JET KAYO OIL COMPANY
1221 East Main Street Chattanooga, TN 37408-1696
(615) 755-9330

September 21, 1987

Mr. Greg Zentner
San Francisco Bay Region
Regional Water Quality Control Board
1111 Jackson ST, Room 6040
Oakland, CA 94607

II
652
11/16/87

RE: Econo Station
14 Lewelling BLVD.
San Lorenzo, CA

Dear Mr. Zentner:

Enclosed is a brief letter report prepared by Applied Geo-Systems of the August monitoring well sampling at the referenced location.

This site is being sampled monthly from July to September then quarterly through July, 1988.

The levels of hydrocarbon constituents have continued to decrease since the initial analyses performed in June. Water levels have dropped by about a foot over this time frame as well.

September analyses will be forwarded to you when they are received.

If you have any questions, please contact me.

Sincerely,

Paul F. Taylor

Paul F. Taylor
Coordinator - Environmental Affairs

Lodi Office: 900 S Cherokee LN
Lodi, CA 95240

Phone: 209/368-2731

PFT/dg

Enclosure

cc: Larry Seto - Alameda County Health Care Services

COPY

Applied GeoSystems 43255 Mission Blvd. Suite B Fremont, CA 94539 (415) 651-1906

September 9, 1987
0901ptay
87044-4

Mr. Paul Taylor
Kayo Oil Company
900 South Cherokee Lane
Lodi, California 95240

Subject: Letter Report No. 87044-4, regarding qualitative ground-water monitoring at Econo gasoline station, 44 Lewelling Boulevard, San Lorenzo, California.

Mr. Taylor:

This letter report summarizes the results of ground-water monitoring performed by Applied GeoSystems as required by the San Francisco Bay Region of the Regional Water Quality Control Board (RWQCB). At Kayo Oil Company's request, quantitative analysis of ground water at the site was performed monthly from June 1987 to August 1987. Monitoring of the ground water in the wells will continue on a monthly schedule through September 1987 and then on a quarterly schedule through July 1988.

A geologist arrived at the above-referenced site at 2:20 P.M. on August 17, 1987, to sample wells MW-1, MW-2, and MW-3. The locations of the wells are shown on the Ground-Water Potentiometric Surface Map, Plate P-1, enclosed with this letter report. An initial sample was collected from each of the wells to check for floating product, odor, sheen, and emulsion. The samples were collected by gently lowering a teflon bailer halfway through the air/water interface and collecting a sample from the surface of the water in the well. The water in the wells showed no floating product. A very slight product odor was detected in water from wells MW-1 and MW-3. No product odor was associated with the water sample retrieved from well MW-2. No product sheen or emulsion was observed in ground water at the site. Cumulative results of the subjective analyses are presented in Table 1.

Prior to performing the subjective analyses, a static water-level measurement was made using a Solinst water-level indicator. The water-level measurements were used to produce the ground-water potentiometric surface contours shown on Plate P-1. The ground-water surface, at the time of the measurement, was sloped toward the west-southwest.

TABLE 1

Cumulative Subjective Analyses
Econo Gasoline Station
San Lorenzo, California

Date	Well No.	Depth to Water	Floating Product	Odor	Sheen	Emulsion
	MW-1:					
6/87		16.27'	NONE	MODERATE	SLIGHT	NONE
7/87		16.96'	NONE	SLIGHT	NONE	NONE
8/87		17.28'	NONE	V. SLIGHT	NONE	NONE
	MW-2:					
6/87		15.62'	NONE	MODERATE	STRONG	NONE
7/87		16.23'	NONE	NONE	NONE	NONE
8/87		16.58'	NONE	NONE	NONE	NONE
	MW-3:					
6/87		15.89'	NONE	MODERATE	SLIGHT	NONE
7/87		16.48'	NONE	NONE	NONE	NONE
8/87		16.80'	NONE	V. SLIGHT	NONE	NONE

After performing the subjective analyses, the wells were purged of approximately four well volumes of water and were allowed to recover to static water level. Samples for laboratory analyses were then collected with a laboratory-cleaned teflon bailer. A sample from each well was collected from below the static water level. The samples were transferred to laboratory-cleaned 40-ml glass Volatile Organic Analysis (VOA) vials. Hydrochloric acid was added to the vials to minimize bacterial degradation of the samples.

The samples were sealed with teflon-lined caps, stored on ice, and delivered to Applied GeoSystems' Certified Laboratory for analyses. A Chain of Custody Record was initiated by the sampler and is enclosed with this report. The samples were analyzed for total volatile hydrocarbons and hydrocarbon constituents (benzene, ethylbenzene, toluene, and total xylenes - BETX). The

results of these analyses and previous analyses are presented in Table 2. The most recent analytical results are also presented on the laboratory Record of Analysis enclosed with this report.

TABLE 2

Laboratory Results For
Water Samples Collected From
Econo Gasoline Station - San Lorenzo, California

Date	I.D.	TVH	B	E	T	X	Det. Limit
MW-1:							
6/87	W-25-MW1	18.05	0.49	0.93	0.15	3.79	0.01
7/87	W-20-MW1	14.75	0.56	0.95	0.12	3.27	0.05
8/87	W-26-MW1	12.86	0.63	0.32	0.04	1.13	0.01
MW-2:							
6/87	W-25-MW2	4.870	0.113	0.046	0.014	0.058	0.002
7/87	W-20-MW2	2.207	0.103	0.034	0.025	0.048	0.001
8/87	W-26-MW2	0.7560	0.0376	0.0082	0.0109	0.0111	0.0005
MW-3:							
6/87	W-25-MW3	40.3	5.4	1.7	3.9	5.2	0.1
7/87	W-20-MW3	30.32	6.88	1.58	7.08	4.77	0.05
8/87	W-26-MW3	25.62	5.93	1.24	4.18	3.37	0.05

Note: All results in parts per million (ppm)
Det. Limit: Detection Limit
TVH: Total volatile hydrocarbons
BETX: Benzene, ethylbenzene, toluene, and total xylenes

The most recent analyses generally show a decrease in concentrations of dissolved hydrocarbons from those of the analyses of July 1987. The concentration of dissolved total volatile hydrocarbons has decreased since the July analyses. The BETX concentrations in the most recent samples are lower than concentrations of the July 1987 samples with the exception of a slight increase in benzene concentration in water collected from MW-1. Cumulative results of concentrations of dissolved hydrocarbons and hydrocarbon constituents for water collected from monitoring wells MW-1 through MW-3 are presented graphically on Plates P-2 and P-3.

Because relatively high concentrations of dissolved hydrocarbon constituents are present in the ground water at the site, further work may be necessary to evaluate the extent of the contamination and the usefulness of the ground water in the vicinity of the site.

A copy of this report should be forwarded to Mr. Greg Zentner of the California Regional Water Quality Control Board, 1111 Jackson Street, Room 6040, Oakland, California 94607. Please do not hesitate to call if you have any questions regarding the material covered in this letter.

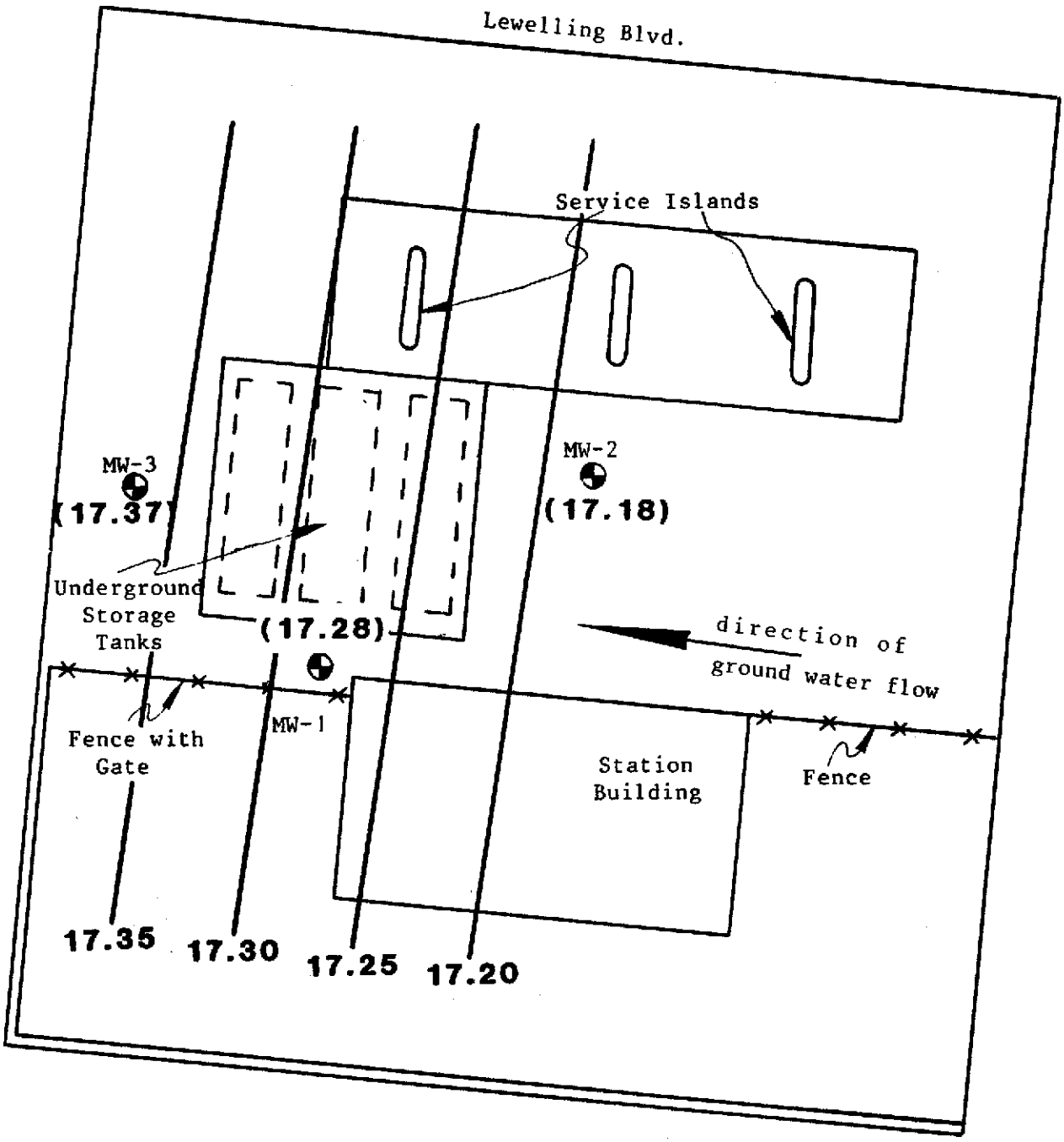
Sincerely,
Applied GeoSystems

Glenn R. Dembroff
Project Geologist

Gillian S. Holmes

Gillian S. Holmes
C.E. #34812

Enclosures:
Ground-Water Potentiometric Surface Map
Cumulative TVH Concentration Table
Cumulative BETX Concentration Table
Chain of Custody Record
Record Of Analysis (3)



Source: Measured by Tape and Compass

= Monitoring Well Location

17.25 = Potentiometric Surface Depth measured in feet (below arbitrary datum)

N

Approximate Scale

20 10 0 20 40

feet

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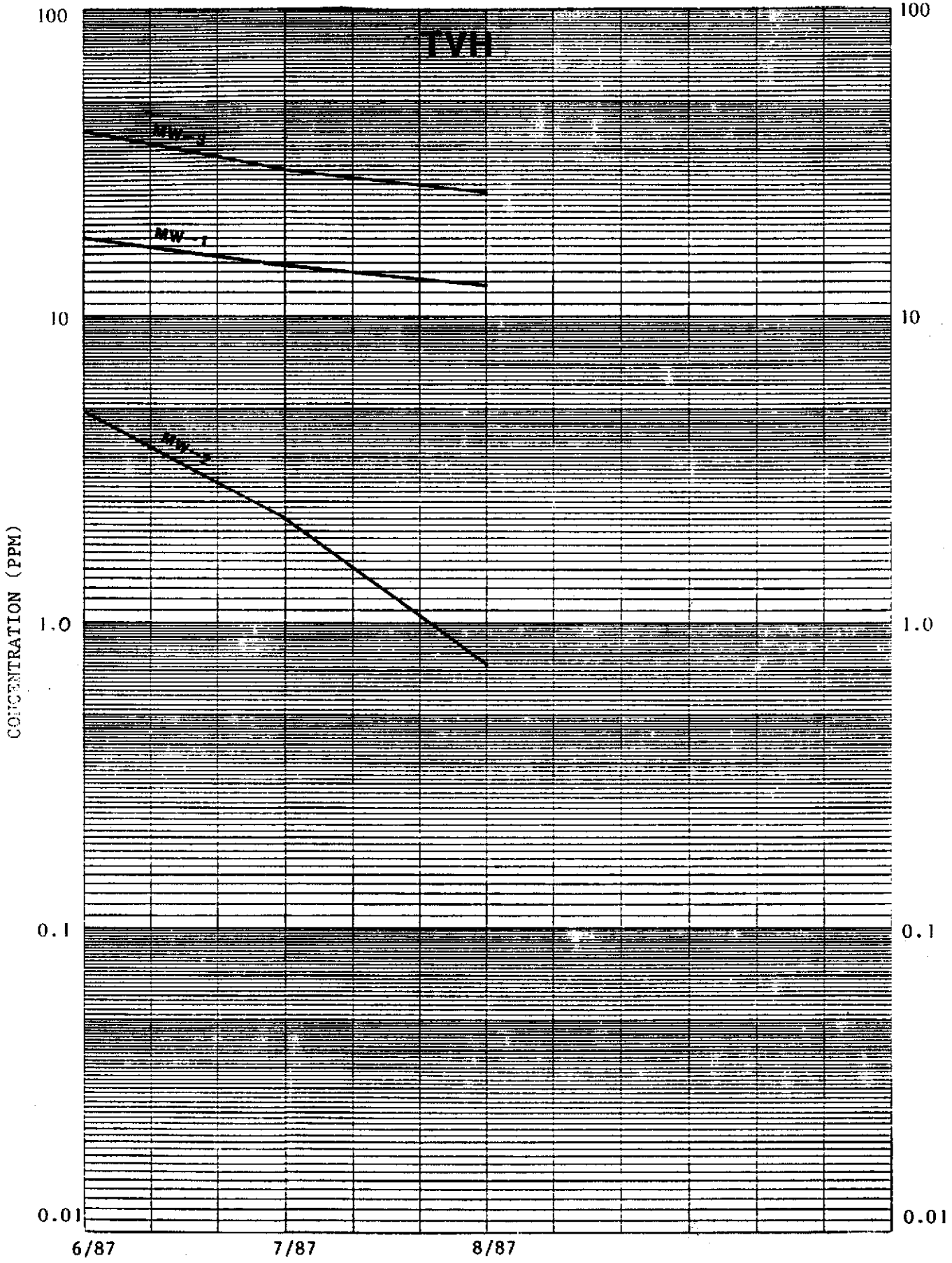
PROJECT NO. 87044-4

GROUND WATER POTENTIOMETRIC SURFACE MAP
August, 1987
Econo Gasoline Station
San Lorenzo, California

PLATE

P-1



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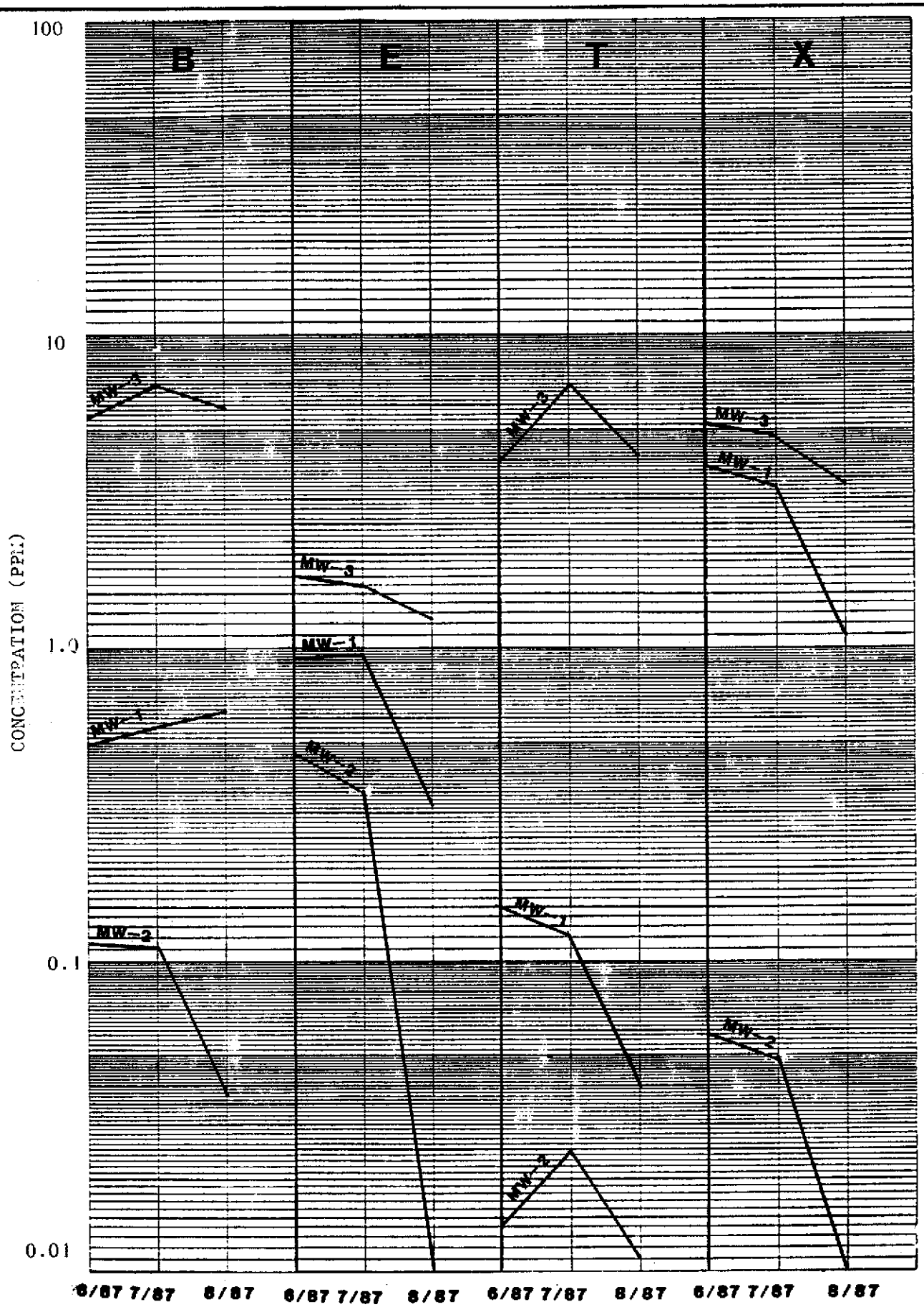
CUMULATIVE TVH CONCENTRATION TABLE
Econo Gasoline Station
San Lorenzo, California

PLATE
P-2



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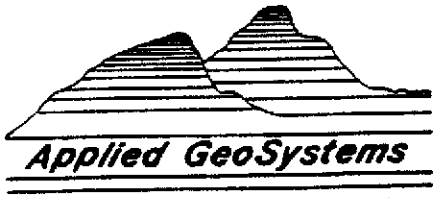
CUMULATIVE BETX CONCENTRATION TABLE
Econo Gasoline Station
San Lorenzo, California

PLATE P-3

PROJECT NO. 87044-4

CHAIN OF CUSTODY RECORD



43255 Mission Blvd. Suite B Fremont, CA 94539 (415) 651-1906

SAMPLER (signature):

Phone: (415) 651-1906

LABORATORY:
APPLIED GEOSYSTEMS

TURNAROUND TIME: 2 WKS.

Project Leader: GLENN DEMBOSKY

Phone No. (415) 651-1906

SHIPPING INFORMATION:

Shipper

Address

Date Shipped

Service Used

Airbill No. Cooler No.

Relinquished by: (signatures)	Received by: (signatures)	Date	Time
		8/18/87	0800
	Received for laboratory by:	8-19-87	8:00AM

LABORATORY SHOULD SIGN UPON RECEIPT AND RETURN A COPY OF THIS FORM WITH THE LABORATORY RESULTS

Sample No.	Site Identification	Date Sampled	Analyses Requested	Sample Condition Upon Receipt
W-26-MW1	AGS-87044-4	8-17-87	BTEX AND THC	ICED
W-26-MW2	"	"	" " "	"
W-26-MW3	"	"	" " "	"

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RECORD OF ANALYSIS

Date 8-26-87

Applied GeoSystems
43255 Mission Blvd.
Fremont, CA. 94539

Attention: Glenn R. Dembroff

Date Received: 8-19-87
Date Analyzed: 8-26-87

Laboratory# 8708W131

Procedure:

The water sample referenced on the attached Chain-of-Custody was analyzed for the presence and concentration of Benzene, Ethyl-Benzene, Toluene, and Xylenes (BETX) and for Total Volatile Hydrocarbons (TVH) by EPA method 602. The sample was concentrated on a Tekmar LSC-2 and ALS automatic sampler prior to injection into a 5890 Hewlett Packard gas chromatograph fitted with a Photo-Ionization detector (PID) and a Flame Ionization detector (FID). The limit of detection for this sample is 0.01 milligrams/liter (parts per million = ppm).

The results are presented in the table below:

SAMPLE	SITE	BENZENE	ETHYL BENZENE	TOLUENE	TOTAL XYLENES	TVH
W-26-MW1	87044-4	0.63	0.32	0.04	1.13	12.86

Results in milligrams/liter (parts per million = ppm).

Tia Tran, Chemist

Applied GeoSystems is a State of California, Department of Health Services Certified Hazardous Waste Testing Laboratory (No. 153).

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RECORD OF ANALYSIS

Date 8-26-87

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Fremont, CA. 94539

Attention: Glenn R. Dembroff

Date Received: 8-19-87
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The results are presented in the table below:

SAMPLE	SITE	BENZENE	ETHYL BENZENE	TOLUENE	TOTAL XYLENES	TVH
W-26-MW2	87044-4	0.0376	0.0082	0.0109	0.0111	0.7560

Results in milligrams/liter (parts per million = ppm).

Tia Tran, Chemist

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RECORD OF ANALYSIS

Date 8-26-87

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Attention: Glenn R. Dembroff

Date Received: 8-19-87
Date Analyzed: 8-26-87

Laboratory# 8708W133

Procedure:

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The results are presented in the table below:

SAMPLE	SITE	BENZENE	ETHYL BENZENE	TOLUENE	TOTAL XYLENES	TVH
W-26-MW3	87044-4	5.93	1.24	4.18	3.37	25.62

Results in milligrams/liter (parts per million = ppm).

Tia Tran, Chemist

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