Weiss Associates *Environmental and Geologic Services*

5500 Shellmound Street, Emeryville, CA 94608-2411 *Fax: 510-547-5043* *Phone:* ***510-450-6000***

November 8, 1994

Juliet Shin
Alameda County Department of
Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621-1426

Re: Shell Service Station
WIC #204-0072-0403
1601 Webster Street
Alameda, California 94501
WA Job #81-0434-104

Dear Ms. Shin:

This letter describes recently completed and anticipated activities at the Shell service station referenced above (Figure 1). This status report satisfies the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Chapter 3, Subchapter 16, Article 5, Section 2652.d. Included below are descriptions and results of activities performed in the third quarter 1994 and proposed work for the fourth quarter 1994.

Third Quarter 1994 Activities:

- WA has received your letter of August 1, 1994 and both Shell and WA believe that there are limited drilling locations available for an additional well northeast of well MW-2. However, we are preparing a workplan addressing ground water oxygenation at the site.

- Blaine Tech Services, Inc. (BTS) of San Jose, California measured ground water depths and collected water samples from the site wells. BTS' report describing these sampling activities and presenting analytic results for ground water is included as Attachment A.

- WA compiled the ground water elevation and analytic data (Tables 1 and 2) and prepared a ground water elevation contour map (Figure 2).

Anticipated Fourth Quarter 1994 Activities:

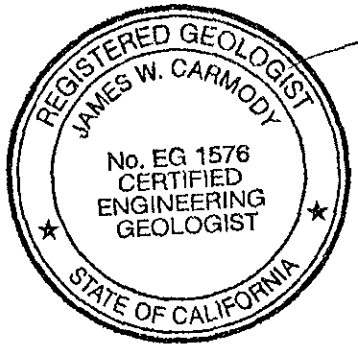
- WA may implement ground water remediation at the site once our workplan is approved and permits are obtained.
- WA will submit a report presenting the results of the fourth quarter 1994 ground water sampling and depth measurements. The report will include tabulated chemical analytic results and a ground water elevation contour map.

Conclusions and Recommendations:

WA recommends continued ground water sampling according to the frequencies described in our second quarter report. This frequency is sufficient to monitor hydrocarbon and dissolved oxygen concentrations and the ground water flow direction at the site.

Please call if you have any questions.

Sincerely,
Weiss Associates



J. Michael Asport
Staff Scientist I

James W. Carmody, C.E.G.
Senior Project Hydrogeologist

JMA/JWC:mb
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Attachments: A - Blaine Tech's Associates' Ground Water Monitoring Report

cc: Dan Kirk, Shell Oil Company, P.O. Box 4023, Concord, California 94524
John Jang, Regional Water Quality Control Board - San Francisco Bay, 2101 Webster Street, Suite 500, Oakland, California 94612

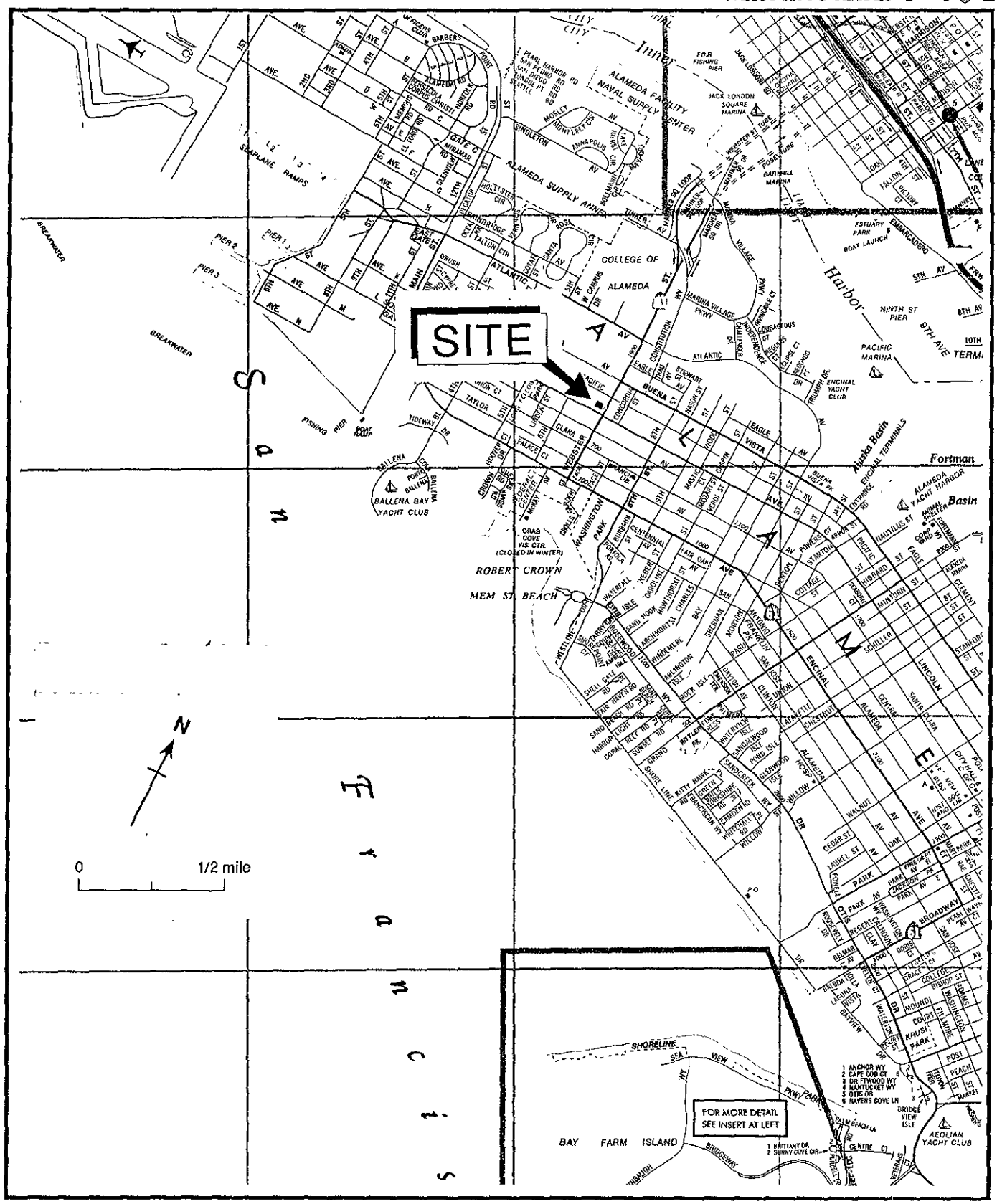

Figure 1. Site Location Map - Shell Service Station, WIC# 204-0072-0403, 1601 Webster Street, Alameda, CA

8/20/90

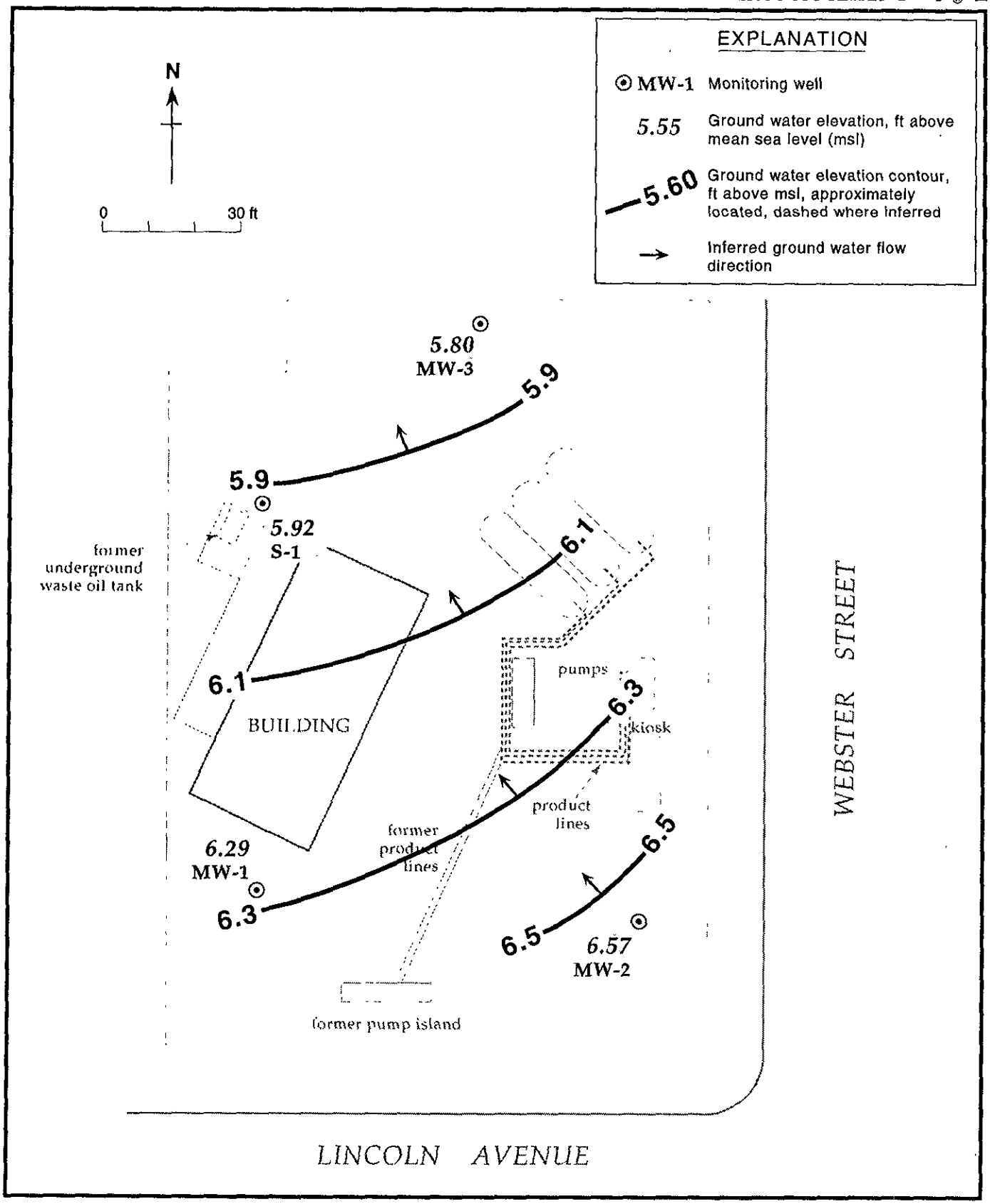

Figure 2. Monitoring Well Locations and Ground Water Elevations - July 26, 1994 - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

TABLE 1. Ground Water Elevations - Shell Service Station WIC #204-0072-0403, 1601 Webster Street Alameda, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-1	04/11/90	**13.80**	8.22	5.58
	07/18/90		9.14	4.66
	10/18/90		10.37	3.43
	01/25/91		10.41	3.39
	04/11/91		7.37	6.43
	07/18/91		8.86	4.94
	10/17/91		10.47	3.33
	01/24/92		9.18	4.62
	04/23/92		6.95	6.85
	07/22/92		8.01	5.79
	10/02/92		9.81	3.99
	01/05/93		7.26	6.54
	04/08/93	**13.80**[a]	5.85	7.95
	07/20/93		6.83	6.97
	10/15/93		8.07	5.73
	01/07/94		7.82	5.98
	04/13/94		6.91	6.89
	07/26/94		**7.51**	**6.29**
MW-2	04/11/90	**13.20**	7.69	5.51
	07/18/90		8.56	4.64
	10/18/90		9.76	3.44
	01/25/91		9.78	3.42
	04/11/91		6.87	6.33
	07/18/91		8.27	4.93
	10/17/91		9.89	3.31
	01/24/92		8.60	4.60
	04/23/92		6.48	6.72
	07/02/92		7.37	5.83
	10/02/92		9.20	4.00
	01/05/93		6.80	6.40
	04/08/93	**13.20**[a]	5.40	7.80
	07/20/93		6.05	7.15
	10/15/93		7.04	6.16
	01/07/94		6.99	6.21
	04/13/94		6.20	7.00
	07/26/94		**6.63**	**6.57**
MW-3	04/08/93	**12.80**	5.48	7.32
	07/20/93		6.38	6.42
	10/15/93		7.53	5.27
	01/07/94		7.38	5.42

-- Table 1 continued on next page --

TABLE 1. Ground Water Elevations - Shell Service Station WIC #204-0072-0403, 1601 Webster Street Alameda, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	04/13/94		6.50	6.30
	07/26/94		**7.00**	**5.80**
S-1	09/11/89	**13.77**	9.82	3.95
	04/11/90		8.41	5.36
	07/18/90		9.31	4.46
	10/18/90		10.43	3.34
	01/25/91		10.49	3.28
	04/11/91		7.68	6.09
	07/18/91		8.95	4.82
	10/17/91		10.62	3.15
	01/24/92		9.32	4.45
	04/23/92		7.27	6.50
	07/02/92		8.19	5.58
	10/02/92		9.95	3.82
	01/05/93		7.64	6.13
	04/08/93	**13.74**[a]	6.10	7.64
	07/20/93		7.18	6.56
	10/15/93		8.39	5.35
	01/07/94		8.19	5.55
	04/13/94		7.22	6.52
	07/26/94		**7.82**	**5.92**

Notes:

a = Top of casing resurveyed on March 30, 1993

Table 2. Analytic Results for Ground Water - Shell Service Station, WIC #204-0072-0403, 1601 Webster Street, Alameda, California

Sample ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X	c-1,2-DCE	1,2-DCA	TOG
			<----------parts per billion (ug/L)---------->								
MW-1	04-11-90	8.22	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10,000
	07-18-90	9.14	<50	---	<0.5	<0.5	<0.5	<0.5	3	<0.5	<5,000
	10-18-90	10.37	<50	---	<0.5	<0.5	<0.5	<0.5	7.9	<0.5	<5,000
	01-25-91	10.41	<50	---	<0.5	<0.5	<0.5	<0.5	5.6	<0.5	---
	04-11-91	7.37	<50	---	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	---
	07-18-91	8.86	<50	---	<0.5	<0.5	<0.5	<0.5	4.4	<0.5	---
	10-17-91	10.47	<50	---	<0.5	<0.5	<0.5	<0.5	7.2	<0.5	---
	01-24-92	9.18	<50	---	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	---
	04-23-92	6.95	<50		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	07-02-92	8.01	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	10-02-92	9.81	<50	---	<0.5	<0.5	<0.5	<0.5	2	<0.5	---
	01-05-93	7.26	<50	---	<0.5	<0.5	<0.5	<0.5	2	<0.5	---
	04-08-93[a]	5.85	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	07-20-93[b]	6.83	<50	---	<0.5	<0.5	<0.5	<0.5	0.76	<0.5	---
	10-15-93	8.07	<50	---	<0.5	<0.5	<0.5	<0.5	0.71	<0.5	---
	01-07-94	7.82	<50	---	<0.5	<0.5	<0.5	<0.5	3.1	0.85	---
	04-13-94	6.91	<50	---	<0.5	<0.5	<0.5	<0.5	3.6	0.95	---
	07-26-94	**7.51**	**<50**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.4**	**<0.4**	**---**
MW-2	04-11-90	7.69	580	430	20	1.2	4.9	73	<0.5	1.1	<10,000
	07-18-90	8.56	1,400	---	110	71	310	310	<0.5	0.7	<5,000
	10-18-90	9.76	1,900	1,300[c]	110	89	470	400	<0.5	0.9	<5,000
	01-25-91	9.78	8,100	---	430	480	1,200	2,600	<0.5	0.8	---
	04-11-91	6.87	2,600	---	130	250	150	330	<0.5	<0.5	---
	07-15-91	8.27	1,300	---	100	84	59	120	<0.5	0.8	---
	10-17-91	9.89	2,100	---	180	150	260	520	<0.5	0.6	---
	01-24-92	8.60	7,100	---	450	960	450	1,600	110	<0.5	---
	04-23-92	6.48	16,000	---	320	650	740	2,600	<2.5	<2.5	---
	07-02-92	7.37	33,000	---	2,500	2,000	3,700	9,600	<50	<50	---
	10-02-92	9.20	7,000	---	960	570	650	1,200	<50	<50	---
	01-05-93	6.80	8,900	---	550	600	500	1,900	<2	<2	---
	04-08-93	5.40	13,000	---	670	900	580	2,900	0.68	<0.5	---
	04-08-93[dup]	5.40	13,000	---	830	1,100	740	3,700	0.64	<0.5	---

-- Table 2 continued on next page --

Table 2. Analytic Results for ground Water - Shell Service Station, WIC #204-0072-0403, 1601 Webster Street Alameda, California

Sample ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X	c-1,2-DCE	1,2-DCA	TOG
			<----------parts per billion (ug/L)---------->								
	07-20-93	6.05	10,000	---	1,200	1,100	630	4,000	0.87	<0.5	---
	07-20-93[dup]	6.05	12,000	---	1,200	1,100	600	3,800	0.80	<0.5	---
	10-15-93	7.04	24,000	---	1,400	1,200	3,400	5,200	<0.5	<0.5	---
	10-15-93[dup]	7.04	19,000	---	1,200	1,000	2,800	4,400	<0.5	<0.5	---
	01-07-94	6.99	27,000	---	1,300	1,900	2,700	7,900	<10	<10	---
	01-07-94[dup]	6.99	33,000	---	1,100	1,700	2,300	6,900	<10	<10	---
	04-13-94	6.20	16,000	---	460	820	93	2,700	<25	<25	---
	04-13-94[dup]	6.20	18,000	---	500	880	100	3,000	<25	<25	---
	07-26-94	**6.63**	**25,000**	**---**	**1,600**	**1,500**	**1,500**	**6,800**	**<0.4**	**<0.4**	**---**
	07-26-94[dup]	**6.63**	**28,000**	**---**	**1,700**	**1,600**	**1,600**	**7,300**	**<0.4**	**<0.4**	**---**
MW-3	02-25-93	5.37	58	140	<0.5	2.5	<0.5	6.4	<0.5	1.5	<5,000
	04-08-93	5.48	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	07-20-93[d]	6.38	<50	---	1.2	<0.5	<0.5	<0.5	<0.5	2.8	---
	10-15-93[e]	7.53	60	---	<0.5	<0.5	<0.5	<0.5	<0.5	0.55	---
	01-07-94	7.38	74	---	<0.5	<0.5	<0.5	0.76	<0.5	0.91	---
	04-13-94	6.50	<50	---	<0.5	<0.5	<0.5	<0.5	<1.3	<1.3	---
	07-26-94	**7.00**	**750[f]**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.4**	**<0.4**	**---**
S-1	09-04-87[g]		---	---	<5	<5	<5	<5	<0.5	<0.5	---
	09-11-89[h]	9.82	<50	<100	<0.5	<1	<1	<3	<0.5	<0.5	<1,000
	04-11-90	8.41	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10,000
	07-18-90	9.31	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5,000
	10-18-90	10.43	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5,000
	01-25-91	10.49	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	04-11-91	7.68	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07-18-91	8.95	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10-17-91	10.62	<50	---	<0.5	<0.5	<0.5	<5	---	---	---
	01-24-92	9.32	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	04-23-92	7.27	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07-02-92	8.19	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10-02-92	9.95	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	01-05-93	7.64	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	04-08-93	6.10	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---

-- Table 2 continued on next page --

Table 2. Analytic Results for ground Water - Shell Service Station, WIC #204-0072-0403, 1601 Webster Street Alameda, California

Sample ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X	c-1,2-DCE	1,2-DCA	TOG
			<----------parts per billion (ug/L)---------->								
	07-20-93	7.18	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10-15-93	8.39	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	01-07-94	8.19	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	04-13-94	7.22	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07-26-94	**7.82**	**<50**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**---**	**---**	**---**
Trip	07-18-90		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
Blank	10-18-90		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	01-25-91		<50	---	<0.5	<0.5	<0.5	0.8	---	---	---
	04-11-91		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07-18-91		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10-17-91		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	01-24-92		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	04-23-92		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07-02-92		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10-02-92		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	01-05-93		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	04-08-93		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07-20-93		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10-15-93		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	01-07-94		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	04-13-94		<50	---	<0.5	<0.5	<0.5[1]	<0.5	---	---	---
	07-26-94		**<50**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**---**	**---**	**---**
DTSC MCLs			NE	NE	1	**680**	**100j**	**1,750**	**6.0**	**0.5**	NE

-- Table 2 continued on next page --

TABLE 2. Analytic Results for ground Water - Shell Service Station, WIC #204-0072-0403, 1601 Webster Street Alameda, California

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
B = Benzene by EPA Method 602, 624, or 8020
E = Ethylbenzene by EPA Method 602, 624, or 8020
T = Toluene by EPA Method 602, 624, or 8020
X = Xylenes by EPA Method 602, 624, or 8020
c-1,2-DCE = cis-1,2-dichloroethene by EPA Method 601 or 624
1,2-DCA = 1,2-dichloroethane by EPA Method 601 or 624
TOG = Total non-polar oil and grease by American Public Health Association Standard Method 503E
<n = Not detected at detection limit of n ppb
DTSC MCL = California Department of Toxic Substances Control maximum contaminant level for drinking water
NE = Not established
--- = Not analyzed
dup = Duplicate sample

Notes:

a = Chloroform detected at 0.0071 ppm by EPA Method 8010
b = Chloroform detected at 1.1 ppb by EPA Method 8010
d = Chloroform detected at 1.5 ppb by EPA Method 8010
c = Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline
e = Chloroform detected at 3.6 ppb by Method 8010
f = The result for Gasoline in and unknown hydrocarbon which consists of a single peak.
g = 0.12 ppm acetone detected by EPA Method 624; no other volatile organic compounds detected
h = Metals detected by EPA Method 6010; 0.020 ppm chromium, 0.060 ppm lead and 0.030 ppm zinc; no cadmium detected above detection limit of 0.010 ppm; no PCBs or semi-volatile compounds detected by EPA Method 625
i =0.54 ppb Toluene detected in equipment blank
j = DTSC recommended action level for drinking water; MCL not established

ATTACHMENT A

GROUND WATER MONITORING REPORT AND ANALYTIC REPORT

BLAINE
TECH SERVICES INC.

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

August 15, 1994

Shell Oil Company
P.O. Box 5278
Concord, CA 94520-9998

Attn: Daniel T. Kirk

SITE:
Shell WIC #204-0072-0403
1601 Webster Street
Alameda, California

QUARTER:
3rd quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 940726-Y-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 obtained 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 site 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: Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608-2411
ATTN: Michael Asport

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	7/26/94	TOC	–	NONE	–	–	7.51	20.70
MW-2 *	7/26/94	TOC	–	NONE	–	–	6.63	19.82
MW-3	7/26/94	TOC	–	NONE	–	–	7.00	19.38
S-1	7/26/94	TOC	–	NONE	–	–	7.82	19.75

* Sample DUP was a duplicate sample taken from well MW-2.

1624

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 940726-X1

Date: 7/26
Page 1 of 1

Site Address: 1601 Webster Street, Alameda

WIC#: 204-0072-0403

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: Joe Carrera
Printed Name: JOE Correra.

Analysis Required

LAB: NET Pacific.

CHECK ONE (1) BOX ONLY	CT/DT
Quarterly Monitoring [X]	5461
Site Investigation [ ]	5441
Soil Classify/Disposal [ ]	5442
Water Classify/Disposal [ ]	5443
Soil/Air Rem. or Sys. O & M [ ]	5452
Water Rem. or Sys. O & M [ ]	5453
Other [ ]	

TURN AROUND TIME
24 hours [ ]
48 hours [ ]
16 days [X] (Normal)
Other [ ] ____

NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.

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	EPA 601	Total DISOLVED Solids	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW-1	7/26			X		7						X	X	X						
MW-2				X		7						X	X	X						
MW-3				X		7						X	X	X						
S-1				X		7						X		X						
EQUIP Blank				X		7						X	X							CUSTODY SEALED 7/27/94 [signature]
Dup.				X		7						X	X	X						
Trip Blank				X		2						X	X							seal intact

Relinquished By (signature):	Printed Name:	Date / Time:	Received (signature):	Printed Name:	Date / Time:
[signature]	JOE CARRERA.	Date: 7/27/94 Time: 12:40	[signature]	GP LUMBRE	Date: 7/27/94 Time: 12:40
[signature]	GP LUMBRE	Date: 7/27/94 Time: 18:00			Date: Time:
(via overs)		Date: Time:	[signature]	K. Temple	Date: 7/28/94 Time: [illegible]

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

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: 08/11/1994
NET Client Acct. No: 1821
NET Pacific Job No: 94.03279
Received: 07/28/1994
REVISED: 08/15/1994

Client Reference Information

SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

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)

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

SAMPLE DESCRIPTION: MW-1
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210384

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
Tot. Dissolved Solids (TFR)	550,000		10,000	ug/L	160.1		07/29/1994
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/04/1994
DILUTION FACTOR*	1						08/04/1994
as Gasoline	ND		50	ug/L	5030		08/04/1994
Carbon Range:	--						08/04/1994
METHOD 8020 (GC,Liquid)	--						08/04/1994
Benzene	ND		0.5	ug/L	8020		08/04/1994
Toluene	ND		0.5	ug/L	8020		08/04/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/04/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/04/1994
SURROGATE RESULTS	--						08/04/1994
Bromofluorobenzene (SURR)	86			% Rec.	5030		08/04/1994

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

SAMPLE DESCRIPTION: MW-1
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210384

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD 601 (GC,Liquid)							
DILUTION FACTOR*	1						08/03/1994
Bromodichloromethane	ND		0.4	ug/L	601		08/03/1994
Bromoform	ND		0.4	ug/L	601		08/03/1994
Bromomethane	ND		0.4	ug/L	601		08/03/1994
Carbon tetrachloride	ND		0.4	ug/L	601		08/03/1994
Chlorobenzene	ND		0.4	ug/L	601		08/03/1994
Chloroethane	ND		0.4	ug/L	601		08/03/1994
2-Chloroethylvinyl ether	ND		1.0	ug/L	601		08/03/1994
Chloroform	ND		0.4	ug/L	601		08/03/1994
Chloromethane	ND		0.4	ug/L	601		08/03/1994
Dibromochloromethane	ND		0.4	ug/L	601		08/03/1994
1,2-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
1,3-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
1,4-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
Dichlorodifluoromethane	ND		0.4	ug/L	601		08/03/1994
1,1-Dichloroethane	ND		0.4	ug/L	601		08/03/1994
1,2-Dichloroethane	ND		0.4	ug/L	601		08/03/1994
1,1-Dichloroethene	ND		0.4	ug/L	601		08/03/1994
trans-1,2-Dichloroethene	ND		0.4	ug/L	601		08/03/1994
1,2-Dichloropropane	ND		0.4	ug/L	601		08/03/1994
cis-1,3-Dichloropropene	ND		0.4	ug/L	601		08/03/1994
trans-1,3-Dichloropropene	ND		0.4	ug/L	601		08/03/1994
Methylene chloride	ND		10	ug/L	601		08/03/1994
1,1,2,2-Tetrachloroethane	ND		0.4	ug/L	601		08/03/1994
Tetrachloroethene	ND		0.4	ug/L	601		08/03/1994
1,1,1-Trichloroethane	ND		0.4	ug/L	601		08/03/1994
1,1,2-Trichloroethane	ND		0.4	ug/L	601		08/03/1994
Trichloroethene	ND		0.4	ug/L	601		08/03/1994
Trichlorofluoromethane	ND		0.4	ug/L	601		08/03/1994
Vinyl chloride	ND		0.4	ug/L	601		08/03/1994
SURROGATE RESULTS	--						08/03/1994
1,4-Difluorobenzene (SURR)	95			% Rec.	601		08/03/1994
1,4-Dichlorobutane (SURR)	104			% Rec.	601		08/03/1994

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

SAMPLE DESCRIPTION: MW-2
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210385

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
Tot. Dissolved Solids (TFR)	630,000		10,000	ug/L	160.1		07/29/1994
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/05/1994
DILUTION FACTOR*	100						08/05/1994
as Gasoline	25,000		5,000	ug/L	5030		08/05/1994
Carbon Range:	C5-C14						08/05/1994
METHOD 8020 (GC,Liquid)	--						08/05/1994
Benzene	1,600		50	ug/L	8020		08/05/1994
Toluene	1,500		50	ug/L	8020		08/05/1994
Ethylbenzene	1,500		50	ug/L	8020		08/05/1994
Xylenes (Total)	6,800		50	ug/L	8020		08/05/1994
SURROGATE RESULTS	--						08/05/1994
Bromofluorobenzene (SURR)	100			% Rec.	5030		08/05/1994

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

SAMPLE DESCRIPTION: MW-2
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210385

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD 601 (GC,Liquid)							
DILUTION FACTOR*	1						08/03/1994
Bromodichloromethane	ND		0.4	ug/L	601		08/03/1994
Bromoform	ND		0.4	ug/L	601		08/03/1994
Bromomethane	ND		0.4	ug/L	601		08/03/1994
Carbon tetrachloride	ND		0.4	ug/L	601		08/03/1994
Chlorobenzene	ND		0.4	ug/L	601		08/03/1994
Chloroethane	ND		0.4	ug/L	601		08/03/1994
2-Chloroethylvinyl ether	ND		1.0	ug/L	601		08/03/1994
Chloroform	ND		0.4	ug/L	601		08/03/1994
Chloromethane	ND		0.4	ug/L	601		08/03/1994
Dibromochloromethane	ND		0.4	ug/L	601		08/03/1994
1,2-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
1,3-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
1,4-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
Dichlorodifluoromethane	ND		0.4	ug/L	601		08/03/1994
1,1-Dichloroethane	ND		0.4	ug/L	601		08/03/1994
1,2-Dichloroethane	ND		0.4	ug/L	601		08/03/1994
1,1-Dichloroethene	ND		0.4	ug/L	601		08/03/1994
trans-1,2-Dichloroethene	ND		0.4	ug/L	601		08/03/1994
1,2-Dichloropropane	ND		0.4	ug/L	601		08/03/1994
cis-1,3-Dichloropropene	ND		0.4	ug/L	601		08/03/1994
trans-1,3-Dichloropropene	ND		0.4	ug/L	601		08/03/1994
Methylene chloride	ND		10	ug/L	601		08/03/1994
1,1,2,2-Tetrachloroethane	ND		0.4	ug/L	601		08/03/1994
Tetrachloroethene	ND		0.4	ug/L	601		08/03/1994
1,1,1-Trichloroethane	ND		0.4	ug/L	601		08/03/1994
1,1,2-Trichloroethane	ND		0.4	ug/L	601		08/03/1994
Trichloroethene	ND		0.4	ug/L	601		08/03/1994
Trichlorofluoromethane	ND		0.4	ug/L	601		08/03/1994
Vinyl chloride	ND		0.4	ug/L	601		08/03/1994
SURROGATE RESULTS	--						08/03/1994
1,4-Difluorobenzene (SURR)	96			% Rec.	601		08/03/1994
1,4-Dichlorobutane (SURR)	88			% Rec.	601		08/03/1994

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

SAMPLE DESCRIPTION: MW-3
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210386

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
Tot. Dissolved Solids (TFR)	650,000		10,000	ug/L	160.1		07/29/1994
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/05/1994
DILUTION FACTOR*	1						08/05/1994
as Gasoline	750	G1	50	ug/L	5030		08/05/1994
Carbon Range:	CS						08/05/1994
METHOD 8020 (GC,Liquid)	--						08/05/1994
Benzene	ND		0.5	ug/L	8020		08/05/1994
Toluene	ND		0.5	ug/L	8020		08/05/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/05/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/05/1994
SURROGATE RESULTS	--						08/05/1994
Bromofluorobenzene (SURR)	98			% Rec.	5030		08/05/1994

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

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

SAMPLE DESCRIPTION: MW-3
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210386

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD 601 (GC,Liquid)							
DILUTION FACTOR*	1						08/03/1994
Bromodichloromethane	ND		0.4	ug/L	601		08/03/1994
Bromoform	ND		0.4	ug/L	601		08/03/1994
Bromomethane	ND		0.4	ug/L	601		08/03/1994
Carbon tetrachloride	ND		0.4	ug/L	601		08/03/1994
Chlorobenzene	ND		0.4	ug/L	601		08/03/1994
Chloroethane	ND		0.4	ug/L	601		08/03/1994
2-Chloroethylvinyl ether	ND		1.0	ug/L	601		08/03/1994
Chloroform	ND		0.4	ug/L	601		08/03/1994
Chloromethane	ND		0.4	ug/L	601		08/03/1994
Dibromochloromethane	ND		0.4	ug/L	601		08/03/1994
1,2-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
1,3-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
1,4-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
Dichlorodifluoromethane	ND		0.4	ug/L	601		08/03/1994
1,1-Dichloroethane	ND		0.4	ug/L	601		08/03/1994
1,2-Dichloroethane	ND		0.4	ug/L	601		08/03/1994
1,1-Dichloroethene	ND		0.4	ug/L	601		08/03/1994
trans-1,2-Dichloroethene	ND		0.4	ug/L	601		08/03/1994
1,2-Dichloropropane	ND		0.4	ug/L	601		08/03/1994
cis-1,3-Dichloropropene	ND		0.4	ug/L	601		08/03/1994
trans-1,3-Dichloropropene	ND		0.4	ug/L	601		08/03/1994
Methylene chloride	ND		10	ug/L	601		08/03/1994
1,1,2,2-Tetrachloroethane	ND		0.4	ug/L	601		08/03/1994
Tetrachloroethene	ND		0.4	ug/L	601		08/03/1994
1,1,1-Trichloroethane	ND		0.4	ug/L	601		08/03/1994
1,1,2-Trichloroethane	ND		0.4	ug/L	601		08/03/1994
Trichloroethene	ND		0.4	ug/L	601		08/03/1994
Trichlorofluoromethane	ND		0.4	ug/L	601		08/03/1994
Vinyl chloride	ND		0.4	ug/L	601		08/03/1994
SURROGATE RESULTS	--						08/03/1994
1,4-Difluorobenzene (SURR)	97			% Rec.	601		08/03/1994
1,4-Dichlorobutane (SURR)	85			% Rec.	601		08/03/1994

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

SAMPLE DESCRIPTION: S-1
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210387

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
Tot. Dissolved Solids (TFR)	63,000		10,000	ug/L	160.1		07/29/1994
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/04/1994
DILUTION FACTOR*	1						08/04/1994
as Gasoline	ND		50	ug/L	5030		08/04/1994
Carbon Range:	--						08/04/1994
METHOD 8020 (GC,Liquid)	--						08/04/1994
Benzene	ND		0.5	ug/L	8020		08/04/1994
Toluene	ND		0.5	ug/L	8020		08/04/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/04/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/04/1994
SURROGATE RESULTS	--						08/04/1994
Bromofluorobenzene (SURR)	93			% Rec.	5030		08/04/1994

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

SAMPLE DESCRIPTION: Equip. Blank
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210388

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/04/1994
DILUTION FACTOR*	1						08/04/1994
as Gasoline	ND		50	ug/L	5030		08/04/1994
Carbon Range:	--						08/04/1994
METHOD 8020 (GC,Liquid)	--						08/04/1994
Benzene	ND		0.5	ug/L	8020		08/04/1994
Toluene	ND		0.5	ug/L	8020		08/04/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/04/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/04/1994
SURROGATE RESULTS	--						08/04/1994
Bromofluorobenzene (SURR)	85			% Rec.	5030		08/04/1994

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

SAMPLE DESCRIPTION: Equip. Blank
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210388

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD 601 (GC,Liquid)							
DILUTION FACTOR*	1						08/03/1994
Bromodichloromethane	ND		0.4	ug/L	601		08/03/1994
Bromoform	ND		0.4	ug/L	601		08/03/1994
Bromomethane	ND		0.4	ug/L	601		08/03/1994
Carbon tetrachloride	ND		0.4	ug/L	601		08/03/1994
Chlorobenzene	ND		0.4	ug/L	601		08/03/1994
Chloroethane	ND		0.4	ug/L	601		08/03/1994
2-Chloroethylvinyl ether	ND		1.0	ug/L	601		08/03/1994
Chloroform	ND		0.4	ug/L	601		08/03/1994
Chloromethane	ND		0.4	ug/L	601		08/03/1994
Dibromochloromethane	ND		0.4	ug/L	601		08/03/1994
1,2-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
1,3-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
1,4-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
Dichlorodifluoromethane	ND		0.4	ug/L	601		08/03/1994
1,1-Dichloroethane	ND		0.4	ug/L	601		08/03/1994
1,2-Dichloroethane	ND		0.4	ug/L	601		08/03/1994
1,1-Dichloroethene	ND		0.4	ug/L	601		08/03/1994
trans-1,2-Dichloroethene	ND		0.4	ug/L	601		08/03/1994
1,2-Dichloropropane	ND		0.4	ug/L	601		08/03/1994
cis-1,3-Dichloropropene	ND		0.4	ug/L	601		08/03/1994
trans-1,3-Dichloropropene	ND		0.4	ug/L	601		08/03/1994
Methylene chloride	ND		10	ug/L	601		08/03/1994
1,1,2,2-Tetrachloroethane	ND		0.4	ug/L	601		08/03/1994
Tetrachloroethene	ND		0.4	ug/L	601		08/03/1994
1,1,1-Trichloroethane	ND		0.4	ug/L	601		08/03/1994
1,1,2-Trichloroethane	ND		0.4	ug/L	601		08/03/1994
Trichloroethene	ND		0.4	ug/L	601		08/03/1994
Trichlorofluoromethane	ND		0.4	ug/L	601		08/03/1994
Vinyl chloride	ND		0.4	ug/L	601		08/03/1994
SURROGATE RESULTS	--						08/03/1994
1,4-Difluorobenzene (SURR)	94			% Rec.	601		08/03/1994
1,4-Dichlorobutane (SURR)	76			% Rec.	601		08/03/1994

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

SAMPLE DESCRIPTION: DUP
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210389

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
Tot. Dissolved Solids (TFR)	650,000		10,000	ug/L	160.1		07/29/1994
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/05/1994
DILUTION FACTOR*	100						08/05/1994
as Gasoline	28,000		5,000	ug/L	5030		08/05/1994
Carbon Range:	C5-C14						08/05/1994
METHOD 8020 (GC,Liquid)	--						08/05/1994
Benzene	1,700		50	ug/L	8020		08/05/1994
Toluene	1,600		50	ug/L	8020		08/05/1994
Ethylbenzene	1,600		50	ug/L	8020		08/05/1994
Xylenes (Total)	7,300		50	ug/L	8020		08/05/1994
SURROGATE RESULTS	--						08/05/1994
Bromofluorobenzene (SURR)	95			% Rec.	5030		08/05/1994

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

SAMPLE DESCRIPTION: DUP
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210389

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD 601 (GC,Liquid)							
DILUTION FACTOR*	1						08/03/1994
Bromodichloromethane	ND		0.4	ug/L	601		08/03/1994
Bromoform	ND		0.4	ug/L	601		08/03/1994
Bromomethane	ND		0.4	ug/L	601		08/03/1994
Carbon tetrachloride	ND		0.4	ug/L	601		08/03/1994
Chlorobenzene	ND		0.4	ug/L	601		08/03/1994
Chloroethane	ND		0.4	ug/L	601		08/03/1994
2-Chloroethylvinyl ether	ND		1.0	ug/L	601		08/03/1994
Chloroform	ND		0.4	ug/L	601		08/03/1994
Chloromethane	ND		0.4	ug/L	601		08/03/1994
Dibromochloromethane	ND		0.4	ug/L	601		08/03/1994
1,2-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
1,3-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
1,4-Dichlorobenzene	ND		0.4	ug/L	601		08/03/1994
Dichlorodifluoromethane	ND		0.4	ug/L	601		08/03/1994
1,1-Dichloroethane	ND		0.4	ug/L	601		08/03/1994
1,2-Dichloroethane	ND		0.4	ug/L	601		08/03/1994
1,1-Dichloroethene	ND		0.4	ug/L	601		08/03/1994
trans-1,2-Dichloroethene	ND		0.4	ug/L	601		08/03/1994
1,2-Dichloropropane	ND		0.4	ug/L	601		08/03/1994
cis-1,3-Dichloropropene	ND		0.4	ug/L	601		08/03/1994
trans-1,3-Dichloropropene	ND		0.4	ug/L	601		08/03/1994
Methylene chloride	ND		10	ug/L	601		08/03/1994
1,1,2,2-Tetrachloroethane	ND		0.4	ug/L	601		08/03/1994
Tetrachloroethene	ND		0.4	ug/L	601		08/03/1994
1,1,1-Trichloroethane	ND		0.4	ug/L	601		08/03/1994
1,1,2-Trichloroethane	ND		0.4	ug/L	601		08/03/1994
Trichloroethene	ND		0.4	ug/L	601		08/03/1994
Trichlorofluoromethane	ND		0.4	ug/L	601		08/03/1994
Vinyl chloride	ND		0.4	ug/L	601		08/03/1994
SURROGATE RESULTS	--						08/03/1994
1,4-Difluorobenzene (SURR)	106			% Rec.	601		08/03/1994
1,4-Dichlorobutane (SURR)	87			% Rec.	601		08/03/1994

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

SAMPLE DESCRIPTION: Trip Blank
Date Taken: 07/26/1994
Time Taken:
NET Sample No: 210390

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/04/1994
DILUTION FACTOR*	1						08/04/1994
as Gasoline	ND		50	ug/L	5030		08/04/1994
Carbon Range:	--						08/04/1994
METHOD 8020 (GC,Liquid)	--						08/04/1994
Benzene	ND		0.5	ug/L	8020		08/04/1994
Toluene	ND		0.5	ug/L	8020		08/04/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/04/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/04/1994
SURROGATE RESULTS	--						08/04/1994
Bromofluorobenzene (SURR)	90			% Rec.	5030		08/04/1994

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials
Tot. Dissolved Solids (TFR)	105.9	1059	1000	mg/L	07/29/1994	shr
Tot. Dissolved Solids (TFR)	103.8	1038	1000	mg/L	07/29/1994	shr
TPH (Gas/BTXE,Liquid)						
as Gasoline	101.0	1.01	1.00	mg/L	08/04/1994	aal
Benzene	98.6	4.93	5.00	ug/L	08/04/1994	aal
Toluene	100.0	5.00	5.00	ug/L	08/04/1994	aal
Ethylbenzene	99.2	4.96	5.00	ug/L	08/04/1994	aal
Xylenes (Total)	99.3	14.9	15.0	ug/L	08/04/1994	aal
Bromofluorobenzene (SURR)	102.0	102	100	% Rec.	08/04/1994	aal
TPH (Gas/BTXE,Liquid)						
as Gasoline	104.0	1.04	1.00	mg/L	08/05/1994	aal
Benzene	94.2	4.71	5.00	ug/L	08/05/1994	aal
Toluene	92.8	4.64	5.00	ug/L	08/05/1994	aal
Ethylbenzene	94.2	4.71	5.00	ug/L	08/05/1994	aal
Xylenes (Total)	94.3	14.14	15.0	ug/L	08/05/1994	aal
Bromofluorobenzene (SURR)	102.0	102	100	% Rec.	08/05/1994	aal

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials
METHOD 601 (GC,Liquid)						
Bromodichloromethane	112.0	22.4	20.0	ug/L	08/03/1994	asm
Bromoform	99.5	19.9	20.0	ug/L	08/03/1994	asm
Bromomethane	98.5	19.7	20.0	ug/L	08/03/1994	asm
Carbon tetrachloride	112.5	22.5	20.0	ug/L	08/03/1994	asm
Chlorobenzene	113.0	22.6	20.0	ug/L	08/03/1994	asm
Chloroethane	84.0	16.8	20.0	ug/L	08/03/1994	asm
2-Chloroethylvinyl ether	127.0	25.4	20.0	ug/L	08/03/1994	asm
Chloroform	108.0	21.6	20.0	ug/L	08/03/1994	asm
Chloromethane	85.0	17.0	20.0	ug/L	08/03/1994	asm
Dibromochloromethane	107.5	21.5	20.0	ug/L	08/03/1994	asm
1,2-Dichlorobenzene	96.0	19.2	20.0	ug/L	08/03/1994	asm
1,3-Dichlorobenzene	85.0	17.0	20.0	ug/L	08/03/1994	asm
1,4-Dichlorobenzene	86.5	17.3	20.0	ug/L	08/03/1994	asm
Dichlorodifluoromethane	95.5	19.1	20.0	ug/L	08/03/1994	asm
1,1-Dichloroethane	108.0	21.6	20.0	ug/L	08/03/1994	asm
1,2-Dichloroethane	108.5	21.7	20.0	ug/L	08/03/1994	asm
1,1-Dichloroethene	92.5	18.5	20.0	ug/L	08/03/1994	asm
trans-1,2-Dichloroethene	88.0	17.6	20.0	ug/L	08/03/1994	asm
1,2-Dichloropropane	112.0	22.4	20.0	ug/L	08/03/1994	asm
cis-1,3-Dichloropropene	111.0	22.2	20.0	ug/L	08/03/1994	asm
trans-1,3-Dichloropropene	108.0	21.6	20.0	ug/L	08/03/1994	asm
Methylene chloride	109.0	21.8	20.0	ug/L	08/03/1994	asm
1,1,2,2-Tetrachloroethane	101.5	20.3	20.0	ug/L	08/03/1994	asm
Tetrachloroethene	111.5	22.3	20.0	ug/L	08/03/1994	asm
1,1,1-Trichloroethane	111.0	22.2	20.0	ug/L	08/03/1994	asm
1,1,2-Trichloroethane	109.0	21.8	20.0	ug/L	08/03/1994	asm
Trichloroethene	110.0	22.0	20.0	ug/L	08/03/1994	asm
Trichlorofluoromethane	92.0	18.4	20.0	ug/L	08/03/1994	asm
Vinyl chloride	86.5	17.3	20.0	ug/L	08/03/1994	asm
1,4-Difluorobenzene (SURR)	112.0	112	100	% Rec.	08/03/1994	asm
1,4-Dichlorobutane (SURR)	100.0	100	100	% Rec.	08/03/1994	asm

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
Tot. Dissolved Solids (TFR)	ND	10	mg/L	07/29/1994	shr
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	08/04/1994	aal
Benzene	ND	0.5	ug/L	08/04/1994	aal
Toluene	ND	0.5	ug/L	08/04/1994	aal
Ethylbenzene	ND	0.5	ug/L	08/04/1994	aal
Xylenes (Total)	ND	0.5	ug/L	08/04/1994	aal
Bromofluorobenzene (SURR)	99		% Rec.	08/04/1994	aal
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	08/05/1994	aal
Benzene	ND	0.5	ug/L	08/05/1994	aal
Toluene	ND	0.5	ug/L	08/05/1994	aal
Ethylbenzene	ND	0.5	ug/L	08/05/1994	aal
Xylenes (Total)	ND	0.5	ug/L	08/05/1994	aal
Bromofluorobenzene (SURR)	102		% Rec.	08/05/1994	aal

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
METHOD 601 (GC,Liquid)					
Bromodichloromethane	ND	0.4	ug/L	08/03/1994	asm
Bromoform	ND	0.4	ug/L	08/03/1994	asm
Bromomethane	ND	0.4	ug/L	08/03/1994	asm
Carbon tetrachloride	ND	0.4	ug/L	08/03/1994	asm
Chlorobenzene	ND	0.4	ug/L	08/03/1994	asm
Chloroethane	ND	0.4	ug/L	08/03/1994	asm
2-Chloroethylvinyl ether	ND	1.0	ug/L	08/03/1994	asm
Chloroform	ND	0.4	ug/L	08/03/1994	asm
Chloromethane	ND	0.4	ug/L	08/03/1994	asm
Dibromochloromethane	ND	0.4	ug/L	08/03/1994	asm
1,2-Dichlorobenzene	ND	0.4	ug/L	08/03/1994	asm
1,3-Dichlorobenzene	ND	0.4	ug/L	08/03/1994	asm
1,4-Dichlorobenzene	ND	0.4	ug/L	08/03/1994	asm
Dichlorodifluoromethane	ND	0.4	ug/L	08/03/1994	asm
1,1-Dichloroethane	ND	0.4	ug/L	08/03/1994	asm
1,2-Dichloroethane	ND	0.4	ug/L	08/03/1994	asm
1,1-Dichloroethene	ND	0.4	ug/L	08/03/1994	asm
trans-1,2-Dichloroethene	ND	0.4	ug/L	08/03/1994	asm
1,2-Dichloropropane	ND	0.4	ug/L	08/03/1994	asm
cis-1,3-Dichloropropene	ND	0.4	ug/L	08/03/1994	asm
trans-1,3-Dichloropropene	ND	0.4	ug/L	08/03/1994	asm
Methylene chloride	ND	10	ug/L	08/03/1994	asm
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	08/03/1994	asm
Tetrachloroethene	ND	0.4	ug/L	08/03/1994	asm
1,1,1-Trichloroethane	ND	0.4	ug/L	08/03/1994	asm
1,1,2-Trichloroethane	ND	0.4	ug/L	08/03/1994	asm
Trichloroethene	ND	0.4	ug/L	08/03/1994	asm
Trichlorofluoromethane	ND	0.4	ug/L	08/03/1994	asm
Vinyl chloride	ND	0.4	ug/L	08/03/1994	asm
1,4-Difluorobenzene (SURR)	107		% Rec.	08/03/1994	asm
1,4-Dichlorobutane (SURR)	91		% Rec.	08/03/1994	asm

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

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	Analyst Initials
TPH (Gas/BTXE,Liquid)										
as Gasoline	101.0	104.0	2.9	1.00	ND	1.01	1.04	mg/L	08/04/1994	aal
Benzene	99.7	101.9	2.1	31.0	ND	30.9	31.6	ug/L	08/04/1994	aal
Toluene	99.6	101.0	1.3	97.2	ND	96.8	98.2	ug/L	08/04/1994	aal
TPH (Gas/BTXE,Liquid)										
as Gasoline	103.0	96.0	6.9	1.00	0.29	1.32	1.25	mg/L	08/04/1994	aal
Benzene	86.5	80.0	7.8	31.0	51	77.8	75.8	ug/L	08/04/1994	aal
Toluene	103.7	97.6	6.0	97.2	ND	100.8	94.9	ug/L	08/03/1994	jmh

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

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	Analyst Initials
METHOD 601 (GC,Liquid)										
Chlorobenzene	110.0	105.0	4.7	20.0	ND	22.0	21.0	ug/L	08/03/1994	asm
1,1-Dichloroethene	91.5	90.0	1.7	20.0	ND	18.3	18.0	ug/L	08/03/1994	asm
Trichloroethene	107.5	105.5	1.9	20.0	ND	21.5	21.1	ug/L	08/03/1994	asm

Ref: SHELL, 1601 Webster Street, Alameda, Job No. 940726-Y1

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	RPD	LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials
Tot. Dissolved Solids (TFR)	104.6		1046	1000	mg/L	07/29/1994	shr

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

StID 3014

December 5, 1994

Mr. Dan Kirk
Shell Oil Co
P.O. Box 4023
Concord, CA 94524

RE: Workplan Approval for Groundwater Oxygenation at 1601 Webster St, Alameda 94501

Dear Mr. Kirk:

I have completed review of Weiss Associates' (WA) response to my letter of October 25, 1994 for the installation of additional well(s) to delineate the extent of the contaminant plume as well as to help assess the effectiveness of groundwater oxygenation (GWO). WA maintains that additional wells are not required at this time. And the effectiveness of the system can be evaluated through sampling of existing wells. This office approves of the proposal to oxygenated water at well MW-2. Field activities should commence within 45 days of the date of this letter, or **by January 30, 1995.**

It is understood after six months of monitoring, Shell may consider installing an additional well, if necessary, to monitor the effectiveness of the GWO system.

If you have any questions, I can be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

cc: James Carmody, WA, 5500 Shellmound St, Emeryville 94608
files

shell1.2

LOP - RECORD CHANGE REQUEST FORM

printed:
12/08/94

Mark Out What Needs Changing and Hand to LOP Data Entry
(Name/Address changes go to Annual Programs Data Entry)

AGENCY # : 10000 SOURCE OF FUNDS: F SUBSTANCE: 8006619
StID : 3014
SITE NAME: Kin Shell Station DATE REPORTED : 06/01/87
ADDRESS : 1601 Webster St DATE CONFIRMED: 06/01/87
CITY/ZIP : Alameda 94501 MULTIPLE RPs : N

SITE STATUS

CASE TYPE: G CONTRACT STATUS: 4 PRIOR CODE:1C4 EMERGENCY RESP:
RP SEARCH: S DATE COMPLETED: 01/06/92
PRELIMINARY ASMNT: U DATE UNDERWAY: 09/13/87 DATE COMPLETED:
REM INVESTIGATION: DATE UNDERWAY: DATE COMPLETED:
REMEDIAL ACTION: DATE UNDERWAY: DATE COMPLETED:
POST REMED ACT MON: DATE UNDERWAY: DATE COMPLETED:

ENFORCEMENT ACTION TYPE: 1 DATE ENFORCEMENT ACTION TAKEN: 01/06/92
LUFT FIELD MANUAL CONSID: 3SWG
CASE CLOSED: DATE CASE CLOSED:
DATE EXCAVATION STARTED : 06/01/87 REMEDIAL ACTIONS TAKEN: ED

RESPONSIBLE PARTY INFORMATION

RP#1-CONTACT NAME: Kurt Miller
COMPANY NAME: Shell Oil Co.
ADDRESS: P O Box 4023
CITY/STATE: Concord, Ca 94524

INSPECTOR VERIFICATION:

NAME _____ SIGNATURE _____ DATE _____

DATA ENTRY INPUT:

Name/Address Changes Only

ANNPGMS _____ LOP _____ DATE _____

Case Progress Changes

LOP _____ DATE _____

TASKS	PERFORMANCE STANDARDS
	(b) Consultation and on-site inspections are conducted as necessary to assist applicant.
5. Investigate complaints	6. Provide prompt investigation and contact with complainant followed by necessary abatement action.
AIR SANITATION	
1. Investigates complaints regarding air sanitation	1. Provides prompt investigation and contact with complainant followed by necessary abatement action or referral.
HOUSING PROGRAM:	
1. Conducts investigations of licensed facilities when requested by other agencies.	1. Provides prompt investigation with a legibly written report of findings and recommendation forwarded to requesting agency.
RECREATION:	
1. Maintains correct inventory of swimming facilities.	1. Assigned inventory up-to-date, and accurate.
2. Inspects public, semi-public and natural swimming facilities.	2.(a) Assigned facilities are inspected in accordance with current frequency policy. (b) Maintains high levels of sanitation and safety through education and the enforcement of local and State codes. (c) All inspections are thorough and well documented in a legible manner on the appropriate form.
3. Collects swimming water samples.	3. Collects samples in accordance with established current procedures and policies.
4. Oversees installation of swimming facilities. (a) Reviews and approves plans for construction, and alteration of swimming facilities. (b) Conducts on-site construction inspections.	4. Provide prompt response to applicant. (a) Plans and specifications are reviewed in a comprehensive manner to assure compliance with appropriate codes in accordance with current procedures. (b) Consultation and on-site inspections are conducted as necessary to assist applicant in achieving final approval of the facilities.