Weiss Associates *Environmental and Geologic Services*

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

March 28, 1994

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

ALCO
HAZMAT
94 APR -5 PM 1:03

Re: Shell Service Station
WIC #204-0072-0403
1601 Webster Street
Alameda, California 94501
WA Job #81-434-104

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 265.d. Included below are descriptions and results of activities performed in the first quarter 1994 and proposed work for the second quarter 1994.

First Quarter 1994 Activities:

- Dissolved Oxygen (DO) concentrations were measured by BTS in each water sample collected this quarter, (Attachment A). DO concentrations ranged from 3.6 to 6.8 mg/l. Based on these results, WA concurs that natural biodegradation is occurring at the site. Further ground water oxygenation will increase this microbial activity. Therefore, WA proposes implementing ground water oxygenation as a remedial alternative to mitigate hydrocarbons in subsurface materials at this 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.

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

Anticipated Second Quarter 1994 Activities:

- WA will submit a workplan for ground water oxygenation for regulatory approval.
- WA will submit a report presenting the results of the second 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:

Until approval of the workplan for ground water oxygenation, WA recommends continued ground water sampling to monitor hydrocarbon concentrations and the ground water flow direction at the site.

Please call if you have any questions.

Sincerely,
Weiss Associates

J. Michael Asport
Technical Assistant

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

JMA/JWC:jma

J:\SHELL\425\QMRPTS\434QMFE4.WP

Attachments: A - BTS Associates' Ground Water Monitoring Report

cc: Dan Kirk, Shell Oil Company, P.O. Box 5278, Concord, California 94520-9998
John Jang, Regional Water Quality Control Board - San Francisco Bay, 2101 Webster Street, Suite 500, Oakland, California 94612

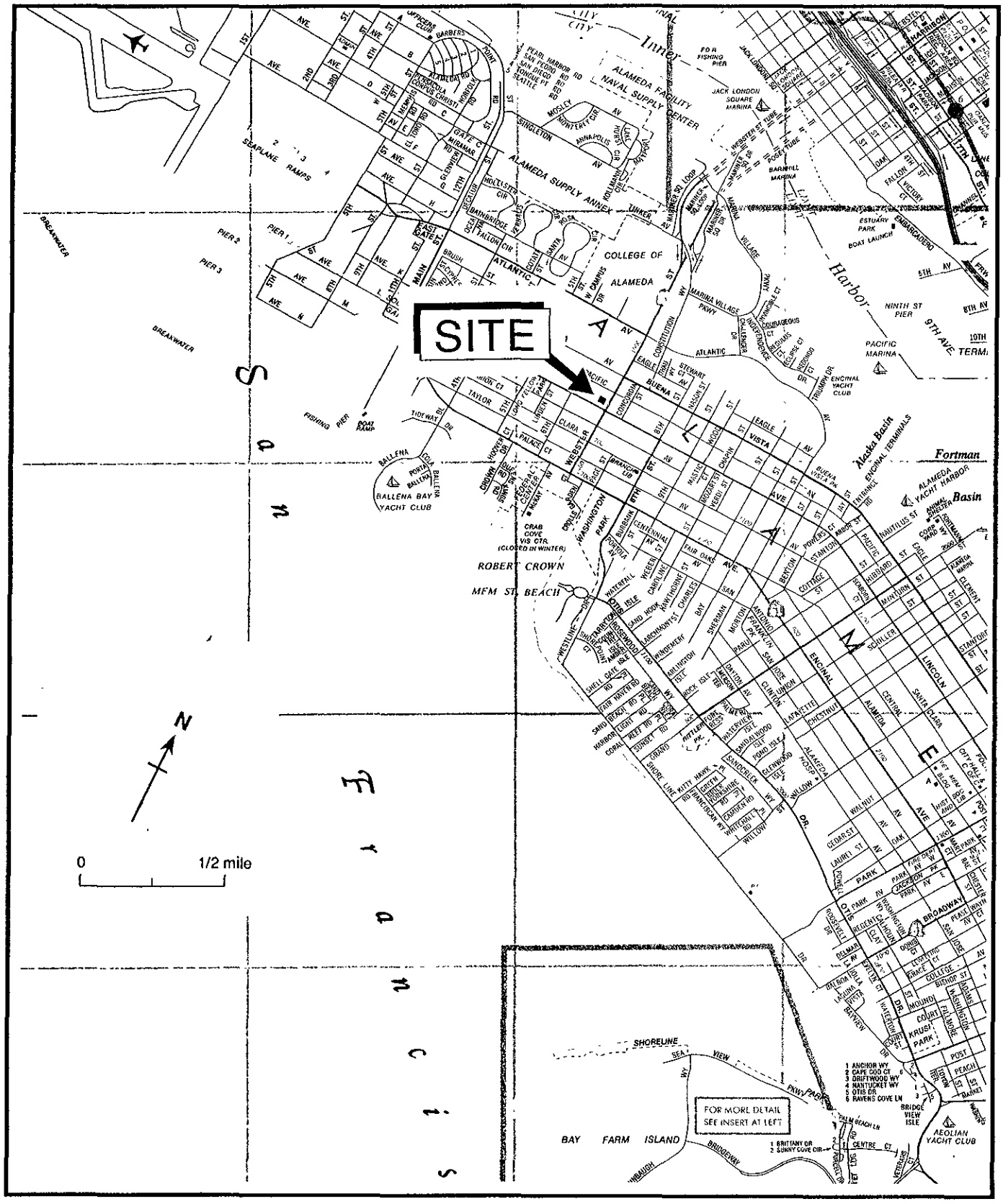


Figure 1. Site Location Map - Shell Service Station, WIC# 204-0072-0403, 1601 Webster Street, Alameda, CA

8/20/90

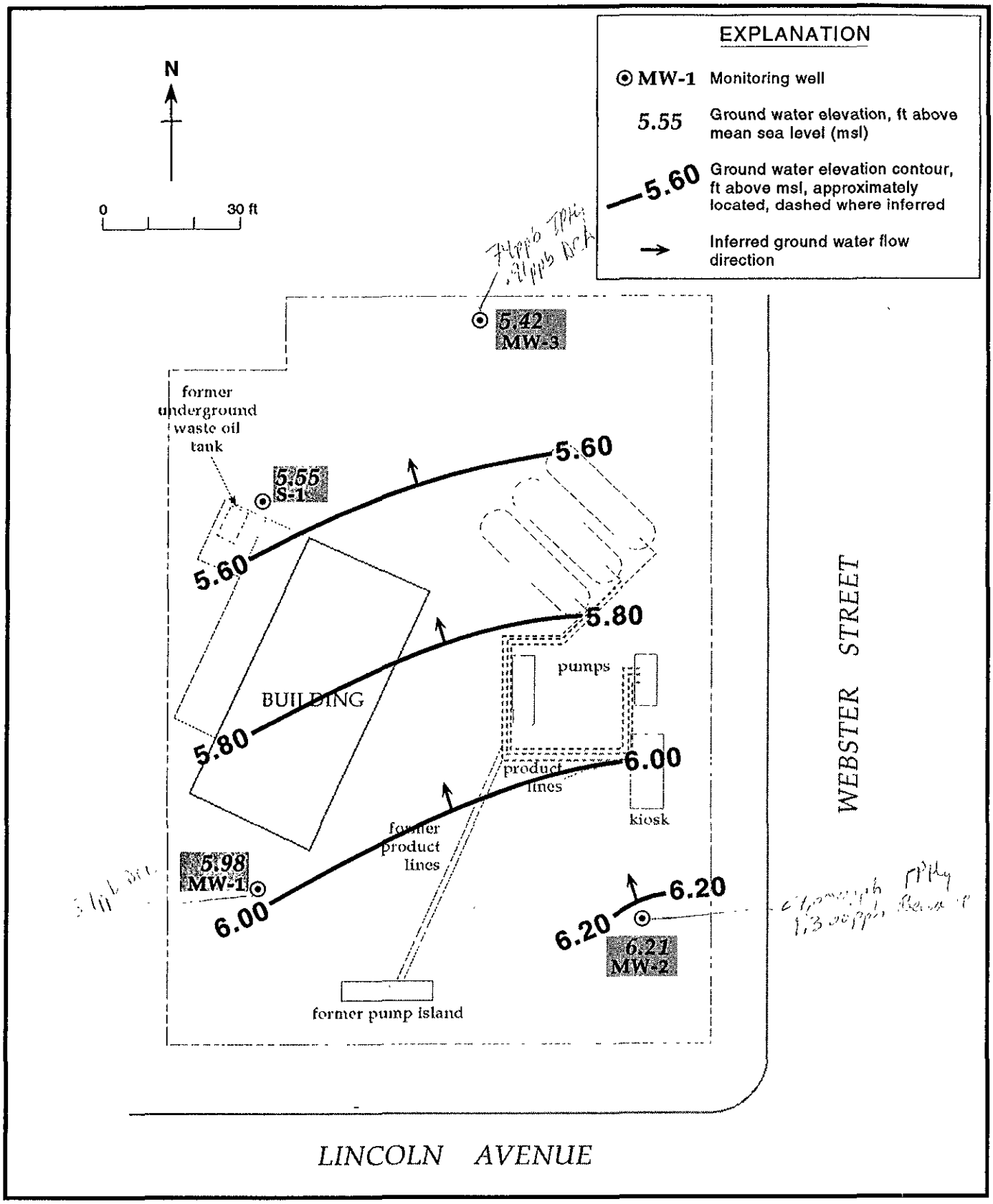


Figure 2. Monitoring Well Locations and Ground Water Elevations - January 7, 1994 - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

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	45.58
	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**
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
	10-17-19		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	4.0
	01-05-93		6.80	6.4
	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**
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 continues on next page --

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

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
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**

Note:

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[f]	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	---
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[b]	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	---
	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	---
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[g]	6.38	<50	---	1.2	<0.5	<0.5	<0.5	<0.5	2.8	---
	10-15-93[h]	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	---

-- Table 2 continues on next page --

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

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)---------->								
S-1	09-04-87[d]		---	---	<5	<5	<5	<5	<0.5	<0.5	---
	09-11-89[e]	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	---	---	---
	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	---	---	---
Trip Blank	07-18-90		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	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	---	---	---
DTSC MCLs			NE	NE	1	680	100[i]	1,750	6.0	0.5	NE

-- Table 2 continues on next page --

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

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 = Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline
c = Chloroform detected at 0.017 ppm and bromodichlorome at 0.0007 ppm by EPA Method 8010
d = 0.12 ppm acetone detected by EPA Method 624; no other volatile organic compounds detected
e = 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
f = Chloroform detected at 1.1 ppb by EPA Method 8010
g = Chloroform detected at 1.5 ppb by EPA Method 8010
h = Chloroform detected at 3.6 ppb by Method 8010
i = 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

January 25, 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:
1st quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 940107-L-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 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 Anametrix, Inc. in San Jose, California. Anametrix, Inc. is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1234.

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	1/7/94	TOC	--	NONE	--	--	7.82	20.78
MW-2 *	1/7/94	TOC	SHEEN/ODOR	--	--	--	6.99	19.92
MW-3	1/7/94	TOC	--	NONE	--	--	7.38	19.39
S-1	1/7/94	TOC	--	NONE	--	--	8.19	19.83

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

WELL GAUGING DATA

Project # 940107-L2 Date 1/7/94 Client WIC# 204 0072 0403

Site 1601 WEBSTER ST., ALAMEDA, CA

Well I.D.	Well Size (in.)	Sheen/ Odor	Depth to Immiscible Liquid (feet)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to Water (feet)	Depth to Well Bottom (feet)	Survey Point: TOB or TOC
MW-1	4					7.82	20.78	TOC
MW-2	4	ODOR/SHEEN				6.99	19.92	↓
MW-3	4					7.38	19.39	↓
S-1	3					8.19	19.83	↓

SHELL WELL MONITORING DATA SHEET

Project #: 940107-LZ	Wic # 204 0072 0403
Sampler: LAD	Date Sampled: 1/7/94
Well I.D.: MW-1	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 20.78 After	Depth to Water: Before 7.82 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC)	Grade Other --

Volume Conversion Factor (VCF):
(ft = (d^2/4) x π)/231
Where
ft = ft/foot
d = diameter (in.)
π = 3.1416
231 = in³/gal

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

8.4	x	3	=	25.2
1 Case Volume		Specified Volumes		gallons

Purging: Bailer ~~X~~ 4" DEDICATED
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer ~~X~~ 4" DED.
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1450	60.4	7.4	460.	>200.	9.	
1455	60.8	7.4	420.	>200.	17.	
1500	60.6	7.3	420.	>200.	26.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 26.

Sampling Time: 1510

Sample I.D.: MW-1 Laboratory: ANAMETRIX

Analyzed for: TPHG, BTEX, EPA 601

Duplicate I.D.: Cleaning Blank I.D.: EB AT 1440

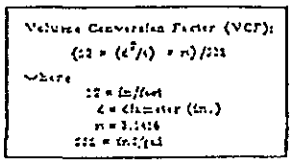
Analyzed for: TPHG, BTEX, EPA 601 AFTER 5-1

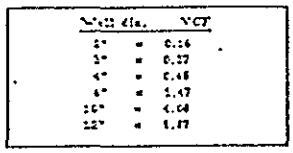
Shipping Notations:

Additional Notations: D.O. 5.5 mg/l

SHELL WELL MONITORING DATA SHEET

Project #: 940107-L2	Wic # 204 0072 0403
Sampler: LAD	Date Sampled: 1/7/94
Well I.D.: MW-2	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 19.92 After	Depth to Water: Before 6.99 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade Other --	





8.4 (1 Case Volume) x 3 (Specified Volumes) = 25.2 gallons

Purging: Bailer ☒ 4" DEDICATED
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer ☒ 4" DED
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1600	63.2	6.8	770.	92.	9.	STRONG ODOR/LIGHT SHEEN
1605	63.6	6.7	750.	175.	17.	
1610	64.2	6.8	740.	>200.	26.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 26.

Sampling Time: 1615

Sample I.D.: MW-2 Laboratory: ANAMETRIX

Analyzed for: TPHG, BTEX, EPA 601

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

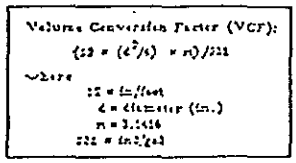
Analyzed for: TPHG, BTEX, EPA 601

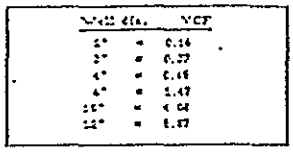
Shipping Notations:

Additional Notations: DO 3.6

SHELL WELL MONITORING L TA SHEET

Project #: 940107-L2	Wic # 204
Sampler: LAD	Date Sampled: 1/7/94
Well I.D.: MW-3	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 19.39 After	Depth to Water: Before 7.38 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (TVC) Grade Other --	





7.8 (1 Case Volume) x 3 (Specified Volumes) = 23.4 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:
1525	61.4	7.1	760.	71.	8.	
1528	62.8	7.0	700.	47.	16.	
1531	63.0	6.9	720.	68.	24.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 24.

Sampling Time: 1540

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

Analyzed for: TPHG, BTEX, EPA 601

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

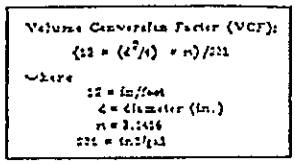
Analyzed for:

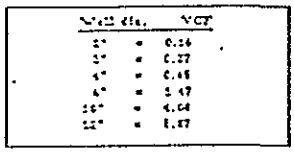
Shipping Notations:

Additional Notations: D.O. 4.6 mg/l

SHELL WELL MONITORING DATA SHEET

Project #: 940107-LZ	Wic # 204 0072 0403
Sampler: LAD	Date Sampled: 1/7/94
Well I.D.: S-1	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 19.83 After	Depth to Water: Before 8.19 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade Other --	





4.3 (1 Case Volume) x 3 (Specified Volumes) = 12.9 gallons

Purging: Bailer (X)
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer (X)
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1400	57.0	8.2	600.	>200.	5.	
1406	56.8	7.8	560.	>200.	9.	
1412	56.6	7.4	540.	>200.	13.	

Did Well Dewater? NO If yes, gals. Gallons Actually Evacuated: 13.

Sampling Time: 1430

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

Analyzed for: TPHG, BTEX

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

Analyzed for:

Shipping Notations:

Additional Notations: D.O. 6.8 mg/l

9401082 (18) (16)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 940107-LZ

Date: 1/7/94
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: ZAB

Printed Name: LAD B OLVER

LAB: Anametrix

CHECK ONE (1) BOX ONLY — C1/D1

- Quarterly Monitoring [X] 4441
- Site Investigation [ ] 4441
- Soil Closure/Disposal [ ] 4442
- Water Closure/Disposal [ ] 4443
- Soil/Air Rem. or Sys. O & M [ ] 4482
- Water Rem. or Sys. O & M [ ] 4483
- Other [ ]

TURN AROUND TIME

- 24 hours [ ]
- 48 hours [ ]
- 15 days [X] (Normal)
- Other [ ]

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

	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	E.P.A. 601		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
(1)	MW-1	1/7			X		6						X	X							
(2)	MW-2				X		6						X	X							
(3)	MW-3				X		6						X	X							
(4)	S-1				X		3						X			✓					
(5)	DUP.				X		6						X	X							
(6)	EB.				X		6						X	X						PLACE EB ON HOLD	
(7)	TB.	↓			X		2						X								

	Printed Name	Date	Time		Printed Name	Date	Time
Relinquished By (signature): ZAB	LAD B OLVER	1/8/94	0930	Received (signature): Kenny S. Carrizosa	KENNY S. CARRIZOSA	1/8/94	0935
Relinquished By (signature): Kenny S. Carrizosa	KENNY S. CARRIZOSA	1/8/94	1000	Received (signature): Josephine De Leehi	Josephine De Leehi	1/10/94	10:00
Relinquished By (signature):	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:

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

Inchcape Testing Services
Anametrix Laboratories

1961 Concourse Drive
Suite E
San Jose, CA 95131
Tel: 408-432-8192
Fax: 408-432-8198

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9401082
Date Received : 01/10/94
Project ID : 204-0072-0403
Purchase Order: MOH-B813

The following samples were received at Anametrix for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9401082- 1	MW-1
9401082- 2	MW-2
9401082- 3	MW-3
9401082- 4	S-1
9401082- 5	DUP
9401082- 6	E.B.
9401082- 7	T.B.

This report consists of 17 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group which performed the analysis(es) and generated the data.

The results contained within this report relate to only the sample(s) tested. Additionally, these data should be considered in their entirety and Anametrix cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234.

If you have any further questions or comments on this report, please call us as soon as possible. Thank you for using Anametrix.

Corinne Khan for
Doug Robbins
Laboratory Director

1/24/94
Date

ANAMETRIX REPORT DESCRIPTION
GC

Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anametrix ID number.

Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method, if the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "*", and the total number of surrogates outside the limits will be listed in the column labelled "Total Out".

Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "*", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

Qualifiers

Anametrix uses several data qualifiers (Q) in its report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank.
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- E - Indicates that the reported amount exceeded the linear range of the instrument calibration.
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

REPORTING CONVENTIONS

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- Amounts reported are gross values, i.e., not corrected for method blank contamination.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9401082
Date Received : 01/10/94
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9401082- 1	MW-1	WATER	01/07/94	8010
9401082- 2	MW-2	WATER	01/07/94	8010
9401082- 3	MW-3	WATER	01/07/94	8010
9401082- 5	DUP	WATER	01/07/94	8010

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9401082
Date Received : 01/10/94
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

QA/QC SUMMARY :

- Due to interfering hydrocarbon peaks, samples MW-2 and DUP were analyzed at a dilution.

M. Hollyman 1/24/94
Department Supervisor Date

Taki Memarzadeh 1/24/94
Chemist Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 204-0072
Sample ID : MW-1
Matrix : WATER
Date Sampled : 1/ 7/94
Date Analyzed : 1/14/94
Instrument ID : HP24

Anametrix ID : 9401082-01
Analyst : TM
Supervisor : DL

Dilution Factor : 1.0
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	3.1	
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	ND	U
79-01-6	Trichloroethene	.50	.85	
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	ND	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 204-0072
Sample ID : MW-2
Matrix : WATER
Date Sampled : 1/ 7/94
Date Analyzed : 1/14/94
Instrument ID : HP24

Anametrix ID : 9401082-02
Analyst : TM
Supervisor : DH

Dilution Factor : 20.0
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	20.	ND	U
74-87-3	Chloromethane	20.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	10.	ND	U
76-13-1	Trichlorotrifluoroethane	10.	ND	U
75-35-4	1,1-Dichloroethene	10.	ND	U
75-09-2	Methylene chloride	20.	ND	U
156-60-5	trans-1,2-Dichloroethene	10.	ND	U
75-34-3	1,1-Dichloroethane	10.	ND	U
156-59-2	cis-1,2-Dichloroethene	10.	ND	U
67-66-3	Chloroform	10.	ND	U
71-55-6	1,1,1-Trichloroethane	10.	ND	U
56-23-5	Carbon tetrachloride	10.	ND	U
107-06-2	1,2-Dichloroethane	10.	ND	U
79-01-6	Trichloroethene	10.	ND	U
78-87-5	1,2-Dichloropropane	10.	ND	U
75-27-4	Bromodichloromethane	10.	ND	U
110-75-8	2-Chloroethylvinylether	20.	ND	U
10061-01-5	cis-1,3-Dichloropropene	10.	ND	U
10061-02-6	trans-1,3-Dichloropropene	10.	ND	U
79-00-5	1,1,2-Trichloroethane	10.	ND	U
127-18-4	Tetrachloroethene	10.	ND	U
124-48-1	Dibromochloromethane	10.	ND	U
108-90-7	Chlorobenzene	10.	ND	U
75-25-2	Bromoform	10.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	ND	U
541-73-1	1,3-Dichlorobenzene	10.	ND	U
106-46-7	1,4-Dichlorobenzene	10.	ND	U
95-50-1	1,2-Dichlorobenzene	10.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID	: 204-0072	Anametrix ID	: 9401082-03
Sample ID	: MW-3	Analyst	: TM
Matrix	: WATER	Supervisor	:
Date Sampled	: 1/ 7/94		
Date Analyzed	: 1/14/94	Dilution Factor	: 1.0
Instrument ID	: HP24	Conc. Units	: ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	.91	
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	ND	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 204-0072
Sample ID : DUP
Matrix : WATER
Date Sampled : 1/ 7/94
Date Analyzed : 1/14/94
Instrument ID : HP24

Anametrix ID : 9401082-05
Analyst : TM
Supervisor : DL

Dilution Factor : 20.0
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	20.	ND	U
74-87-3	Chloromethane	20.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	10.	ND	U
76-13-1	Trichlorotrifluoroethane	10.	ND	U
75-35-4	1,1-Dichloroethene	10.	ND	U
75-09-2	Methylene chloride	20.	ND	U
156-60-5	trans-1,2-Dichloroethene	10.	ND	U
75-34-3	1,1-Dichloroethane	10.	ND	U
156-59-2	cis-1,2-Dichloroethene	10.	ND	U
67-66-3	Chloroform	10.	ND	U
71-55-6	1,1,1-Trichloroethane	10.	ND	U
56-23-5	Carbon tetrachloride	10.	ND	U
107-06-2	1,2-Dichloroethane	10.	ND	U
79-01-6	Trichloroethene	10.	ND	U
78-87-5	1,2-Dichloropropane	10.	ND	U
75-27-4	Bromodichloromethane	10.	ND	U
110-75-8	2-Chloroethylvinylether	20.	ND	U
10061-01-5	cis-1,3-Dichloropropene	10.	ND	U
10061-02-6	trans-1,3-Dichloropropene	10.	ND	U
79-00-5	1,1,2-Trichloroethane	10.	ND	U
127-18-4	Tetrachloroethene	10.	ND	U
124-48-1	Dibromochloromethane	10.	ND	U
108-90-7	Chlorobenzene	10.	ND	U
75-25-2	Bromoform	10.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	ND	U
541-73-1	1,3-Dichlorobenzene	10.	ND	U
106-46-7	1,4-Dichlorobenzene	10.	ND	U
95-50-1	1,2-Dichlorobenzene	10.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 204-00
Sample ID : VBLKB1
Matrix : WATER
Date Sampled : 0/ 0/ 0
Date Analyzed : 1/13/94
Instrument ID : HP24

Anametrix ID : BJ1303I1
Analyst : TM
Supervisor : NL

Dilution Factor : 1.0
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Trichlorofluoromethane	.50	ND	U
76-13-1	Trichlorotrifluoroethane	.50	ND	U
75-35-4	1,1-Dichloroethene	.50	ND	U
75-09-2	Methylene chloride	1.0	ND	U
156-60-5	trans-1,2-Dichloroethene	.50	ND	U
75-34-3	1,1-Dichloroethane	.50	ND	U
156-59-2	cis-1,2-Dichloroethene	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-Trichloroethane	.50	ND	U
56-23-5	Carbon tetrachloride	.50	ND	U
107-06-2	1,2-Dichloroethane	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-Dichloropropane	.50	ND	U
75-27-4	Bromodichloromethane	.50	ND	U
110-75-8	2-Chloroethylvinylether	1.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	.50	ND	U
10061-02-6	trans-1,3-Dichloropropene	.50	ND	U
79-00-5	1,1,2-Trichloroethane	.50	ND	U
127-18-4	Tetrachloroethene	.50	ND	U
124-48-1	Dibromochloromethane	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	.50	ND	U
541-73-1	1,3-Dichlorobenzene	.50	ND	U
106-46-7	1,4-Dichlorobenzene	.50	ND	U
95-50-1	1,2-Dichlorobenzene	.50	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 204-0072
Matrix : LIQUID

Anametrix ID : 9401082
Analyst : TM
Supervisor : rh

	SAMPLE ID	SU1	SU2	SU3
1	VBLKB1	68	85	85
2	MW-1	67	76	79
3	MW-2	69	85	86
4	MW-3	70	84	88
5	DUP	64	76	80
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

	QC LIMITS
SU1 = Bromochloromethane	(56- 99)
SU2 = 1-Chloro-2-fluorobenze	(73-110)
SU3 = 2-Bromochlorobenzene	(65-108)

* Values outside of Anametrix QC limits

LABORATORY CONTROL SAMPLE
EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Sample I.D. : LABORATORY CONTROL SAMPLE
Matrix : WATER
SDG/Batch : 01080
Date analyzed : 01/13/94

Anametrix I.D. : MJ1302I1
Analyst : TM
Supervisor : DH
Instrument I.D.: HP24

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
Trichlorotrifluoroethane	10	7.1	71%	65 - 116
1,1-Dichloroethene	10	9.0	90%	64 - 125
trans-1,2-Dichloroethene	10	9.1	91%	77 - 113
1,1-Dichloroethane	10	9.8	98%	85 - 129
cis-1,2-Dichloroethene	10	9.9	99%	78 - 130
1,1,1-Trichloroethane	10	9.5	95%	83 - 125
Trichloroethene	10	9.6	96%	76 - 124
Tetrachloroethene	10	9.2	92%	80 - 118
Chlorobenzene	10	9.3	93%	81 - 130
1,3-Dichlorobenzene	10	9.4	94%	82 - 115
1,4-Dichlorobenzene	10	9.3	93%	85 - 122
1,2-Dichlorobenzene	10	9.6	96%	86 - 122

* Limits based on data generated by Anametrix, Inc., December, 1993.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9401082
Date Received : 01/10/94
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9401082- 1	MW-1	WATER	01/07/94	TPHgBTEX
9401082- 2	MW-2	WATER	01/07/94	TPHgBTEX
9401082- 3	MW-3	WATER	01/07/94	TPHgBTEX
9401082- 4	S-1	WATER	01/07/94	TPHgBTEX
9401082- 5	DUP	WATER	01/07/94	TPHgBTEX
9401082- 7	T.B.	WATER	01/07/94	TPHgBTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY DRIVE
SAN JOSE, CA 95133

Workorder # : 9401082
Date Received : 01/10/94
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Balmer 1/20/94
Department Supervisor Date

Peggie Dawson 1/20/94
Chemist Date

Organic Analysis Data Sheet
Total Petroleum Hydrocarbons as Gasoline with BTEX
ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9401082 | Client Project ID : 204-0072-0403

Matrix : WATER | Units : ug/L

Compound Name	Method Reporting Limit*	Client ID MW-1 Lab ID 9401082-01	Client ID MW-2 Lab ID 9401082-02	Client ID MW-3 Lab ID 9401082-03	Client ID S-1 Lab ID 9401082-04	Client ID DUP Lab ID 9401082-05
Benzene	0.50	ND	1300	ND	ND	1100
Toluene	0.50	ND	2700	ND	ND	2300
Ethylbenzene	0.50	ND	1900	ND	ND	1700
Total Xylenes	0.50	ND	7900	0.76	ND	6900
TPH as Gasoline	50	ND	27000	74	ND	33000
Surrogate Recovery		106%	97%	105%	106%	96%
Instrument ID		HP12	HP12	HP12	HP12	HP12
Date Sampled		01/07/94	01/07/94	01/07/94	01/07/94	01/07/94
Date Analyzed		01/14/94	01/19/94	01/14/94	01/14/94	01/19/94
RLMF		1	250	1	1	250
Filename Reference		FPJ08201.D	FTJ08202.D	FPJ08203.D	FPJ08204.D	FTJ08205.D

* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.
TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.
BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Peggie Dawson 1/20/94
Analyst Date

Cheryl Beaman 1/20/94
Supervisor Date

Issued on 1/20/94 @ 9:18 AM

Organic Analysis Data Sheet
Total Petroleum Hydrocarbons as Gasoline with BTEX
ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9401082 Client Project ID : 204-0072-0403

Matrix : WATER Units : ug/L

Compound Name	Method Reporting Limit*	Client ID T.B. Lab ID 9401082-07	Client ID Lab ID Method Blank	Client ID Lab ID Method Blank	Client ID Lab ID 	Client ID Lab ID
Benzene	0.50	ND	ND	ND		
Toluene	0.50	ND	ND	ND		
Ethylbenzene	0.50	ND	ND	ND		
Total Xylenes	0.50	ND	ND	ND		
TPH as Gasoline	50	ND	ND	ND		
Surrogate Recovery		101%	103%	102%		
Instrument ID		HP12	HP12	HP12		
Date Sampled		01/07/94	N/A	N/A		
Date Analyzed		01/14/94	01/14/94	01/19/94		
RLMF		1	1	1		
Filename Reference		FPJ08207.D	BJ1401E1.D	BJ1902E1.D		

* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.
TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.
BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Peggie Davison 1/20/94
Analyst Date

Cheryl Balmer 1/20/94
Supervisor Date

Matrix Spike Report
Total Petroleum Hydrocarbons as BTEX
ITS - Anametrix Laboratories - (408)432-8192

Project ID : 204-0072-0403
Sample ID : MW-3
Matrix : WATER
Date Sampled : 01/07/94

Laboratory ID : 9401082-03
Analyst : RD
Supervisor : CS
Instrument ID : HP12
Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	SAMPLE RESULTS	MS RECOVERY	MSD RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS
Benzene	20	ND	100%	105%	45-139	-5%	30
Toluene	20	ND	105%	105%	51-138	0%	30
Ethylbenzene	20	ND	125%	125%	48-146	0%	30
Total Xylenes	20	0.76	101%	106%	50-139	-5%	30
Surrogate Recovery		105%	94%	95%			
Date Analyzed		01/14/94	01/14/94	01/14/94			
Multiplier		1	1	1			
Filename Reference		FPJ08203.D	FMJ08203.D	FDJ08203.D			

* Limits established by Inchcape Testing Services, Anametrix Laboratories.

Laboratory Control Spike Report
Total Petroleum Hydrocarbons as BTEX
ITS - Anametrix Laboratories - (408)432-8192

Instrument ID : HP12
Matrix : LIQUID

Analyst : RD
Supervisor : [illegible]
Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Benzene	20	100%	52-133
Toluene	20	100%	57-136
Ethylbenzene	20	110%	56-139
Total Xylenes	20	110%	56-141
Surrogate Recovery		103%	61-139
Date Analyzed		01/14/94	
Multiplier		1	
Filename Reference		MJ1401E1.D	

* Limits established by Inchcape Testing Services, Anametrix Laboratories.

Laboratory Control Spike Report
Total Petroleum Hydrocarbons as BTEX
ITS - Anametrix Laboratories - (408)432-8192

Instrument ID : HP12
Matrix : LIQUID

Analyst : RD
Supervisor : GS
Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Benzene	20	120%	52-133
Toluene	20	110%	57-136
Ethylbenzene	20	125%	56-139
Total Xylenes	20	110%	56-141
Surrogate Recovery		92%	61-139
Date Analyzed		01/19/94	
Multiplier		1	
Filename Reference		MJ1901E1.D	

* Limits established by Inchcape Testing Services, Anametrix Laboratories.