Weiss Associates Environmental and Geologic Services

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

TRANSMITTAL LETTER

FROM: J. Michael Asport

DATE: August 24, 1992

TO: Ms. Juliet Shin
Alameda County Department
of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621-1426

VIA:
- X First Class Mail
- ___ Fax ___ pages
- ___ UPS (Surface)
- ___ Federal Express
- ___ Courier

SUBJECT: Shell Service Station
WIC #204-0072-0403
1601 Webster Street
Alameda, California

JOB: 81-434-201

AS:
- ___ We discussed on the telephone on _____
- ___ You requested _____
- ___ We believe you may be interested
- X Is required

WE ARE SENDING:
- X Enclosed
- ___ Under Separate Cover Via _____

Quarterly status report for the subject site

FOR:
- ___ Your information
- X Your use
- ___ Your review & comments
- ___ Return to you

PLEASE:
- X Keep this material
- ___ Return within 2 weeks
- ___ Acknowledge receipt

MESSAGE: Please call if you have any questions.

cc: Dan Kirk, Shell Oil Company, P.O. Box 5278, Concord, CA 94520
Lester Feldman, Regional Water Quality Control Board - San Francisco Bay Region, 2101 Webster Street, Suite 500, CA 94612

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Weiss Associates
Environmental and Geologic Services
5500 Shellmound Street, Emeryville, CA 94608-2411
Fax 510-547-5043 Phone: 510-547-5420

August 21, 1992

Ms. 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 #81-434-201

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 third quarter 1992 and proposed work for the fourth quarter 1992.

Third Quarter 1992 Activities:

- EMCON Associates (EMCON) of San Jose, California measured ground water depths and collected water samples from the three site wells. EMCON's report describing these sampling activities and presenting analytic results for ground water is included as Attachment A.

- Weiss Associates (WA) used EMCON's ground water elevation calculations to prepare a ground water elevation contour map (Figure 2).

- WA also visited the site to identify potential sources of hydrocarbons detected in ground water samples from well MW-2. Results of the site visit and a work plan detailing proposed additional investigation will be submitted by August 19, 1992.

Anticipated Fourth Quarter 1992 Activities:

WA will submit a report presenting the results of the fourth quarter 1992 ground water sampling and depth measurements. We will also report the results of any additional work conducted during the fourth quarter. The reports will include tabulated chemical analytic results, ground water elevation contour maps and descriptions of the addional work.

Please call if you have any questions.

Sincerely,
Weiss Associates

J. Michael Asport
Technical Assistant

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

JMA/JPT:jma

E:\ALL\SHELL\400\434QMJY2.WP

Attachments: Figures
A - EMCON Associates' Ground Water Monitoring Report

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

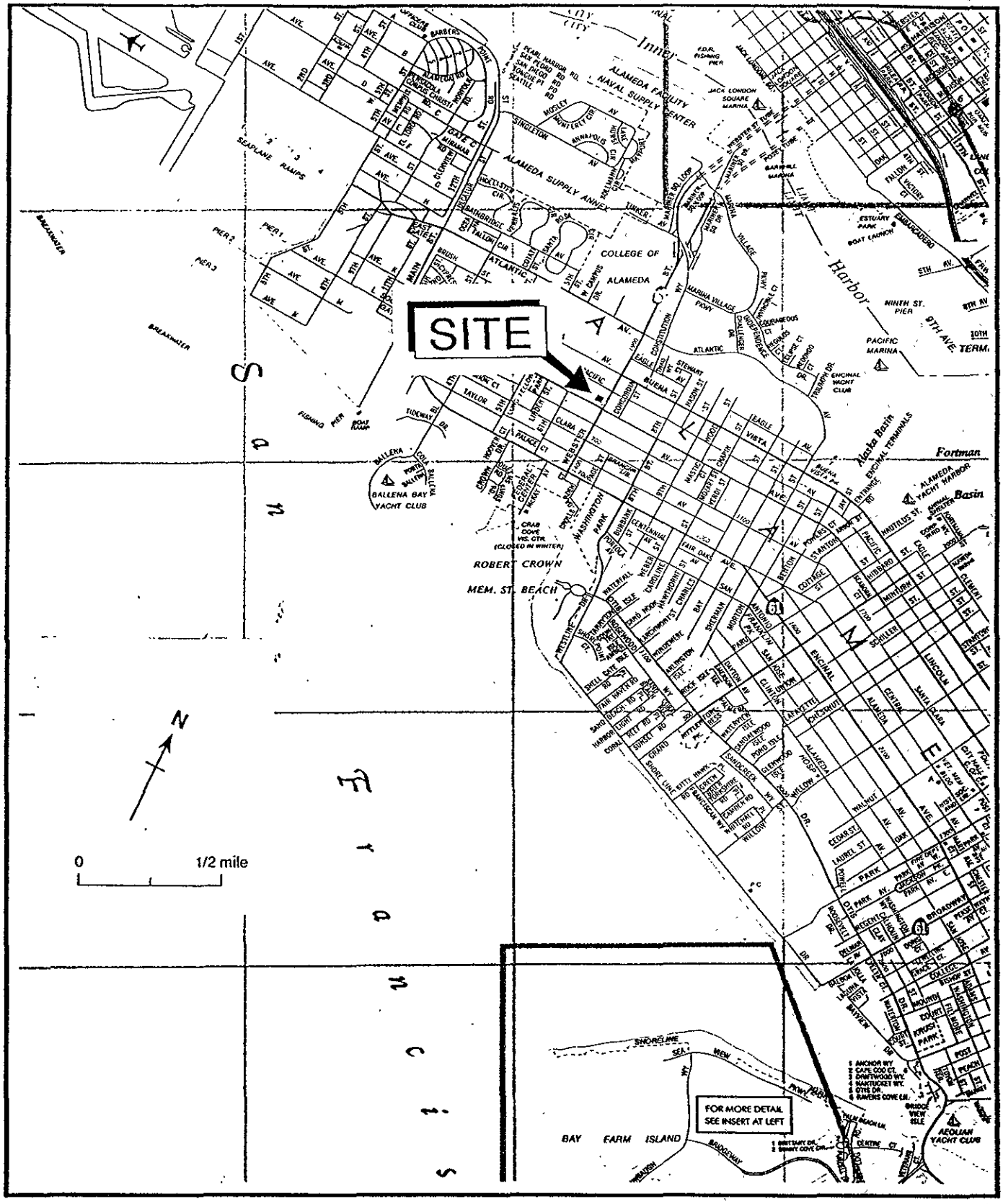

Figure 1. Site Location Map - Shell Service Station, WIC# 204-0072-0403, 1601 Webster Street, Alameda, CA

8/20/90

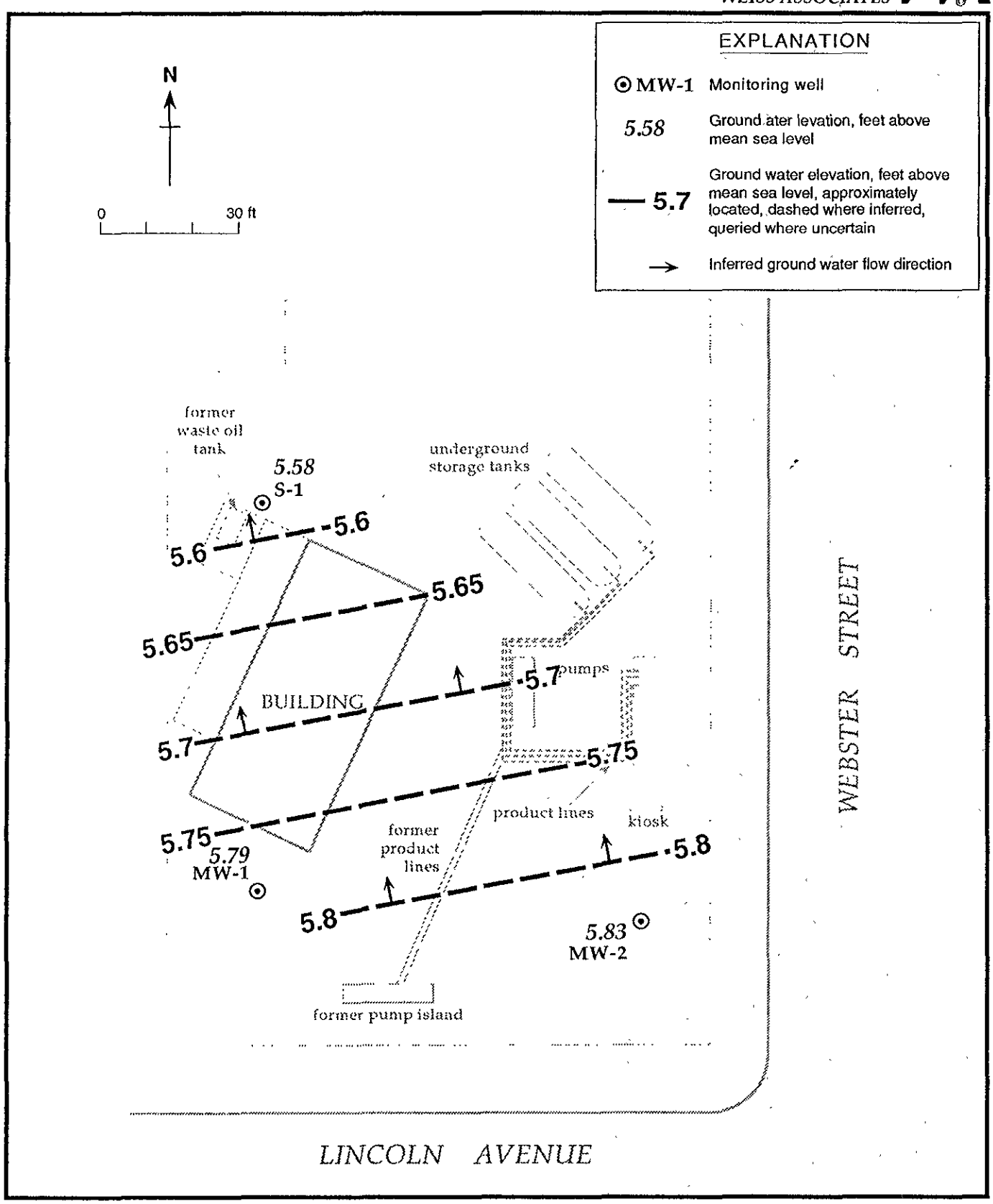

Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - July 2, 1992 - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

ATTACHMENT A

GROUND WATER MONITORING REPORT AND ANALYTIC REPORT

EMCON
ASSOCIATES
Consultants in Wastes
Management and
Environmental Control

July 28, 1992
Project: G67-29.01
WIC#: 204-0072-0403

Mr. David Elias
Weiss Associates
5500 Shellmound Street
Emeryville, California 94608-2411

Re: Third quarter 1992 ground-water monitoring report, Shell Oil Company, 1601 Webster Street, Alameda, California

Dear Mr. Elias:

This letter presents the results of the third quarter 1992 ground-water monitoring event for the Shell Oil Company (Shell) site located at 1601 Webster Street, Alameda, California (figure 1). Third quarter monitoring was conducted on July 2, 1992. The site is monitored quarterly.

GROUND-WATER LEVEL SURVEY

A water-level survey preceded the purging and sampling of the monitoring wells. The wells included in the survey are identified in figure 2 (supplied by Weiss Associates). During the survey, wells MW-1, MW-2, and S-1 were measured for depth to water, floating product thickness, and total depth. Depth to water and floating product thickness were measured to the nearest 0.01 foot with an oil/water interface probe. No floating product was observed in any wells. Total depth was measured to the nearest 0.1 foot. Results of the third quarter water-level survey, and available data from four previous surveys, are summarized in table 1.

SAMPLING AND ANALYSIS

Ground-water samples were collected from wells MW-1, MW-2, and S-1 on July 2, 1992. Prior to sample collection, the wells were purged with polyvinyl chloride bailers. During the purging operation, ground water was monitored for pH, electrical conductivity, and temperature as a function of volume of water removed. Purging continued until these parameters were stable and a minimum of three casing volumes of ground water were removed. Field measurements from third quarter monitoring, and available measurements from four previous monitoring events, are summarized in table 1. Purge water from the monitoring wells was contained in a 55-gallon drum. The drum was identified with a Shell-approved label and secured for on-site storage.

1938 Junction Avenue, San Jose, California 95131-2102, (408) 453-0719, Fax (408) 453-0452

Ground-water samples were collected with a Teflon® bailer, labeled, placed on ice, and transported to Anametrix Inc. for analysis. Shell chain-of-custody documents accompanied all samples to the laboratory.

All equipment that was placed down a well or that came in contact with ground water was steam cleaned with deionized water prior to use at each well.

Quality control samples for third quarter monitoring included a trip blank (called TB), a field blank (called FB), and a duplicate well sample collected from well MW-2 (called MW-2D). All water samples collected during third quarter monitoring were analyzed for total petroleum hydrocarbons as gasoline (TPH-g), and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Additional ground-water samples collected from wells MW-1 and MW-2 were analyzed for halogenated volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) method 601.

ANALYTICAL RESULTS

Analytical results for the third quarter 1992 monitoring event, and available results from four previous monitoring events, are summarized in table 2 (TPH-g and BTEX) and table 3 (VOCs). The original certified analytical report and final chain-of-custody document are attached.

If you have any questions, please call.

Very truly yours,

EMCON Associates

David Larsen
Environmental Sampling Coordinator

Orrin Childs
Environmental Sampling Supervisor

DL/OC:dl

Attachments: Table 1 - Monitoring well field measurement data
Table 2 - Summary of analytical results (TPH-g and BTEX)
Table 3 - Summary of analytical results (VOCs)
Figure 1 - Site location map
Figure 2 - Monitoring well locations
Certified analytical report
Chain-of-custody document

Table 1
Monitoring Well Field Measurement Data
2nd Quarter 1992

Shell Station: 1601 Webster St.
Alameda, California
WIC #: 204-0072-0403

Date: 08/06/92
Project Number: G67-29.01

Well Designation	Water Level Field Date	TOC Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	Total Well Depth (feet)	Floating Product Thickness (feet)	Water Sample Field Date	pH (std. units)	Electrical Conductivity (micromhos/cm)	Temperature (degrees F)	Turbidity (NTU)
MW-1	04/11/91	13.80	7.37	6.43	NR	NR	04/11/91	NR	NR	NR	NR
MW-1	07/18/91	13.80	8.86	4.94	NR	NR	07/18/91	NR	NR	NR	NR
MW-1	10/17/91	13.80	10.47	3.33	NR	NR	10/17/91	NR	NR	NR	NR
MW-1	01/24/92	13.80	9.18	4.62	21.0	ND	01/24/92	6.49	685	61.3	>200
MW-1	04/23/92	13.80	6.95	6.85	20.8	ND	04/23/92	6.38	928	63.3	>200
MW-2	04/11/91	13.20	6.87	6.33	NR	NR	04/11/91	NR	NR	NR	NR
MW-2	07/18/91	13.20	8.27	4.93	NR	NR	07/18/91	NR	NR	NR	NR
MW-2	10/17/91	13.20	9.89	3.31	NR	NR	10/17/91	NR	NR	NR	NR
MW-2	01/24/92	13.20	8.60	4.60	19.9	ND	01/24/92	6.46	1211	65.1	>200
MW-2	04/23/92	13.20	6.48	6.72	19.9	ND	04/23/92	6.68	1166	66.2	>200
S-1	04/11/91	13.77	7.68	6.09	NR	NR	04/11/91	NR	NR	NR	NR
S-1	07/18/91	13.77	8.95	4.82	NR	NR	07/18/91	NR	NR	NR	NR
S-1	10/17/91	13.77	10.62	3.15	NR	NR	10/17/91	NR	NR	NR	NR
S-1	01/24/92	13.77	9.32	4.45	20.0	ND	01/24/92	6.51	806	60.7	>200
S-1	04/23/92	13.77	7.27	6.50	19.9	ND	04/23/92	6.46	801	60.7	>200

TOC = top of casing
ft-MSL = elevation in feet, relative to mean sea level
std. units = standard pH units
micromhos/cm = micromhos per centimeter
degrees F = degrees Fahrenheit
NTU = nephelometric turbidity units
NR = Not reported; data not available
ND = None detected

Table 2
Summary of Analytical Results
2nd Quarter 1992
milligrams per liter (mg/l) or parts per million (ppm)

Shell Station: 1601 Webster St.
Alameda, California
WIC #: 204-0072-0403

Date: 08/06/92
Project Number: G67-29.01

Sample Designation	Water Sample Field Date	TPH-g (mg/l)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Total Xylenes (mg/l)
MW-1	04/11/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-1	07/18/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-1	10/17/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-1	01/24/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-1	04/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-2	04/11/91	2.6	0.13	0.15	0.25	0.33
MW-2	07/18/91	1.3	0.10	0.059	0.084	0.12
MW-2	10/17/91	2.1	0.18	0.26	0.15	0.52
MW-2	01/24/92	7.1	0.45	0.96	0.45	1.6
MW-2	04/23/92	16.	0.32	0.74	0.65	2.6
S-1	04/11/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-1	07/18/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-1	10/17/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-1	01/24/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-1	04/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
TB	04/11/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
TB	07/18/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
TB	10/17/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
TB	01/24/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
TB	04/23/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005

TPH-g = total petroleum hydrocarbons as gasoline

Table 3
Summary of Analytical Results
Volatile Organic Compounds by EPA Method 601
2nd Quarter 1992
milligrams per liter (mg/l) or parts per million (ppm)

Shell Station: 1601 Webster St.
Alameda, California
WIC #: 204-0072-0403

Date: 08/06/92
Project Number: G67-29.01

Sample Designation	Water Sample Field Date	cis-1,2-DCE (mg/l)	1,2-DCA (mg/l)
MW-1	04/11/91	0.0009	<0.0005
MW-1	07/18/91	0.0044	<0.0005
MW-1	10/17/91	0.0072	<0.0005
MW-1	01/24/92	0.0014	<0.0005
MW-1	04/23/92	<0.0005	<0.0005
MW-2	04/11/91	<0.0005	<0.0005
MW-2	07/18/91	<0.0005	0.0008
MW-2	10/17/91	<0.0005	0.0006
MW-2	01/24/92	<0.0005	<0.0005
MW-2	05/20/92	<0.0025	<0.0025
S-1	10/18/90	<0.0005	<0.0005

cis-1,2-DCE = cis-1,2-Dichloroethene
1,2-DCA = 1,2-Dichloroethane

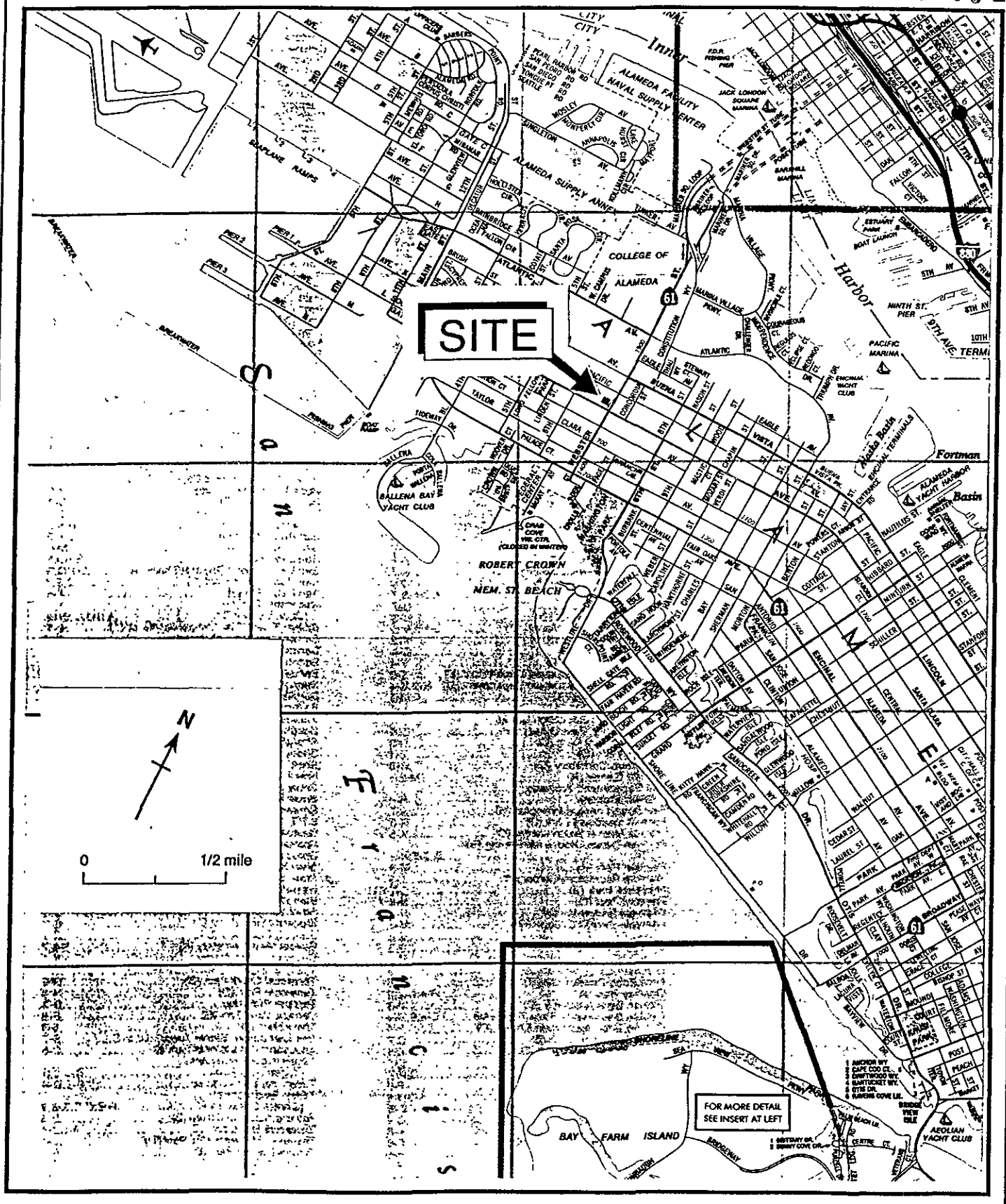

Figure 1. Site Location Map
Shell Service Station WIC #204-0072-0403
1601 Webster Street, Alameda, California

8/20/90

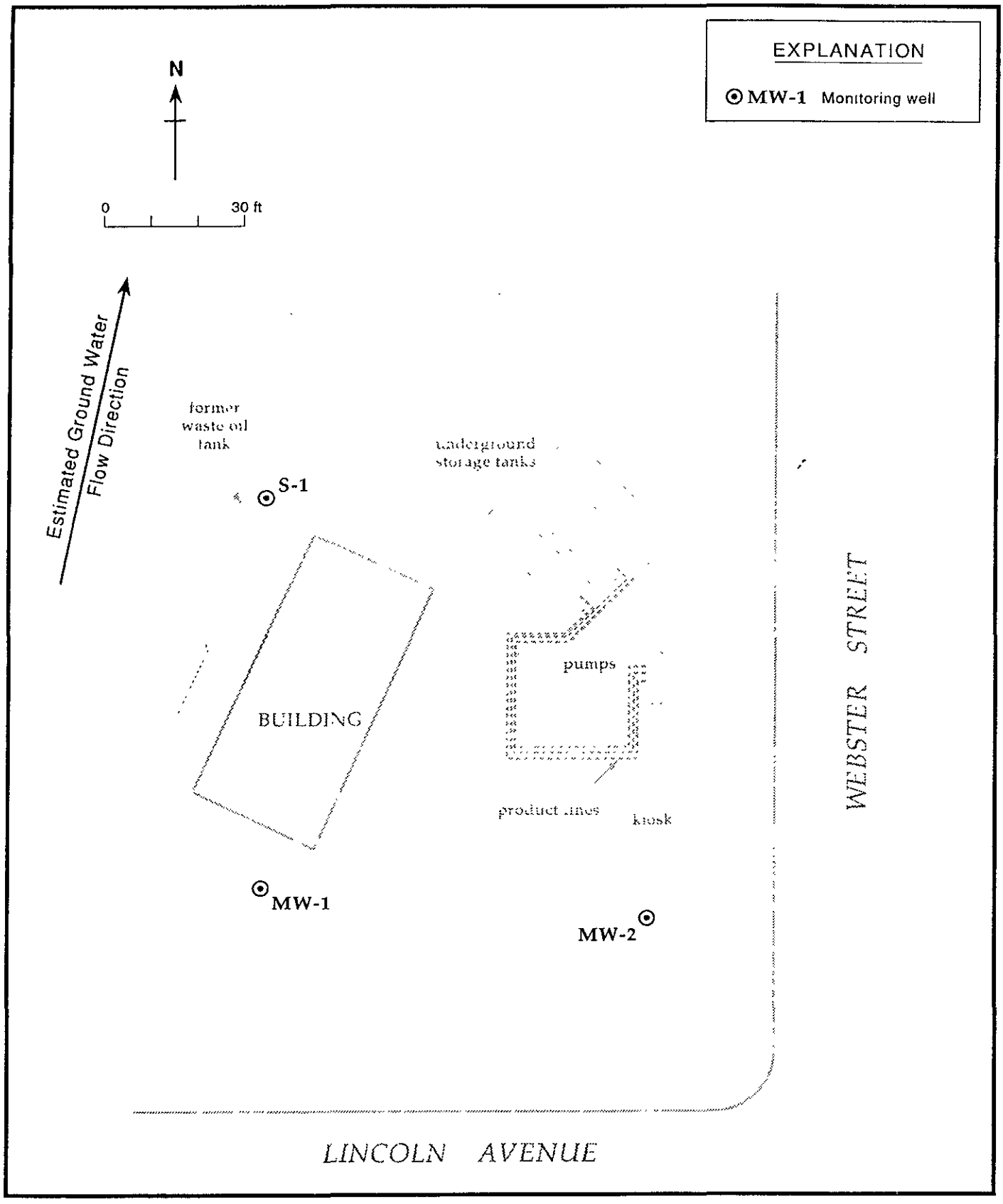

Figure 2. Monitoring Well Locations - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

5/19/92

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

REPORT

MR. DAVID LARSEN
EMCON ASSOCIATES
1938 JUNCTION AVE.
SAN JOSE, CA 95131

Workorder # : 9207023
Date Received : 07/02/92
Project ID : G67-29.01
Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9207023- 1	MW-1
9207023- 2	S-1
9207023- 3	MW-2
9207023- 4	TB
9207023- 5	FB
9207023- 6	MW-2D

This report consists of 12 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.

Larry Kutt for
Sarah Schoen, Ph.D.
Laboratory Director

07-15-92
Date

EMCON ASSOCIATES
JUL 16 1992
RECEIVED

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. DAVID LARSEN
EMCON ASSOCIATES
1938 JUNCTION AVE.
SAN JOSE, CA 95131

Workorder # : 9207023
Date Received : 07/02/92
Project ID : G67-29.01
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9207023- 1	MW-1	WATER	07/02/92	601
9207023- 3	MW-2	WATER	07/02/92	601

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

MR. DAVID LARSEN
EMCON ASSOCIATES
1938 JUNCTION AVE.
SAN JOSE, CA 95131

Workorder # : 9207023
Date Received : 07/02/92
Project ID : G67-29.01
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

QA/QC SUMMARY :

- Sample MW-2 was analyzed at a dilution due to interfering hydrocarbon peaks.

Corinne Pham 7/8/92
Department Supervisor Date

Kamel G. Kamel 7/8/92
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 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: MW-1	Anametrix I.D.	: 9207023-01
Matrix	: WATER	Analyst	: KK
Date sampled	: 07/02/92	Supervisor	: SP
Date analyzed	: 07/07/92	Date released	: 07/08/92
Dilution	: NONE	Instrument ID	: HP14

CAS #	Compound Name	Reporting Limit (mg/L)	Amount Found (mg/L)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	78%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: MW-2	Anametrix I.D.	: 9207023-03
Matrix	: WATER	Analyst	: KK
Date sampled	: 07/02/92	Supervisor	:
Date analyzed	: 07/07/92	Date released	: 07/08/92
Dilution	: 100	Instrument ID	: HP14

CAS #	Compound Name	Reporting Limit (mg/L)	Amount Found (mg/L)
74-87-3	* Chloromethane	0.1	ND
74-83-9	* Bromomethane	0.05	ND
75-71-8	* Dichlorodifluoromethane	0.1	ND
75-01-4	* Vinyl Chloride	0.05	ND
75-00-3	* Chloroethane	0.05	ND
75-09-2	* Methylene Chloride	0.05	ND
75-69-4	* Trichlorofluoromethane	0.05	ND
75-35-4	* 1,1-Dichloroethene	0.05	ND
75-34-3	* 1,1-Dichloroethane	0.05	ND
156-59-2	# Cis-1,2-Dichloroethene	0.05	ND
156-60-5	* Trans-1,2-Dichloroethene	0.05	ND
67-66-3	* Chloroform	0.05	ND
76-13-1	# Trichlorotrifluoroethane	0.05	ND
107-06-2	* 1,2-Dichloroethane	0.05	ND
71-55-6	* 1,1,1-Trichloroethane	0.05	ND
56-23-5	* Carbon Tetrachloride	0.05	ND
75-27-4	* Bromodichloromethane	0.05	ND
78-87-5	* 1,2-Dichloropropane	0.05	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.05	ND
79-01-6	* Trichloroethene	0.05	ND
124-48-1	* Dibromochloromethane	0.05	ND
79-00-5	* 1,1,2-Trichloroethane	0.05	ND
10061-01-5	* cis-1,3-Dichloropropene	0.05	ND
110-75-8	* 2-Chloroethylvinylether	0.1	ND
75-25-2	* Bromoform	0.05	ND
127-18-4	* Tetrachloroethene	0.05	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.05	ND
108-90-7	* Chlorobenzene	0.05	ND
95-50-1	* 1,2-Dichlorobenzene	0.1	ND
541-73-1	* 1,3-Dichlorobenzene	0.1	ND
106-46-7	* 1,4-Dichlorobenzene	0.1	ND
	% Surrogate Recovery	51-136%	73%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : VBLANK
Matrix : WATER
Date sampled : N/A
Date analyzed: 07/07/92
Dilution : NONE

Anametrix I.D. : 14B0707H01
Analyst : kk
Supervisor : CP
Date released : 07/08/92
Instrument ID : HP14

CAS #	Compound Name	Reporting Limit (mg/L)	Amount Found (mg/L)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	73%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

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

MR. DAVID LARSEN
EMCON ASSOCIATES
1938 JUNCTION AVE.
SAN JOSE, CA 95131

Workorder # : 9207023
Date Received : 07/02/92
Project ID : G67-29.01
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9207023- 1	MW-1	WATER	07/02/92	TPHg/BTEX
9207023- 2	S-1	WATER	07/02/92	TPHg/BTEX
9207023- 3	MW-2	WATER	07/02/92	TPHg/BTEX
9207023- 4	TB	WATER	07/02/92	TPHg/BTEX
9207023- 5	FB	WATER	07/02/92	TPHg/BTEX
9207023- 6	MW-2D	WATER	07/02/92	TPHg/BTEX

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

MR. DAVID LARSEN
EMCON ASSOCIATES
1938 JUNCTION AVE.
SAN JOSE, CA 95131

Workorder # : 9207023
Date Received : 07/02/92
Project ID : G67-29.01
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Department Supervisor — Date 7/14/92

Chemist — Date 7/14/92

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

Anametrix W.O.: 9207023
Matrix : WATER
Date Sampled : 07/02/92

Project Number : G67-29.01
Date Released : 07/14/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# MW-1 -01	Sample I.D.# S-1 -02	Sample I.D.# MW-2 -03	Sample I.D.# TB -04	Sample I.D.# FB -05
Benzene	0.0005	ND	ND	2.5	ND	ND
Toluene	0.0005	ND	ND	3.7	ND	ND
Ethylbenzene	0.0005	ND	ND	2.0	ND	ND
Total Xylenes	0.0005	ND	ND	9.6	ND	ND
TPH as Gasoline	0.050	ND	ND	33	ND	ND
% Surrogate Recovery		116%	80%	107%	87%	91%
Instrument I.D.		HP4	HP4	HP4	HP4	HP4
Date Analyzed		07/08/92	07/07/92	07/08/92	07/07/92	07/07/92
RLMF		1	1	250	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 53-147%.

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

Steve Jones 7/14/92
Analyst Date

Cheryl Bateman 7/14/92
Supervisor Date

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

Anametrix W.O.: 9207023
Matrix : WATER
Date Sampled : 07/02/92

Project Number : G67-29.01
Date Released : 07/14/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# MW-2D -06	Sample I.D.# BL0701E2 BLANK	Sample I.D.# BL0801E2 BLANK
Benzene	0.0005	2.9	ND	ND
Toluene	0.0005	4.8	ND	ND
Ethylbenzene	0.0005	1.8	ND	ND
Total Xylenes	0.0005	10	ND	ND
TPH as Gasoline	0.050	26	ND	ND
% Surrogate Recovery		81%	108%	129%
Instrument I.D.		HP4	HP4	HP4
Date Analyzed		07/08/92	07/07/92	07/08/92
RLMF		500	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 53-147%.

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

Analyst 7/14/92 Date

Supervisor 7/14/92 Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT
EPA METHOD 5030 WITH GC/FID

Sample I.D. : G67-29.01 S-1
Matrix : WATER
Date Sampled : 07/02/92
Date Analyzed : 07/07/92

Anametrix I.D. : 9207023-02
Analyst : [illegible]
Supervisor : [illegible]
Date Released : 07/14/92
Instrument ID : HP4

COMPOUND	SPIKE AMT. (PPM)	MS (PPM)	%REC MS	MSD (PPM)	%REC MSD	RPD	%REC LIMITS
Gasoline	0.50	0.46	92%	0.42	84%	-9%	48-145
P-BFB			77%		72%		53-147

* Limits established by Anametrix, Inc.

Site Address: 1601 Webster Street, Alameda

WIC#: 204-0072-0403

Shell Engineer: Dan Kirk ~~Kurt Miller~~ DER — **Phone No.** (510) **Fax #:** 685-3853

Consultant Name & Address: EMCON Assoc. 1938 Junction Ave. San Jose, CA 95131

Consultant Contact: David Larsen — **Phone No.** (408) **Fax #:** 453-2269

Comments: 3- VOAs (HCl) for g, BTEX
3- VOAs (NP) for 601

Sampled By:

Printed Name:

Serial No.: 529 (18) (10) **Page** 1 **of** 1

LAB: Anametrix 10:40 AM

Analysis Required

CHECK ONE (1) BOX ONLY		CT/DT
Quarterly Monitoring	X	5461
Site Investigation		5441
Soil for disposal		5442
Water for disposal		5443
Air Sample- Sys O&M		5452
Water Sample - Sys O&M		5453
Other		

TURN AROUND T
24 hours [ ]
48 hours [ ]
15 days X (No
Other [ ] ___
NOTE: Notify La soon as possible o 24/48 hrs. TAT.

Sample ID	Date	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	EPA 601	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITIO COMMEN
MW-1	7-2-92		X		6	X		X			X	40 ml	NP/ HCl	No		
S-1	7-2-92		↓		3	X		X								
MW-2	7-2-92				6	X		X			X					
TB	7-2-92				3	X		X							Sample ID on container says TB-1	
FB	7-2-92				3	X		X							Sample ID on container says FB-1 g.d.	
MW-2D	7-2-92		↓		6 ~~3~~	X		X				↓	↓	↓		

Relinquished By (signature): Lesee Ratt — **Printed name:** Lisle Rath — **Date:** 7-2-92 **Time:** 16:16

Received (signature): Michele D. Aguilar — **Printed name:** Michele D Aguilar — **Date:** 7/2 **Time:** 16:

Relinquished By (signature): — **Printed name:** — **Date:** — **Time:**

Received (signature): — **Printed name:** — **Date:** — **Time:**

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

Last Revision Date: 10/15/91