylbenzene	ND		0.5	ug/L	8020		12/26/1994	2420
Xylenes (Total)	0.6	C	0.5	ug/L	8020		12/26/1994	2420
SURROGATE RESULTS	--						12/26/1994	2420
Bromofluorobenzene (SURR)	110			% Rec.	5030		12/26/1994	2420

C : Positive result confirmed by secondary column or GC/MS analysis.

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Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 94.06140

Date: 01/05/1995
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Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 941215-J2

SAMPLE DESCRIPTION: MW-4

Date Taken: 12/15/1994

Time Taken:

NET Sample No: 231514

Parameter	Results	Flags	Reporting			Date	Date	Run
			Limit	Units	Method	Extracted	Analyzed	Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						12/28/1994	2425
DILUTION FACTOR*	1						12/28/1994	2425
as Gasoline	2,900		50	ug/L	5030		12/28/1994	2425
Carbon Range:	C5-C14						12/28/1994	2425
METHOD 8020 (GC,Liquid)	--						12/28/1994	2425
Benzene	78	FC	0.5	ug/L	8020		12/31/1994	2432
Toluene	14		0.5	ug/L	8020		12/28/1994	2425
Ethylbenzene	94	FC	0.5	ug/L	8020		12/31/1994	2432
Xylenes (Total)	17		0.5	ug/L	8020		12/28/1994	2425
SURROGATE RESULTS	--						12/28/1994	2425
Bromofluorobenzene (SURR)	144	MI		% Rec.	5030		12/28/1994	2425

FC : Compound quantitated at a 10X dilution factor.

MI : Matrix Interference Suspected

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services
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Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 941215-J2

SAMPLE DESCRIPTION: E.B.

Date Taken: 12/15/1994

Time Taken:

NET Sample No: 231515

Parameter	Results	Flags	Reporting		Method	Date	Date	Run
			Limit	Units		Extracted	Analyzed	Batch No.
TPH (Gas/BTXE, Liquid)								
METHOD 5030/M8015	--						12/26/1994	2420
DILUTION FACTOR*	1						12/26/1994	2420
as Gasoline	ND		50	ug/L	5030		12/26/1994	2420
METHOD 8020 (GC, Liquid)	--						12/26/1994	2420
Benzene	ND		0.5	ug/L	8020		12/26/1994	2420
Toluene	ND		0.5	ug/L	8020		12/26/1994	2420
Ethylbenzene	ND		0.5	ug/L	8020		12/26/1994	2420
Xylenes (Total)	ND		0.5	ug/L	8020		12/26/1994	2420
SURROGATE RESULTS	--						12/26/1994	2420
Bromofluorobenzene (SURR)	117			% Rec.	5030		12/26/1994	2420

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services
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Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 941215-J2

SAMPLE DESCRIPTION: DUP
Date Taken: 12/15/1994
Time Taken:
NET Sample No: 231516

Parameter	Results	Flags	Reporting		Method	Date	Date	Run
			Limit	Units		Extracted	Analyzed	Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						12/26/1994	2420
DILUTION FACTOR*	1						12/26/1994	2420
as Gasoline	2,900		50	ug/L	5030		12/26/1994	2420
Carbon Range:	C5-C14						12/26/1994	2420
METHOD 8020 (GC,Liquid)	--						12/26/1994	2420
Benzene	90	FC	0.5	ug/L	8020		12/28/1994	2425
Toluene	7.0		0.5	ug/L	8020		12/26/1994	2420
Ethylbenzene	96	FC	0.5	ug/L	8020		12/28/1994	2425
Xylenes (Total)	18		0.5	ug/L	8020		12/26/1994	2420
SURROGATE RESULTS	--						12/26/1994	2420
Bromofluorobenzene (SURR)	210	MI		µ Rec.	5030		12/26/1994	2420

FC : Compound quantitated at a 10X dilution factor.

MI : Matrix Interference Suspected

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services
 Client Acct: 1821
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Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 941215-J2

SAMPLE DESCRIPTION: T.B.

Date Taken: 12/15/1994

Time Taken:

NET Sample No: 231517

Parameter	Results	Flags	Reporting			Date	Date	Run
			Limit	Units	Method	Extracted	Analyzed	Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						12/26/1994	2420
DILUTION FACTOR*	1						12/26/1994	2420
as Gasoline	ND		50	ug/L	5030		12/26/1994	2420
METHOD 8020 (GC,Liquid)	--						12/26/1994	2420
Benzene	ND		0.5	ug/L	8020		12/26/1994	2420
Toluene	ND		0.5	ug/L	8020		12/26/1994	2420
Ethylbenzene	ND		0.5	ug/L	8020		12/26/1994	2420
Xylenes (Total)	ND		0.5	ug/L	8020		12/26/1994	2420
SURROGATE RESULTS	--						12/26/1994	2420
Bromofluorobenzene (SURR)	98			% Rec.	5030		12/26/1994	2420

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Client Name: Blaine Tech Services

Date: 01/05/1995

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Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 941215-J2

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials	Run Batch Number
	Standard % Recovery	Standard Amount Found	Standard Amount Expected				
TPH (Gas/BTEXE,Liquid)							
as Gasoline	114.0	1.14	1.00	mg/L	12/26/1994	jmh	2420
Benzene	106.6	5.33	5.00	ug/L	12/26/1994	jmh	2420
Toluene	101.2	5.06	5.00	ug/L	12/26/1994	jmh	2420
Ethylbenzene	107.8	5.39	5.00	ug/L	12/26/1994	jmh	2420
Xylenes (Total)	104.0	15.6	15.0	ug/L	12/26/1994	jmh	2420
Bromofluorobenzene (SURR)	110.0	110	100	% Rec.	12/26/1994	jmh	2420
TPH (Gas/BTEXE,Liquid)							
as Gasoline	112.0	1.12	1.00	mg/L	12/28/1994	jmh	2425
Benzene	92.0	4.60	5.00	ug/L	12/28/1994	jmh	2425
Toluene	89.6	4.48	5.00	ug/L	12/28/1994	jmh	2425
Ethylbenzene	99.8	4.99	5.00	ug/L	12/28/1994	jmh	2425
Xylenes (Total)	99.3	14.9	15.0	ug/L	12/28/1994	jmh	2425
Bromofluorobenzene (SURR)	111.0	111	100	% Rec.	12/28/1994	jmh	2425
TPH (Gas/BTEXE,Liquid)							
as Gasoline	107.0	1.07	1.00	mg/L	12/29/1994	jmh	2427
Benzene	114.4	5.72	5.00	ug/L	12/29/1994	jmh	2427
Toluene	90.0	4.50	5.00	ug/L	12/29/1994	jmh	2427
Ethylbenzene	97.0	4.85	5.00	ug/L	12/29/1994	jmh	2427
Xylenes (Total)	88.7	13.3	15.0	ug/L	12/29/1994	jmh	2427
Bromofluorobenzene (SURR)	89.0	89	100	% Rec.	12/29/1994	jmh	2427
TPH (Gas/BTEXE,Liquid)							
as Gasoline	103.0	1.03	1.00	mg/L	01/02/1995	lss	2432
Benzene	92.6	4.63	5.00	ug/L	01/02/1995	lss	2432
Toluene	101.2	5.06	5.00	ug/L	01/02/1995	lss	2432
Ethylbenzene	104.0	5.20	5.00	ug/L	01/02/1995	lss	2432
Xylenes (Total)	102.7	15.4	15.0	ug/L	01/02/1995	lss	2432
Bromofluorobenzene (SURR)	108.0	108	100	% Rec.	01/02/1995	lss	2432
TPH (Gas/BTEXE,Liquid)							
as Gasoline	98.0	0.98	1.00	mg/L	01/03/1995	aal	2444
Benzene	97.8	4.89	5.00	ug/L	01/03/1995	aal	2444
Toluene	94.6	4.73	5.00	ug/L	01/03/1995	aal	2444
Ethylbenzene	103.2	5.16	5.00	ug/L	01/03/1995	aal	2444
Xylenes (Total)	102.7	15.4	15.0	ug/L	01/03/1995	aal	2444
Bromofluorobenzene (SURR)	118.0	118	100	% Rec.	01/03/1995	aal	2444

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 94.06140

Date: 01/05/1995
ELAP Cert: 1386
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Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 941215-J2

METHOD BLANK REPORT

Parameter	Method			Date Analyzed	Analyst Initials	Run Batch Number
	Blank Amount Found	Reporting Limit	Units			
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	12/26/1994	jmh	2420
Benzene	ND	0.5	ug/L	12/26/1994	jmh	2420
Toluene	ND	0.5	ug/L	12/26/1994	jmh	2420
Ethylbenzene	ND	0.5	ug/L	12/26/1994	jmh	2420
Xylenes (Total)	ND	0.5	ug/L	12/26/1994	jmh	2420
Bromofluorobenzene (SURR)	70		% Rec.	12/26/1994	jmh	2420
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	12/28/1994	jmh	2425
Benzene	ND	0.5	ug/L	12/28/1994	jmh	2425
Toluene	ND	0.5	ug/L	12/28/1994	jmh	2425
Ethylbenzene	ND	0.5	ug/L	12/28/1994	jmh	2425
Xylenes (Total)	ND	0.5	ug/L	12/28/1994	jmh	2425
Bromofluorobenzene (SURR)	93		% Rec.	12/28/1994	jmh	2425
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	12/29/1994	jmh	2427
Benzene	ND	0.5	ug/L	12/29/1994	jmh	2427
Toluene	ND	0.5	ug/L	12/29/1994	jmh	2427
Ethylbenzene	ND	0.5	ug/L	12/29/1994	jmh	2427
Xylenes (Total)	ND	0.5	ug/L	12/29/1994	jmh	2427
Bromofluorobenzene (SURR)	105		% Rec.	12/29/1994	jmh	2427
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	12/31/1994	lss	2432
Benzene	ND	0.5	ug/L	12/31/1994	lss	2432
Toluene	ND	0.5	ug/L	12/31/1994	lss	2432
Ethylbenzene	ND	0.5	ug/L	12/31/1994	lss	2432
Xylenes (Total)	ND	0.5	ug/L	12/31/1994	lss	2432
Bromofluorobenzene (SURR)	105		% Rec.	12/31/1994	lss	2432
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	01/03/1995	aal	2444
Benzene	ND	0.5	ug/L	01/03/1995	aal	2444
Toluene	ND	0.5	ug/L	01/03/1995	aal	2444
Ethylbenzene	ND	0.5	ug/L	01/03/1995	aal	2444
Xylenes (Total)	ND	0.5	ug/L	01/03/1995	aal	2444
Bromofluorobenzene (SURR)	107		% Rec.	01/03/1995	aal	2444

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services

Client Acct: 1821

NET Job No: 94.06140

Date: 01/05/1995

ELAP Cert: 1386

Page: 11

Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 941215-J2

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike				Sample Conc.	Matrix Spike		Units	Date Analyzed	Run Batch	Sample Spiked
	Spike % Rec.	Dup % Rec.	RPD	Spike Amount		Spike Conc.	Dup. Conc.				
TPH (Gas/BTXE,Liquid)											231517
as Gasoline	84.0	92.0	9.1	1.00	ND	0.84	0.92	mg/L	12/26/1994	2420	231517
Benzene	74.5	78.2	4.8	24.3	ND	18.1	19.0	ug/L	12/26/1994	2420	231517
Toluene	78.0	85.2	8.8	87.8	ND	68.5	74.8	ug/L	12/26/1994	2420	231517
TPH (Gas/BTXE,Liquid)											231948
as Gasoline	113.0	115.0	1.8	1.00	ND	1.13	1.15	mg/L	12/28/1994	2425	231948
Benzene	104.0	105.8	1.7	22.6	ND	23.5	23.9	ug/L	12/28/1994	2425	231948
Toluene	101.8	104.2	2.3	83.8	ND	85.3	87.3	ug/L	12/28/1994	2425	231948
TPH (Gas/BTXE,Liquid)											231959
as Gasoline	109.0	106.0	2.8	1.00	ND	1.09	1.06	mg/L	12/28/1994	2425	231959
Benzene	98.2	97.3	0.9	22.6	ND	22.2	22.0	ug/L	12/28/1994	2425	231959
Toluene	99.9	95.3	4.7	83.8	ND	83.7	79.9	ug/L	12/28/1994	2425	231959
TPH (Gas/BTXE,Liquid)											232024
as Gasoline	97.0	103.0	5.9	1.00	ND	0.97	1.03	mg/L	12/29/1994	2427	232024
Benzene	93.4	99.4	6.2	36.1	ND	33.7	35.9	ug/L	12/29/1994	2427	232024
Toluene	92.0	98.1	6.4	104	ND	95.7	102	ug/L	12/29/1994	2427	232024
TPH (Gas/BTXE,Liquid)											231983
as Gasoline	106.0	106.0	0.0	1.00	ND	1.06	1.06	mg/L	12/31/1994	2432	231983
Benzene	107.1	107.1	0.0	21.1	ND	22.6	22.6	ug/L	12/31/1994	2432	231983
Toluene	107.1	106.8	0.3	84.9	ND	90.9	90.7	ug/L	12/31/1994	2432	231983
TPH (Gas/BTXE,Liquid)											232263
as Gasoline	109.0	105.0	3.7	1.00	ND	1.09	1.05	mg/L	01/03/1995	2444	232263
Benzene	98.6	102.8	4.1	21.1	ND	20.8	21.7	ug/L	01/03/1995	2444	232263
Toluene	111.4	110.3	1.0	72.7	ND	81.0	80.2	ug/L	01/03/1995	2444	232263

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



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. Actual reporting limits and results have been multiplied by the listed dilution factor. Do not multiply the reporting limits or reported values by the dilution factor.
- dw : Result expressed as dry weight.
- 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 the applicable listed reporting limit.
- NTU : Nephelometric turbidity units.
- RPD : Relative percent difference, $100 \text{ [Value 1 - Value 2] / mean value}$.
- 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 501 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., Rev. 1, December 1987.

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

COOLER RECEIPT FORM

Project: Shell, W. MacArthur Blvd Oak land Log No: 4514
Cooler received on: 12/17/94 and checked on 12/17/94 by Kim S. Danner
IC SK
(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 -0.3°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:*

OK

Sample descriptor:

Number of vials:

~~_____~~
~~_____~~
~~_____~~
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~~_____~~
~~_____~~
~~_____~~
~~_____~~

*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 #: 94121502	Wic # 204-5508-0703
Sampler: J.G.	Date Sampled: 12/15/94
Well I.D.: MW-1	Well Diameter: (circle one) 2 3 4 6
Total Well Depth: Before 29.43 After	Depth to Water: Before 12.98 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to:	PVC Grade Other --

Volume Conversion Factor (VCF):
 $VCF = (d^2/4) \times \pi / 2.31$
 where
 V = Volume
 d = diameter (in.)
 π = 3.1416
 2.31 = 2.31 ft³/gal

Well dia.	VCF
2"	0.26
3"	0.57
4"	0.88
6"	1.67
8"	3.00
10"	4.60
12"	6.67

<u>10.6</u>	x	<u>3</u>	=	<u>31.8</u>
1 Case Volume		Specified Volumes		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:
12:28	66.2	7.2	600	54.	11	
12:31	67.0	7.1	600	21.	22	
12:33	67.5	7.1	610	50.	33	

Did Well Dewater? **NO** If yes, gals. Gallons Actually Evacuated: **33**

Sampling Time: **12:38**

Sample I.D.: **MW-1** Laboratory: **NET**

Analyzed for: **TPAG, BTEX**

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

Analyzed for:

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 94121502	Wic # 204-5508-0703
Sampler: J.G.	Date Sampled: 12/15/94
Well I.D.: MW-3	Well Diameter: (circle one) 2 3 4 6
Total Well Depth: Before 28.12 After	Depth to Water: Before 13.80 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to:	(PVC) Grade Other --

Volume Conversion Factor (VCF):

$$VCF = (d^2/4) \times \pi / 2.31$$
 Where
 2.31 = in/foot
 d = diameter (in.)
 $\pi = 3.1416$
 2.31 = 12in/ft

Well dia.	VCF
2"	0.16
3"	0.37
4"	0.68
6"	1.47
10"	4.08
12"	6.67

<u>9.3</u>	x	<u>3</u>	=	<u>27.9</u>
1 Case Volume		Specified Volumes		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:
11:57	67.0	7.6	800	36.	10	
11:59	68.6	7.5	600	118.	20	
12:01	70.0	7.4	600	69.	30	

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

Sampling Time: 12:10

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

Analyzed for: TPH, BTEX

Duplicate I.D.: _____ Cleaning Blank I.D.: E.B. @

Analyzed for: TPH, BTEX

Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 94121502	Wic # 204-5508-0703
Sampler: J.C.	Date Sampled: 12/10/94
Well I.D.: MW-4	Well Diameter: (circle one) 2 3 4 6
Total Well Depth: Before 24.03 After	Depth to Water: Before 13.43 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC	Grade Other --

Volume Conversion Factor (VCF):
 $VCF = (d^2/1) \times \pi / 231$
 Where
 d = diameter (in.)
 $\pi = 3.1416$
 $231 = \text{in}^3/\text{gal}$

Well dia.	VCF
2"	0.16
3"	0.37
4"	0.68
6"	1.57
8"	3.08
12"	7.97

6.8	x	3	=	20.4
1 Case Volume		Specified Volumes		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:
13:29	68.2	7.2	1000	78.	7	
13:31	69.0	7.0	1000	54.	14	
13:33	69.8	7.0	1000	43.	21	

Did Well Dewater? **NO** If yes, gals. Gallons Actually Evacuated: **21**

Sampling Time: **13:40**

Sample I.D.: **MW-4** Laboratory: **NET**

Analyzed for: **TPHG, BTEX**

Duplicate I.D.: **DUP @ 13:40** Cleaning Blank I.D.:

Analyzed for: **TPHG, BTEX**

Shipping Notations:

Additional Notations: