Weiss Associates Environmental and Geologic Services

5500 Shellmound Street, Emeryville, CA 94608-2411 Fax: 510-547-5043 Phone: **510-547-5420**

April 15, 1993

Scott Seery
Alameda County Department
of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621-1426

Re: Shell Service Station
WIC #204-6852-0703
[redacted] Bancroft Avenue
San Leandro, California 94577
WA Job #81-423-203

Dear Mr. Seery:

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 1993 and proposed work for the second quarter 1993.

First Quarter 1993 Activities:

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

- As requested in a January 27, 1993 letter from the Alameda County Department of Environmental Health, WA analyzed ground water from all wells for volatile organic compounds as part of a regional hydrogeologic study.

- 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 1993 Activities:

WA will submit a report presenting the results of the second quarter 1993 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results and a ground water elevation contour map.

Conclusions and Recommendations:

Ground water elevations have increased approximately nine feet compared to the previous quarter. However, despite the ground water elevation increase, hydrocarbon concentrations detected in the wells are consistent with previous results. Therefore, WA recommends continued ground water monitoring to assess the long-term impacts of the water table elevation increase.

wrong! on to the order-of-magnitude increase in TPH-G and BTEX in MW-2!

Please call if you have any questions.

Sincerely,
Weiss Associates

J. Michael Asport
Technical Assistant

for

Joseph P. Theisen, C.E.G.
Senior Hydrogeologist

REGISTERED GEOLOGIST N. SCOTT MacLEOD No. 5747 STATE OF CALIFORNIA

JMA/JPT:jma

J:\SHELL\400\423QMMA3.WP

Attachments: Figure
Tables
A - Ground Water Monitoring Report and Analytic Report

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

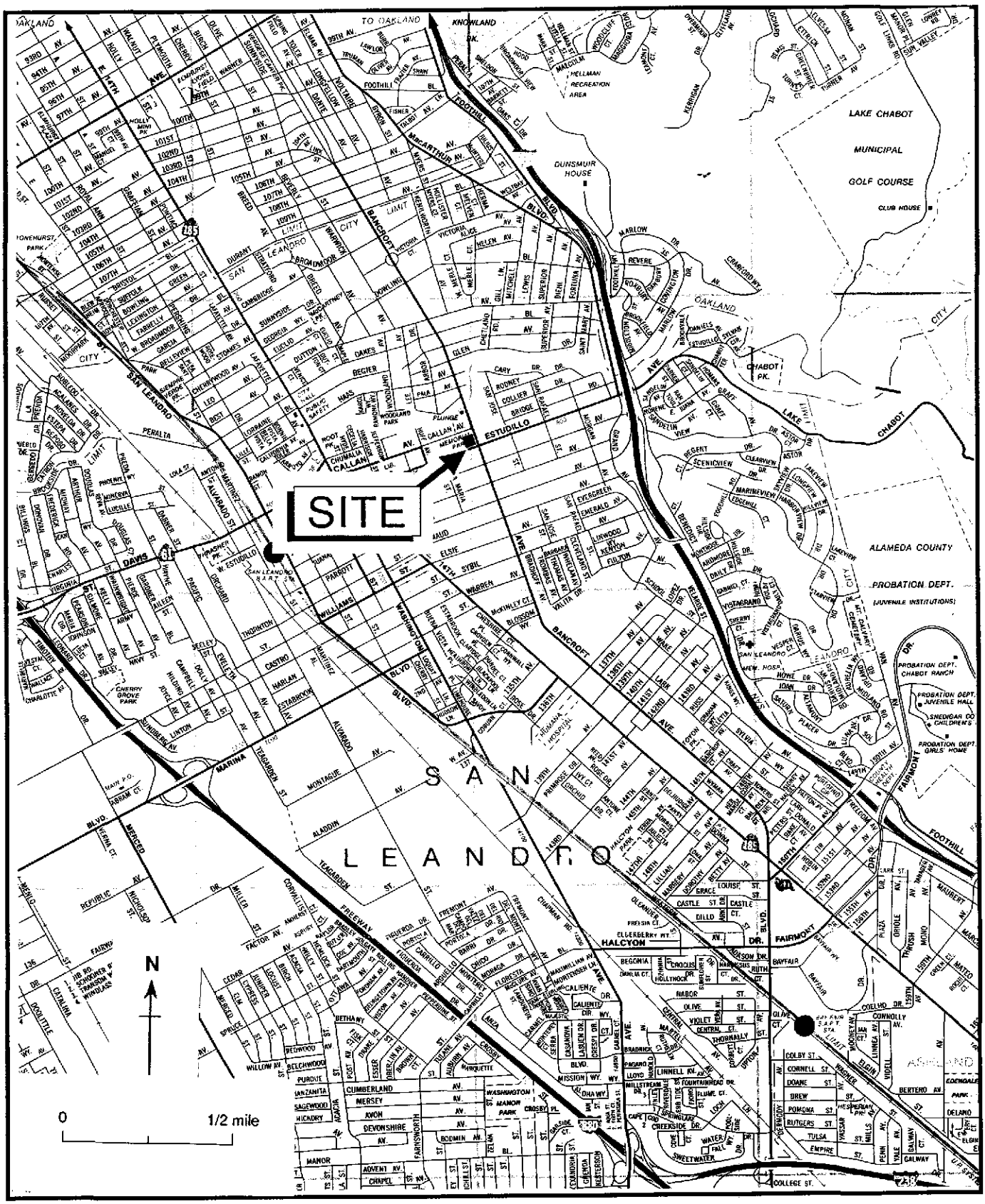

Figure 1. Site Location Map - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

3/16/90

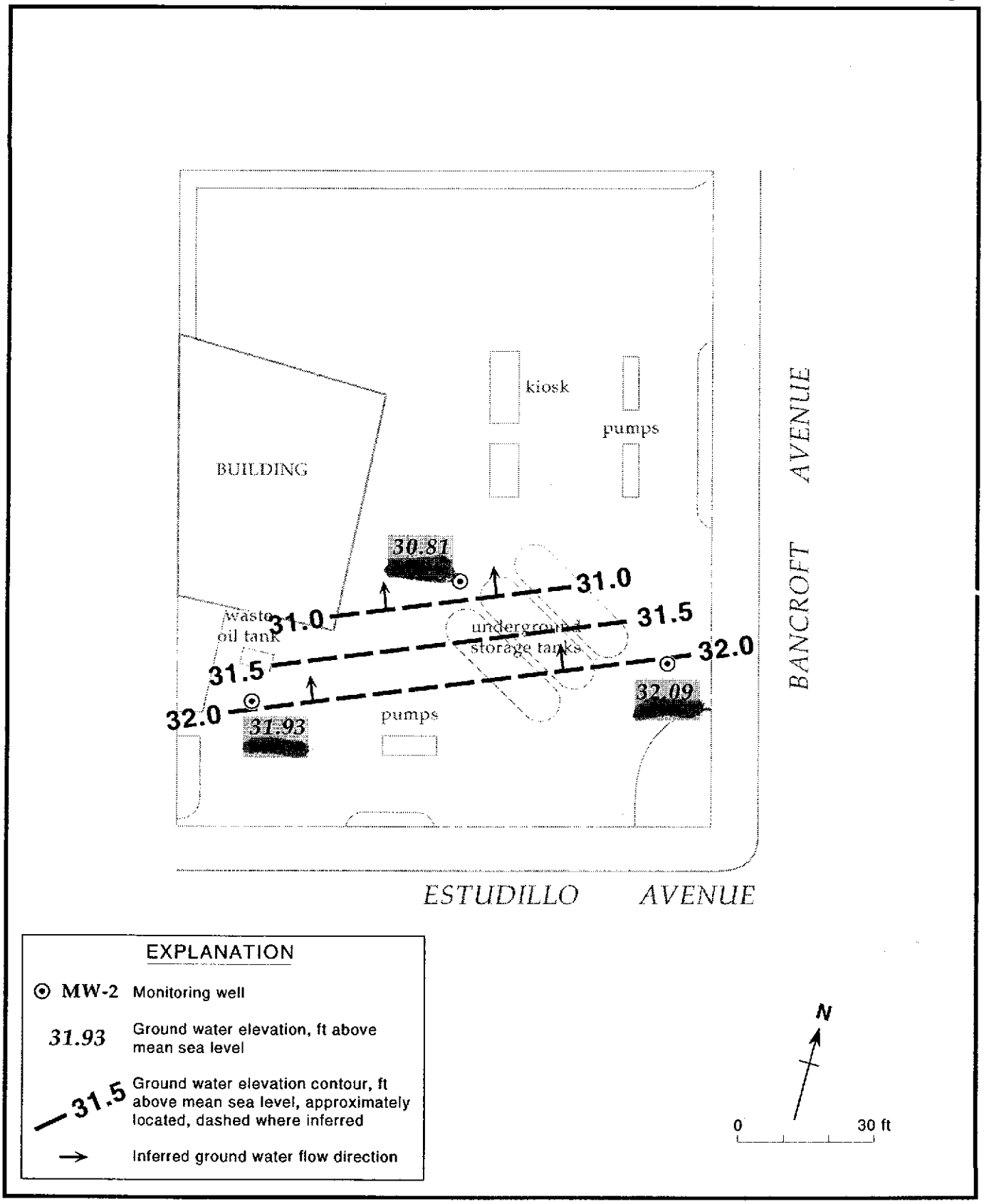

Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - March 1, 1993 - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

4/13/93

Table 1. Ground Water Elevations, Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-1	03/13/90	66.29	42.65	23.64
	06/12/90		43.14	23.15
	09/13/90		44.71	21.58
	12/18/90		45.23	21.06
	03/07/91		43.32	22.97
	06/07/91		42.18	24.11
	09/17/91		44.85	21.44
	03/01/92		41.56	24.73
	06/03/92		40.74	25.55
	09/01/92		43.05	23.24
	12/07/92		44.19	22.10
	03/01/93		34.96	31.33
MW-2	03/01/92	66.91	41.57	25.34
	06/03/92		40.56	26.35
	09/01/92		42.94	23.97
	12/07/92		44.13	22.78
	03/01/93		34.82	32.09
MW-3	03/01/92	66.31	42.00	24.31
	06/03/92		44.30	22.01
	09/01/92		43.62	22.69
	12/07/92		44.77	21.54
	03/01/93		35.50	30.81

Table 2. Analytical Results for Ground Water - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X
			<----------parts per million (mg/L)---------->					
[redacted]	09/17/91	44.85	0.05[a]	0.16[b]	<0.0005	<0.0005	<0.0005	<0.0005
	03/01/92	41.56	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
	06/03/92	40.74	<0.05	---	[redacted]	[redacted]	<0.0005	<0.0005
	09/01/92	43.05	<0.05	---	<0.0005	[redacted]	[redacted]	[redacted]
	12/07/92	44.19	[redacted]	---	<0.0005	<0.0005	[redacted]	[redacted]
	03/01/93	34.96	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
	03/01/93[c]		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
upgradient	03/01/92	41.57	[redacted]	<0.05	[redacted]	[redacted]	[redacted]	[redacted]
	06/03/92	40.56	[redacted]	---	[redacted]	[redacted]	[redacted]	[redacted]
	09/01/92	42.94	[redacted]	---	[redacted]	[redacted]	[redacted]	0.019
	09/01/92[c]		[redacted]	---	[redacted]	[redacted]	[redacted]	0.22
	12/07/92	44.13	0.24	---	[redacted]	[redacted]	[redacted]	[redacted]
	12/07/92[c]		<0.05	---	[redacted]	[redacted]	[redacted]	[redacted]
	03/01/93	34.82	[redacted] 130	---	[redacted] 60	[redacted] 27	[redacted] 3/0	[redacted] 6
downgradient	03/01/92	42.00	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
	06/03/92	44.30	<0.05	---	<0.0005	[redacted]	<0.0005	<0.0005
	09/01/92	43.62	<0.05	---	<0.0005	[redacted]	<0.0005	[redacted]
	12/07/92	44.77	[redacted]	---	<0.0005	<0.0005	<0.0005	[redacted]
	03/01/93	35.50	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
Bailer Blank	09/01/92		<0.05	---	<0.0005	<0.0005	<0.0005	0.0010
	12/07/92		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
Trip Blank	09/17/91		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
	03/01/92		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
	06/03/92		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
	09/01/92		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
	12/07/92		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
	03/01/93		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
DTSC MCLs			NE	NE	0.001	0.680	0.10[d]	1.750

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 8020
E = Ethylbenzene by EPA Method 8020
T = Toluene by EPA Method 8020
X = Xylenes by EPA Method 8020
NE = Not established
DTSC MCLs = California Department of Toxic Substances Control maximum contaminant levels for drinking water
--- = Not analyzed
<n = Not detected at detection limits of n ppb

Notes:

a = Result due to a non-gasoline hydrocarbon compound
b = Result due to a non-diesel hydrocarbon compound
c = Duplicate sample
d = DTSC recommended action level; MCL not established

Table 2B. Analytic Reports for Ground Water - Non-Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

Well ID	Date Sampled	Depth to Water	TCE	TOG	PCE	Chloroform	cis-1,2-DCE	trans-1,2-DCE
MW-1	03/08/90	42.65	---	<10	[illegible]	[illegible]	---	---
	06/12/90	43.14	---	<10	[illegible]	[illegible]	---	---
	09/13/90	44.71	---	<10	[illegible]	[illegible]	---	---
	12/18/90	45.23	---	<10	<0.0004	[illegible]	---	---
	03/07/91	43.32	---	---	[illegible]	[illegible]	---	---
	06/07/91	42.18	---	---	[illegible]	[illegible]	---	---
	09/17/91	44.85	---	---	[illegible]	[illegible]	---	---
	03/01/92	41.56	<0.0004	---	[illegible]	[illegible]	---	<0.0004
	06/03/92	40.74	[illegible]	---	<0.0005	[illegible]	<0.0005	<0.0005
	09/01/92	43.05	[illegible]	---	<0.0005	[illegible]	<0.0005	<0.0005
	12/07/92	44.19	<0.0005	---	[illegible]	[illegible]	<0.0005	<0.0005
	03/01/93	34.96	<0.0005	---	[illegible] 22	[illegible] 13	<0.0005	<0.0005
	03/01/93[a]		<0.0005	---			<0.0005	<0.0005
MW-2	03/01/92	41.57	<0.0004	---	[illegible]	[illegible]	---	<0.0004
	06/03/92	40.56	[illegible]	---	<0.0005	<0.0005	[illegible]	[illegible]
	09/01/92	42.94	[illegible]	---	<0.0005	[illegible]	<0.0005	<0.0005
	09/01/92[a]		[illegible]	---	<0.0005	[illegible]	<0.0005	<0.0005
	12/07/92	44.13	<0.0005	---	[illegible]	[illegible]	<0.0005	<0.0005
	12/07/92[a]		<0.0005	---	[illegible]	[illegible]	<0.0005	<0.0005
	03/01/93	34.82	<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005
MW-3	03/01/92	42.00	<0.0004	---	[illegible]	[illegible]	---	<0.0004
	06/03/92	44.30	[illegible]	---	<0.0005	[illegible]	<0.0005	<0.0005
	09/01/92	43.62	[illegible]	---	<0.0005	[illegible]	<0.0005	<0.0005
	12/07/92	44.77	<0.0005	---	[illegible]	[illegible]	<0.0005	<0.0005
	03/01/93	35.50	<0.0005	---	0.0092 9.2	0.0094 9.4	<0.0005	<0.0005
Bailer Blank	09/01/92		<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005
	12/07/92[b]		<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005
Trip Blank	09/01/92		<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005
	12/07/92		<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005
	03/01/93		<0.0005	---	<0.0005	<0.0005	<0.0005	<0.0005

Abbreviations:

TCE = Trichloroethene
TOG = Total non-polar oil and grease by American Public Health Association Standard Methods 503A&E
PCE = Tetrachloroethene
cis-1,2-DCE = cis-1,2-Dichloroethene
trans-1,2-DCE = trans-1,2-Dichlorethene
CHLOR = Chloroform by EPA Method 601
--- = Not analyzed

Notes:

a = Duplicate sample
b = Trip blank sample from 12/07/92 contained 0.014 mg/L of 1,3-Dichlorobenzene

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

March 16, 1993

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

Attn: Daniel T. Kirk

SITE:
Shell WIC # 204-6852-0703
1285 Bancroft Avenue
San Leandro, California

QUARTER:
1st quarter of 1993

QUARTERLY GROUNDWATER SAMPLING REPORT 930301-Y-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 the 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.

TABLE OF WELL GAUGING DATA

WELL I.D.	WELL DIAMETER (inches)	DATA COLLECTION DATE	MEASUREMENTS REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLE LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLE LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
MW-1 *	4	03-01-93	TOP OF PIPE	--	NONE	--	--	34.96	59.30
MW-2	4	03-01-93	TOP OF PIPE	--	NONE	--	--	34.82	59.18
MW-3	4	03-01-93	TOP OF PIPE	--	NONE	--	--	35.50	58.0

* Sample "DUP" was a duplicate sample taken from well MW-1.

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 may be removed in cases where more evacuation is needed to achieve stabilization of water parameters. Less than three case volumes of 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.

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. Either the requested analyses or the specific analytes are written on the sample label (e.g. TPH-G, BTEX).

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/kkl

attachments: chain of custody
certified analytical report

cc: Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608-2411
ATTN: Kristina Koltavary

9303021 (10/22) (18) (16)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No:_____

Date:
Page 1 of 1

Site Address: 1285 Bancroft AV. San leandro.

WIC#: 204-6852-0703

Shell Engineer: Daniel T. Kirk. Phone No.:510 Fax #:675-6171

Consultant Name & Address: Blaine Tech Services.

Consultant Contact: Glen Bennett. Phone No.: 406 Fax #:995-5535

Comments:

Sampled by: Joe Carrera

Printed Name: JOE Carrera

LAB: Anametrix

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	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
(1) MW-1	3-1			X		7	X	X	X				X						
(2) MW-2				X		7	X	X	X				X						
(3) MW-3				X		7	X	X	X				X						
(4) Dup.				X		7	X	X	X				X						
								/											
								TPHd analysis deleted per G. Bennett 3-3-93 KWK											

Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
Joe Carrera	JOE Carrera	3-2-93	1255	Jenny S. Carrizosa	Jenny S. Carrizosa	3-2-93	1255
Jenny S. Carrizosa	Jenny S. Carrizosa	3-2-93	1305	Maria Barajas	Maria Barajas	3/2/93	13:45
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

CHECK ONE (1) BOX ONLY — GT/01

- Quarterly Monitoring [X] 6441
- Site Investigation [ ] 6441
- Soil Classify/Disposal [ ] 6442
- Water Classify/Disposal [ ] 6443
- Soil/Air Rem. or Sys. O & M [ ] 6462
- Water Rem. or Sys. O & M [ ] 6463
- Other [ ]

TURN AROUND TIME

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

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

ANAMETRIX INC
Environmental & Analytical Chemistry

Part of INCHCAPE ENVIRONMENTAL

REPORT

MR. GLEN BENNETT
BLAINE TECH
985 TIMOTHY STREET
SAN JOSE, CA 95133

Workorder # : 9303021
Date Received : 03/02/93
Project ID : 204-6852-0703
Purchase Order: MOH-B813

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9303021- 1	MW-1
9303021- 2	MW-2
9303021- 3	MW-3
9303021- 4	DUP

This report consists of 16 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

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

Sarah Schoen, Ph.D.
Laboratory Director

3-12-93
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 it's 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 amount reported 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. GLEN BENNETT
BLAINE TECH
985 TIMOTHY STREET
SAN JOSE, CA 95133

Workorder # : 9303021
Date Received : 03/02/93
Project ID : 204-6852-0703
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9303021- 1	MW-1	WATER	03/01/93	8010
9303021- 2	MW-2	WATER	03/01/93	8010
9303021- 3	MW-3	WATER	03/01/93	8010
9303021- 4	DUP	WATER	03/01/93	8010

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

MR. GLEN BENNETT
BLAINE TECH
985 TIMOTHY STREET
SAN JOSE, CA 95133

Workorder # : 9303021
Date Received : 03/02/93
Project ID : 204-6852-0703
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Corinne Kham 3/12/93
Department Supervisor Date

Kamel G. Kamel 3112193
Chemist Date

DESCRIPTIONS FOR SPECIFIC COMPOUNDS ANALYZED
EPA METHOD 601/8010

CAS #	COMPOUND NAME	ABBREVIATED NAME
74-87-3	Chloromethane	Chloromethane
74-83-9	Bromomethane	Bromoethane
75-71-8	Dichlorodifluoromethane	Freon 12
75-01-4	Vinyl Chloride	Vinyl Chloride
75-00-3	Chloroethane	Chloroethane
75-09-2	Methylene Chloride	Methylene Chlor
75-69-4	Trichlrofluoromethane	Freon 11
75-35-4	1,1-Dichloroethene	1,1-DCE
75-34-3	1,1-Dichloroethane	1,1-DCA
156-59-2	Cis-1,2-Dichloroethene	Cis-1,2-DCE
156-60-5	Trans-1,2-Dichloroethene	Trans-1,2-DCE
67-66-3	Chloroform	Chloroform
76-13-1	Trichlorotrifluoroethane	Freon 113
107-06-2	1,2-Dichloroethane	1,2-DCA
71-55-6	1,1,1-Trichloroethane	1,1,1-TCA
56-23-5	Carbon Tetrachloride	Carbon Tet
75-27-4	Bromodichloromethane	BromodichloroMe
78-87-5	1,2-Dichloropropane	1,2-DCPA
10061-02-6	Trans-1,3-Dichloropropene	Trans-1,3-DCPE
79-01-6	Trichloroethene	TCE
124-48-1	Dibromochloromethane	DibromochloroMe
79-00-5	1,1,2-Trichloroethane	1,1,2-TCA
10061-01-5	Cis-1,3-Dichloropropene	Cis-1,3-DCPE
110-75-8	2-Chloroethylvinylether	Chloroethylvinl
75-25-2	Bromoform	Bromoform
127-18-4	Tetrachloroethene	PCE
79-34-5	1,1,2,2-Tetrachloroethane	PCA
108-90-7	Chlorobenzene	Chlorobenzene
95-50-1	1,2-Dichlorobenzene	1,2-DCB
541-73-1	1,3-Dichlorobenzene	1,3-DCB
106-46-7	1,4-Dichlorobenzene	1,4-DCB
352-33-0	p-Chlorofluorobenzene	Chlorofluoroben

mh/3426 - 10MH

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

Project ID : 204-6852
Sample ID : MW-1
Matrix : WATER
Date Sampled : 3/ 1/93
Date Analyzed : 3/ 8/93
Instrument ID : HP14

Anametrix ID : 9303021-01
Analyst : KK
Supervisor : [illegible]

Dilution Factor : 1.0
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	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	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	13.	
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	22.	
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

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

Project ID : 204-6852
Sample ID : MW-2
Matrix : WATER
Date Sampled : 3/ 1/93
Date Analyzed : 3/ 8/93
Instrument ID : HP14

Anametrix ID : 9303021-02
Analyst : KK
Supervisor : CP

Dilution Factor : 1.0
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	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	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

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

Project ID : 204-6852
Sample ID : MW-3
Matrix : WATER
Date Sampled : 3/ 1/93
Date Analyzed : 3/ 8/93
Instrument ID : HP14

Anametrix ID : 9303021-03
Analyst : KK
Supervisor : CP

Dilution Factor : 1.0
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	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	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	9.4	
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	9.2	
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

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

Project ID : 204-6852
Sample ID : DUP
Matrix : WATER
Date Sampled : 3/ 1/93
Date Analyzed : 3/ 8/93
Instrument ID : HP14

Anametrix ID : 9303021-04
Analyst :
Supervisor : QP KK

Dilution Factor : 1.0
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	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	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	13.	
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	22.	
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

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

Project ID : 204-68
Sample ID : BLK308
Matrix : WATER
Date Sampled : 0/ 0/ 0
Date Analyzed : 3/ 8/93
Instrument ID : HP14

Anametrix ID : 14B0308H01
Analyst : CP KC
Supervisor :

Dilution Factor : 1.0
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	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	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

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

Project ID : 204-6852
Matrix : LIQUID

Anametrix ID : 9303021
Analyst :
Supervisor : CP KK

	SAMPLE ID	SU1	SU2	SU3
1	BLK308	109		
2	MW-1	108		
3	MW-3	109		
4	DUP	109		
5	MW-3 MS	106		
6	MW-3 MSD	108		
7	MW-2	86		
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 = CHLOROFLUOROBEN	(51-136)

* Values outside of Anametrix QC limits

MATRIX SPIKE RECOVERY FORM -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 204-6852
Sample ID : MW-3
Matrix : WATER
Date Sampled : 3/ 1/93
Date Analyzed : 3/ 8/93
Instrument ID : HP14

Anametrix ID : 9303021-03
Analyst :
Supervisor : CP KK

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	%REC LIMITS
Freon 113	10.0	.0	11.5	115	28-127
1,1-DCE	10.0	.0	11.0	110	47-119
Trans-1,2-DCE	10.0	.0	11.2	112	46-112
1,1-DCA	10.0	.0	11.2	112	57-124
Cis-1,2-DCE	10.0	.0	11.9	119	70-139
1,1,1-TCA	10.0	.0	12.1	121	57-125
Trichloroethene	10.0	.0	11.3	113	61-133
PCE	10.0	9.2	20.9	117	61-132
Chlorobenzene	10.0	.0	11.7	117	81-120
1,3-DCB	10.0	.0	11.2	112	56-113
1,4-DCB	10.0	.0	11.0	110	62-119
1,2-DCB	10.0	.0	10.9	109	69-116

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	RPD LIMITS	%REC LIMITS
Freon 113	10.0	9.1	91	23	25	28-127
1,1-DCE	10.0	9.8	98	11	25	47-119
Trans-1,2-DCE	10.0	10.3	103	9	25	46-112
1,1-DCA	10.0	10.4	104	7	25	57-124
Cis-1,2-DCE	10.0	10.9	109	8	25	70-139
1,1,1-TCA	10.0	11.5	115	5	25	57-125
Trichloroethene	10.0	10.3	103	10	25	61-133
PCE	10.0	18.7	95	21	25	61-132
Chlorobenzene	10.0	11.0	110	7	25	81-120
1,3-DCB	10.0	11.0	110	1	25	56-113
1,4-DCB	10.0	10.9	109	1	25	62-119
1,2-DCB	10.0	11.1	111	1	25	69-116

* Value is outside of Anametrix QC limits

RPD: 0 out of 12 outside limits
Spike Recovery: 0 out of 24 outside limits

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

Project/Case : LABORATORY CONTROL SAMPLE
Matrix : WATER
SDG/Batch : N/A
Date analyzed : 03/08/93

Anametrix I.D. : WO030893
Analyst : KK
Supervisor : QP
Instrument I.D.: HP15

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
FREON 113	10	10.6	106%	34 - 128
1,1-DICHLOROETHENE	10	10.9	109%	63 - 133
trans-1,2-DICHLOROETHENE	10	11.6	116%	55 - 145
1,1-DICHLOROETHANE	10	10.7	107%	49 - 121
cis-1,2-DICHLOROETHENE	10	12.0	120%	66 - 168
1,1,1-TRICHLOROETHANE	10	11.5	115%	72 - 143
TRICHLOROETHENE	10	11.0	110%	63 - 147
TETRACHLOROETHENE	10	10.9	109%	60 - 133
CHLOROBENZENE	10	11.7	117%	70 - 148
1,3-DICHLOROBENZENE	10	11.2	112%	49 - 139
1,4-DICHLOROBENZENE	10	11.7	117%	70 - 133
1,2-DICHLOROBENZENE	10	11.2	112%	69 - 140

* Limits based on data generated by Anametrix, Inc., August, 1992.

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

MR. GLEN BENNETT
BLAINE TECH
985 TIMOTHY STREET
SAN JOSE, CA 95133

Workorder # : 9303021
Date Received : 03/02/93
Project ID : 204-6852-0703
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9303021- 1	MW-1	WATER	03/01/93	TPHg/BTEX
9303021- 2	MW-2	WATER	03/01/93	TPHg/BTEX
9303021- 3	MW-3	WATER	03/01/93	TPHg/BTEX
9303021- 4	DUP	WATER	03/01/93	TPHg/BTEX

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

MR. GLEN BENNETT
BLAINE TECH
985 TIMOTHY STREET
SAN JOSE, CA 95133

Workorder # : 9303021
Date Received : 03/02/93
Project ID : 204-6852-0703
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Balmer 3/12/93
Department Supervisor Date

Reggie Dawson 3/12/93
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9303021
Matrix : WATER
Date Sampled : 03/01/93

Project Number : 204-6852-0703
Date Released : 03/12/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MW-1 -01	Sample I.D.# MW-2 -02	Sample I.D.# MW-3 -03	Sample I.D.# DUP -04	Sample I.D.# BM0402E3 BLANK
Benzene	0.5	ND	260	ND	ND	ND
Toluene	0.5	ND	310	ND	ND	ND
Ethylbenzene	0.5	ND	27	ND	ND	ND
Total Xylenes	0.5	ND	66	ND	ND	ND
TPH as Gasoline	50	ND	2000	ND	ND	ND
% Surrogate Recovery		86%	67%	86%	80%	105%
Instrument I.D.		HP21	HP21	HP21	HP21	HP21
Date Analyzed		03/04/93	03/04/93	03/04/93	03/04/93	03/04/93
RLMF		1	10	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%.

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

Reggie Davison 3/12/93
Analyst Date

Cheryl Balmer 3/12/93
Supervisor Date

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: LCSW0304
Matrix	: WATER	Analyst	: RP
Date Sampled	: N/A	Supervisor	:
Date Analyzed	: 03/04/93	Date Released	: 03/12/93
		Instrument I.D.	: HP21

COMPOUND	SPIKE AMT. (ug/L)	REC LCS (ug/L)	%REC LCS	% REC LIMITS
GASOLINE	375	346	92%	67-127
p-BFB			89%	61-139

* Quality control established by Anametrix, Inc.