Kayo Oil Company
a subsidiary of Conoco Inc.

P.O. Box 4784
Houston, TX 77210-4784

5/5/89

April 27, 1989

Mr. Steven Ritchie
Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street, Room 6040
Oakland, CA 94607

RE: Conoco Inc. (Kayo Oil)
Gasoline Stations
San Francisco Bay Region

Dear Mr. Ritchie:

Enclosed is the first quarter 1989 Summary Report for our environmental cases within your region. Summary reports for individual sites have been copied to the local agency and the cleanup oversight agency for that jurisdiction.

Mr. Gregory Fletcher and myself will be acting as representatives for Conoco Inc. in the coordination of activities and communications regarding the Bay Area stations.

If you have any questions, please contact Greg or myself at the Lodi office.

Sincerely,

Joyce M. Miley

Joyce M. Miley
Coordinator - Environmental Affairs

Lodi Office: 900 S. Cherokee Lane
Lodi, CA 95240

Phone: 209/368-2731

JMM/wml

Enclosure

cc: Local Implementing Agencies

SUMMARY REPORT

SAN FRANCISCO BAY

REGIONAL WATER QUALITY CONTROL BOARD

Prepared by:

DuPont Environmental Services

for:

Conoco, Inc.

April 25, 1989

April 27, 1989

5/5/87

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KC

ALAMEDA COUNTY 01

Site: Jet Gas Station
44 Lewelling Boulevard
San Lorenzo, CA

History

Three underground fuel storage tanks were removed and replaced during the site retrofit in April 1987. Additional soil was excavated from the tank pit and the resulting 450 cubic yards were aerated on-site prior to disposal at a Class III dump. In May 1987, three ground water monitoring wells were installed and sampled by Applied GeoSystems. A ground water monitoring and sampling program of monthly for three months then quarterly was initiated in July 1987. Additional sampling intervals were August 1987, September 1987, December 1987, March 1988 and June 1988. In July 1988 the SFB RWQCB requested further delineation of the hydrocarbon plume in ground water. DuPont Biosystems installed four additional ground water monitoring wells and one deep exploratory boring in December 1988 after receiving off-site access toward the west.

1st Quarter 1989 Chronology

Pursuing off-site access for additional well(s).

March 8, 1989 - Ground water monitoring and sampling was performed.

March 3, 1989 - Reporting of December monitoring and sampling results.

Scheduled Actions 2nd Quarter 1989

Submit two reports summarizing the additional site assessment and March monitoring and sampling results.

Perform ground water monitoring and sampling in June.

Du Pont Biosystems

March 13, 1989
Job No. 211-Q6-11

Mr. Larry Seto
Alameda County Health Care Services
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

SUBJECT: Quarterly Sampling Results
Jet Gas Station
44 Lewelling Boulevard
San Lorenzo, California

Dear Mr. Seto:

Please find the enclosed report entitled "Quarterly Ground-Water Sampling Report, December 1988, Jet Gas Station, 44 Lewelling Boulevard, San Lorenzo, California" prepared by Du Pont Biosystems.

Please contact me if you have any questions or comments.

Respectfully submitted,

DU PONT BIOSYSTEMS

Darrell S. Klingman
Coordinator - Environmental Affairs

DSK/rr

7068 Koll Center Parkway, Suite 401 • Pleasanton, California 94566 • 415 • 462 • 7772 • 800 • 468 • 2122 • FAX • 415 • 462 • 7944
500 W. Dutton's Mill Road, Suite 102 • Aston, Pennsylvania 19014 • 215 • 497 • 5800 • 800 • 548

Du Pont Biosystems

QUARTERLY GROUND-WATER SAMPLING REPORT
DECEMBER 1988
JET GAS STATION
44 LEWELLING BOULEVARD
SAN LORENZO, CALIFORNIA

FOR

CONOCO INC.
900 SOUTH CHEROKEE LANE
LODI, CALIFORNIA 95240

PREPARED BY

DU PONT BIOSYSTEMS
7068 KOLL CENTER PARKWAY, SUITE 401
PLEASANTON, CALIFORNIA 94566

March 3, 1989

JOB NO. 211-Q6-11

Du Pont Biosystems

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Du Pont Biosystems

March 3, 1989
Job No. 211-Q6-11

Conoco Inc.
900 South Cherokee Lane
Lodi, California 95240

ATTENTION: Mr. Michael Hansen

SUBJECT: Quarterly Ground-Water Sampling Report
December 1988
Jet Gas Station
44 Lewelling Boulevard
San Lorenzo, California

Dear Mr. Hansen:

INTRODUCTION

This report presents the results of the quarterly ground-water sampling which was conducted at the Jet Gas Station, 44 Lewelling Boulevard in San Lorenzo, California (See Location Map, Figure 1), on December 6, 1988. The purpose of this sampling program is to monitor and evaluate the extent of hydrocarbon contamination in the ground water at the subject property.

SUMMARY

A summary of monitoring well data for the December 1988 quarter is presented in Table A. In general, ground-water levels have declined 1.5 feet, and the ground-water flow direction has shifted from the northwest towards the southwest since the last quarter (see Ground-Water Gradient Map, Figure 2). Chemical analytical results showed a decrease in BTEX levels detected in MW-1 and MW-3, while MW-2 remained relatively constant (since July 1988). See Table B and Appendix B for a summary of the ground water chemical analytical results compiled to date. Isopleths of benzene

concentrations in ground water interpreted for the site are shown in Figure 3. Four additional monitoring wells, MW-4, MW-5, MW-6 and MW-7, were installed on December 1 and 2, 1988, as part of the continuing site assessment program. The monitoring well details and initial sampling results will be forthcoming on completion of the site assessment. This site is scheduled to be resampled during March 1989.

Respectfully submitted,

DU PONT BIOSYSTEMS

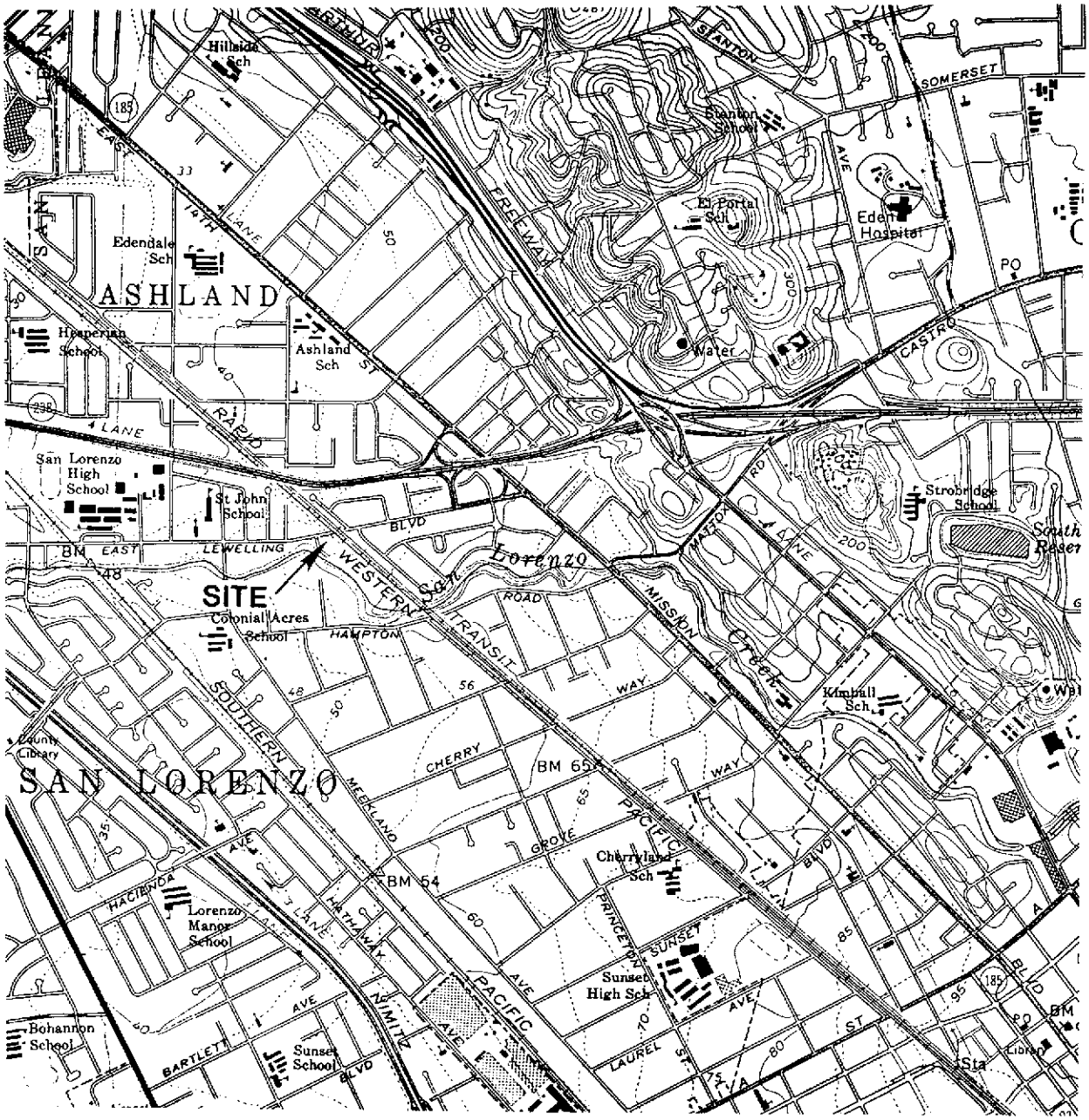
Marjorie Lane

Marjorie Lane
Staff Geologist

George Reid

George Reid
CEG 1068

ML/GR:jv/rw

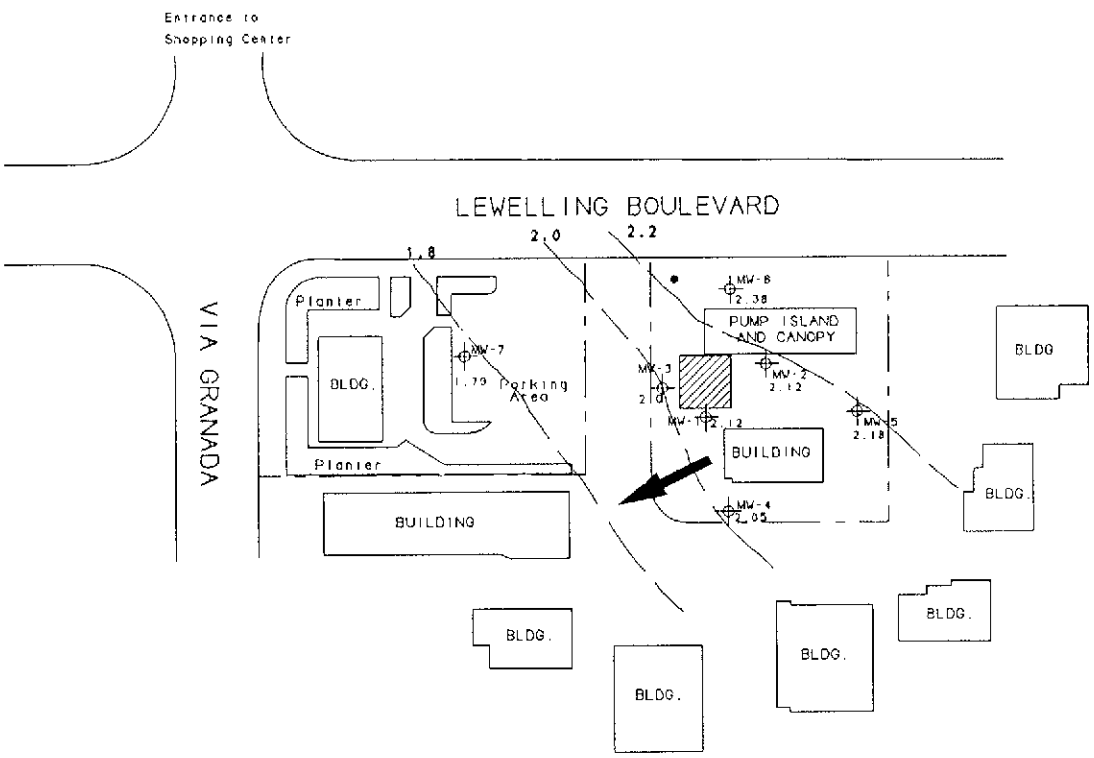


LOCATION MAP

Jet Gas Station
44 Lewelling Boulevard
San Lorenzo, California

BASE: A portion of the U.S.G.S. Hayward 7.5 minute quadrangle, dated 1959, photorevised 1980, scale 1:24,000.

Figure 1



EXPLANATION

- Property Limits
- MW-7 / 2.38 — Existing Monitoring Well
- Existing Fuel Tanks
- Temporary Bench Mark designated at 20 feet.
- 2.3 — Potentiometric Contour in feet.
- Approximate ground-water gradient direction

NOTE: Based on water level measurements obtained from monitoring wells MW-1 through MW-7 sampled on 12-6-88.

60 0 60 120
scale feet

N

Base: Modified from Pacific Aerial Surveys, Inc. aerial photo #AV-2772-B-14, at a scale of approximately 1 inch = 50 feet, dated 1-25-88.

GROUND-WATER GRADIENT MAP

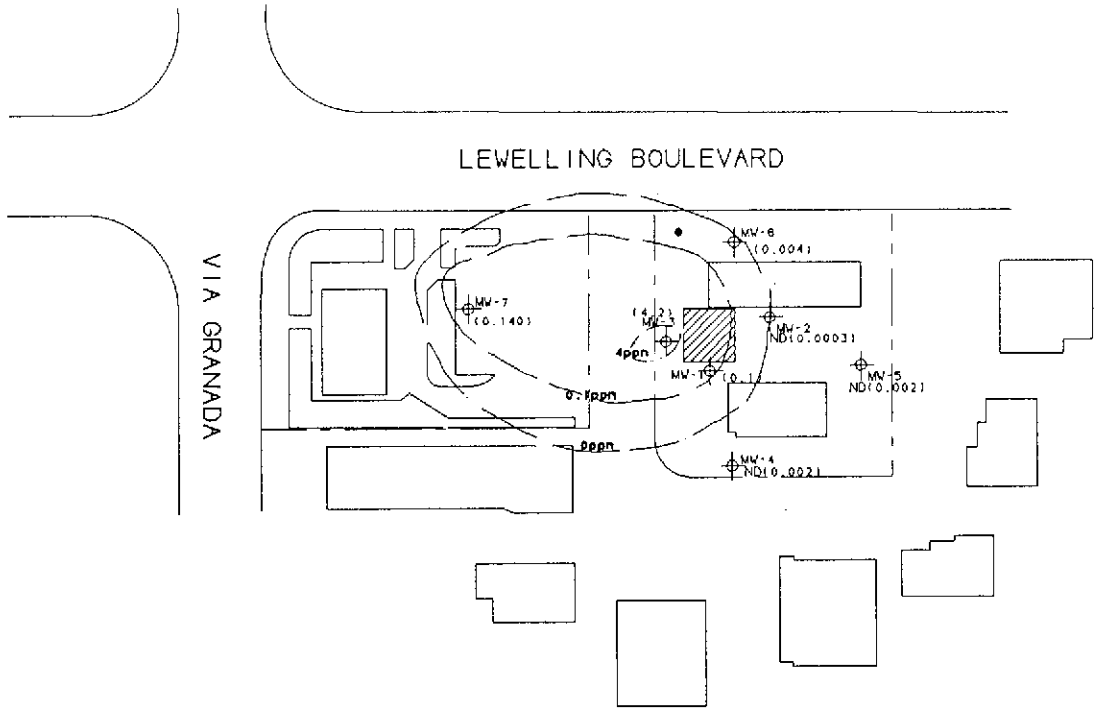
SCALE: As Shown	APPROVED	DRAWN BY: DA CADD
DATE: 8/25/88		REVISED: 12-6-88

Jet Gas Station
44 Lewelling Boulevard
San Lorenzo, California

Du Pont Biosystems

DRAWING NUMBER
211-Q6-11

Figure 2



EXPLANATION

- Property Limits
- MW-7 (0.140) — Existing Monitoring Well
- Existing Fuel Tanks
- Temporary Bench Mark designated at 20 feet.
- 4ppm — Isopleth showing concentrations of benzene in ppm.
- "0" — Effective Zero Line.

NOTE: This map based on chemical analysis results obtained from monitoring wells MW-1 through MW-7 collected on 12-6-88.

60 0 60 120
scale feet

N

Base: Modified from Pacific Aerial Surveys, Inc. aerial photo #AV-2772-6-14, at a scale of approximately 1 inch = 50 feet, dated 1-25-88.

ISOPLETH MAP OF BENZENE-PLUME CONCENTRATIONS IN GROUND WATER

SCALE: As Shown	APPROVED GR	DRAWN BY: DA CADD
DATE: 8/25/88		REVISED: 12-6-88

Jet Gas Station
44 Lewelling Boulevard
San Lorenzo, California

Du Pont Biosystems

DRAWING NUMBER 211-06-11

Figure 3

TABLE A

GROUND-WATER POTENTIOMETRIC ELEVATIONS

JET GAS STATION
44 LEWELLING BLVD
SAN LORENZO, CALIFORNIA

WELL ID	TOP OF CASING ELEVATION	GROUND-WATER ELEVATION	DEPTH TO GROUND-WATER Dec 1987	Mar 1988	Jun 1988	Dec 1988
MW-1	21.54	2.06	17.54	17.12	18.05	19.48
MW-2	20.91	2.12	16.71	16.43	17.35	18.79
MW-3	20.96	2.00	16.90	16.68	17.59	18.96
MW-4	22.52	2.05	---	---	---	20.47
MW-5	21.66	2.18	---	---	---	19.48
MW-6	20.37	2.38	---	---	---	17.99
MW-7	19.40	1.79	---	---	---	17.61

NOTES:
1) All elevations surveyed to a temporary bench mark designated 20 feet.
2) Elevations and depths given in feet.
3) Data prior to December 1988 collected by Applied GeoSystems.
4) Monitoring wells MW-4, MW-5, MW-6, and MW-7 installed in December 1988.

TABLE B

SUMMARY OF GROUND-WATER ANALYTICAL RESULTS

JET GAS STATION
44 LEWELLING BLVD
SAN LORENZO, CALIFORNIA

WELL ID	DATE SAMPLED	BENZENE (ug/L)	ETHYL BENZENE (ug/L)	TOLUENE (ug/L)	XYLENES (ug/L)	TPHg (ug/L)	COMMENTS
MW-1	*29-MAY-87*	490	930	150	3790	18050	
	14-JUL-87	560	950	120	3270	14750	
	17-AUG-87	630	320	40	1130	12860	
	01-SEP-87	558	562	84	1942	14269	
	10-DEC-87	200	273	138	777	14000	
	10-MAR-88	70	340	40	940	7300	
	14-JUN-88	290	330	ND(10)	790	34000	
	05-DEC-88	100	140	16	310	4000	
MW-2	*29-MAY-87*	113	46	14	58	4870	
	14-JUL-87	103	34	25	48	2207	
	17-AUG-87	37.6	8.2	10.9	11.1	756	
	01-SEP-87	75.3	16.4	14.2	27.6	1482.5	
	10-DEC-87	28	38.1	40.6	100.3	1800	
	10-MAR-88	9.2	7.3	3.1	2.6	1200	
	14-JUN-88	ND(0.9)	2.2	ND(1.0)	5.7	500	
	05-DEC-88	ND(0.3)	5.6	1.3	3.6	500	
MW-3	*29-MAY-87*	5400	1700	3900	5200	40300	
	14-JUL-87	6880	1580	7080	4770	30320	
	17-AUG-87	5930	1240	4180	3370	25620	
	01-SEP-87	8540	1020	6660	3740	38210	
	10-DEC-87	4240	890	2350	1860	25000	
	10-MAR-88	3210	940	950	950	13400	
	14-JUN-88	5900	450	7600	4600	54000	
	05-DEC-88	4200	1000	2400	3100	19000	*Slight odor*
MW-4	*05-DEC-88*	ND(2.0)	2.3	ND(2.0)	6.5	4500	
MW-5	*05-DEC-88*	ND(0.2)	0.23	0.78	0.92	3.9	
MW-6	*05-DEC-88*	4.0	0.63	1.3	1.3	190	
MW-7	*05-DEC-88*	140	40	150	370	1500	

NOTES: *1) TPHg = Total Petroleum Hydrocarbons (as gasoline).*
2) ND = Not Detected, detection limit shown in parentheses.
3) Odor refers to petroleum hydrocarbon odor.
4) All results are presented in parts per billion.
5) Samples prior to December 1988 taken by Applied GeoSystems.

APPENDIX A

GROUND-WATER SAMPLING PROCEDURES, LABORATORY TEST RESULTS, AND CHAIN-OF-CUSTODY FORMS

GROUND-WATER MONITORING AND SAMPLING PROCEDURES

Prior to sampling, the depth to water was measured in all monitoring wells using an electronic immersion probe. All measurements were read to the nearest 0.01 foot. If free product was present, the depth to free product and the depth to water was measured using an interface probe and an observation sample was collected with a clear teflon bailer for confirmation. No analytical samples were collected from monitoring wells containing more than 0.25-inch free product.

The monitoring wells were sampled on December 6, 1988. Prior to purging, each well was sampled with a clear teflon bailer in order to observe the possible presence of floating hydrocarbons. Purging was accomplished using a stainless steel bailer. The bailer was thoroughly cleaned prior to each sampling using a trisodium phosphate solution followed by a 10% methylalcohol solution, and then rinsed with water. The wells were purged prior to sampling until pH and conductivity values stabilized. Generally, this resulted in the removal of approximately 3 to 5 well volumes of ground water from each well during the purging process. The water obtained from purging was placed in labeled 55-gallon drums and stored on-site. The bailer line was replaced after each sampling. Samples recovered from each well were decanted into two 40-ml appropriately labeled, volatile organic analysis (VOA) bottles. The sample bottles were immediately placed in an ice chest for delivery to a State of California licensed laboratory. Routine chain-of-custody procedures were employed.

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545 *(415) 783-6960*

TAL

RECEIVED
JAN 09 1989

DATE: 1/5/89
LOG NO.: 6765
DATE SAMPLED: 12/5/88
DATE RECEIVED: 12/7/88

CUSTOMER: DuPont Biosystems

REQUESTER: Curt Griffiths

PROJECT: No. 211-Q6-11, San Lorenzo

Sample Type: Water

Method and Constituent	Units	MW1 Concentration	MW1 Detection Limit	MW2 Concentration	MW2 Detection Limit	MW3 Concentration	MW3 Detection Limit
DHS Method:							
Total Petroleum Hydrocarbons as Gasoline	ug/l	4,000	90	500	3	19,000	2,000
Modified EPA Method 8020:							
Benzene	ug/l	100	10	< 0.3	0.3	4,200	200
Toluene	ug/l	16	10	1.3	0.3	2,400	200
Xylenes	ug/l	310	10	3.6	0.3	3,100	200
Ethyl Benzene	ug/l	140	10	5.6	0.3	1,000	200

DATE: 1/5/89
LOG NO.: 6765
DATE SAMPLED: 12/5/88
DATE RECEIVED: 12/7/88
PAGE: Two

Sample Type: Water

Method and Constituent	Units	MW4 Concentration	MW4 Detection Limit	MW5 Concentration	MW5 Detection Limit	MW6 Concentration	MW6 Detection Limit
DHS Method:							
Total Petroleum Hydrocarbons as Gasoline	ug/l	4,500	20	3.9	2	190	2
Modified EPA Method 8020:							
Benzene	ug/l	< 2	2	< 0.2	0.2	4.0	0.2
Toluene	ug/l	< 2	2	0.78	0.2	1.3	0.2
Xylenes	ug/l	6.5	2	0.92	0.2	1.3	0.2
Ethyl Benzene	ug/l	2.3	2	0.23	0.2	0.63	0.2

		MW7		Dup. 1		Dup. 2	
DHS Method:							
Total Petroleum Hydrocarbons as Gasoline	ug/l	1,500	20	500	3	5.0	2
Modified EPA Method 8020:							
Benzene	ug/l	140	10	< 2	2	< 0.2	0.2
Toluene	ug/l	150	10	1.9	2	0.45	0.2
Xylenes	ug/l	370	10	< 2	2	1.6	0.2
Ethyl Benzene	ug/l	40	10	6.3	2	0.28	0.2

Hugh R. McLean

Hugh R. McLean
Supervisory Chemist

HRM:mln

Alpha Environmental Services, Inc.

310 Main Street, Suite F • Pleasanton, California 94566 • (415) 462-7772

CHAIN OF CUSTODY/WORK ORDER

Testing Laboratory Trace Labs Phone 783-6960

Address 5423 Investment Blvd.

City, State, Zip Hayward

PROJECT NAME: San Lorenzo

JOB NUMBER: 21-26-11

SAMPLERS (Signature): Curt Griffiths

SAMPLE NO.	DATE	TIME	COMP	GRAB	LOCATION (mw = monitor well)	NO. OF CONTAINERS	Stored in wet ice	TVH, BTEX					REMARKS
mw1	12/5			X	mw1	2	X	X					
mw2	12/5			X	mw2	2	X	X					
mw3	12/5			X	mw3	2	X	X					
mw4	12/5			X	mw4	2	X	X					
mw5	12/5			X	mw5	2	X	X					
mw6	12/5			X	mw6	2	X	X					
mw7	12/5			X	mw-7	2	X	X					
dup1	12/5			X	dup.1	2	X	X					
dup2	12/5			X	dup.2	2	X	X					

RELINQUISHED BY (Signature)	DATE	TIME	RECEIVED BY (Signature)	DATE	TIME
Curt Griffiths	12/7	15:20	Corrine Keller	12-7-88	3:20 P.M.
REPRESENTING: DUPONT-BIO			REPRESENTING:		
RELINQUISHED BY (Signature)	DATE	TIME	RECEIVED BY (Signature)	DATE	TIME
REPRESENTING:			REPRESENTING:		
RELINQUISHED BY (Signature)	DATE	TIME	RECEIVED BY (Signature)	DATE	TIME
REPRESENTING:			REPRESENTING:		

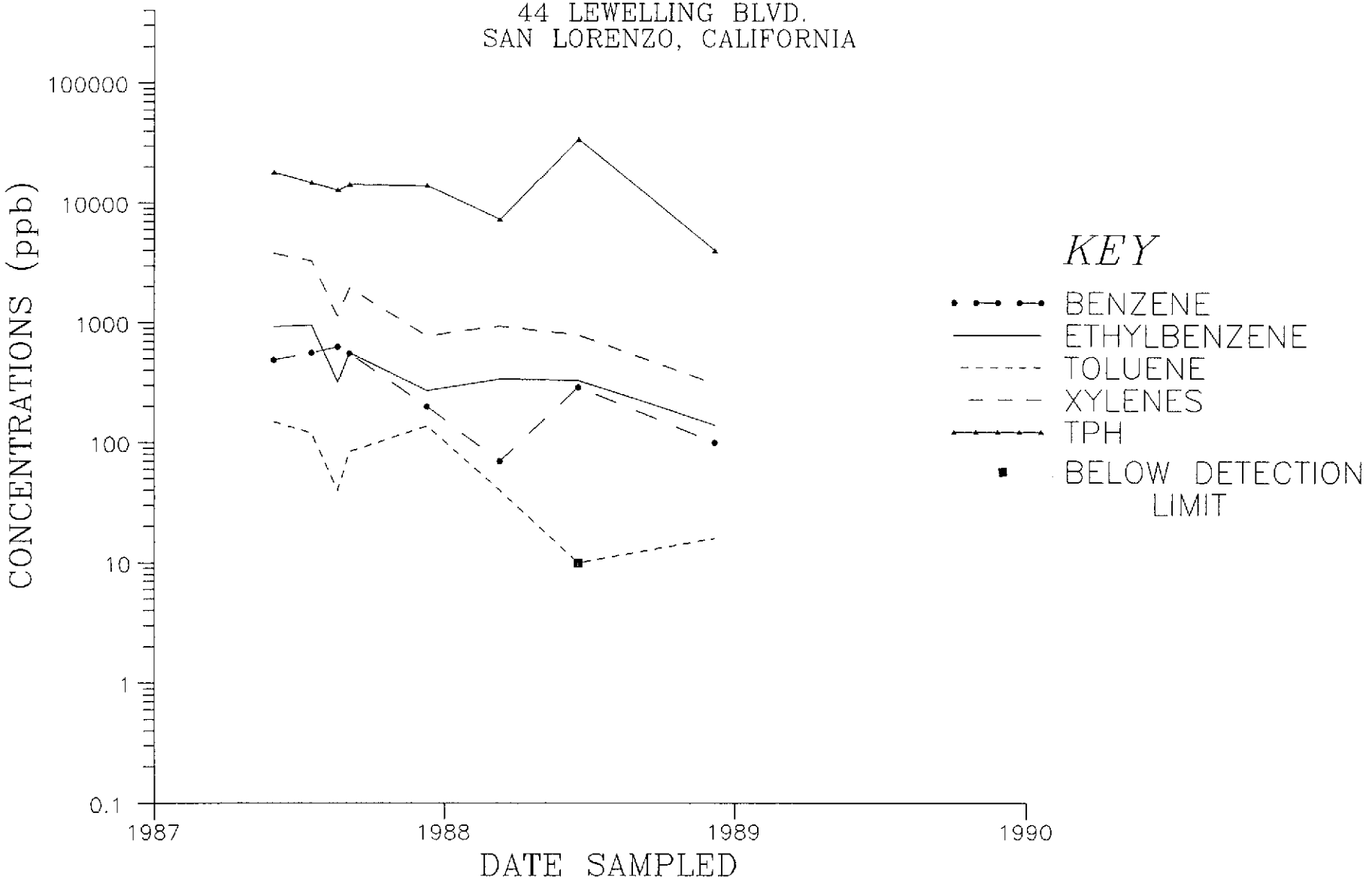
APPENDIX B

GRAPHS SHOWING LABORATORY TEST DATA

GROUND-WATER ANALYSES DATA

WELL MW-1

JET GAS STATION
44 LEWELLING BLVD.
SAN LORENZO, CALIFORNIA

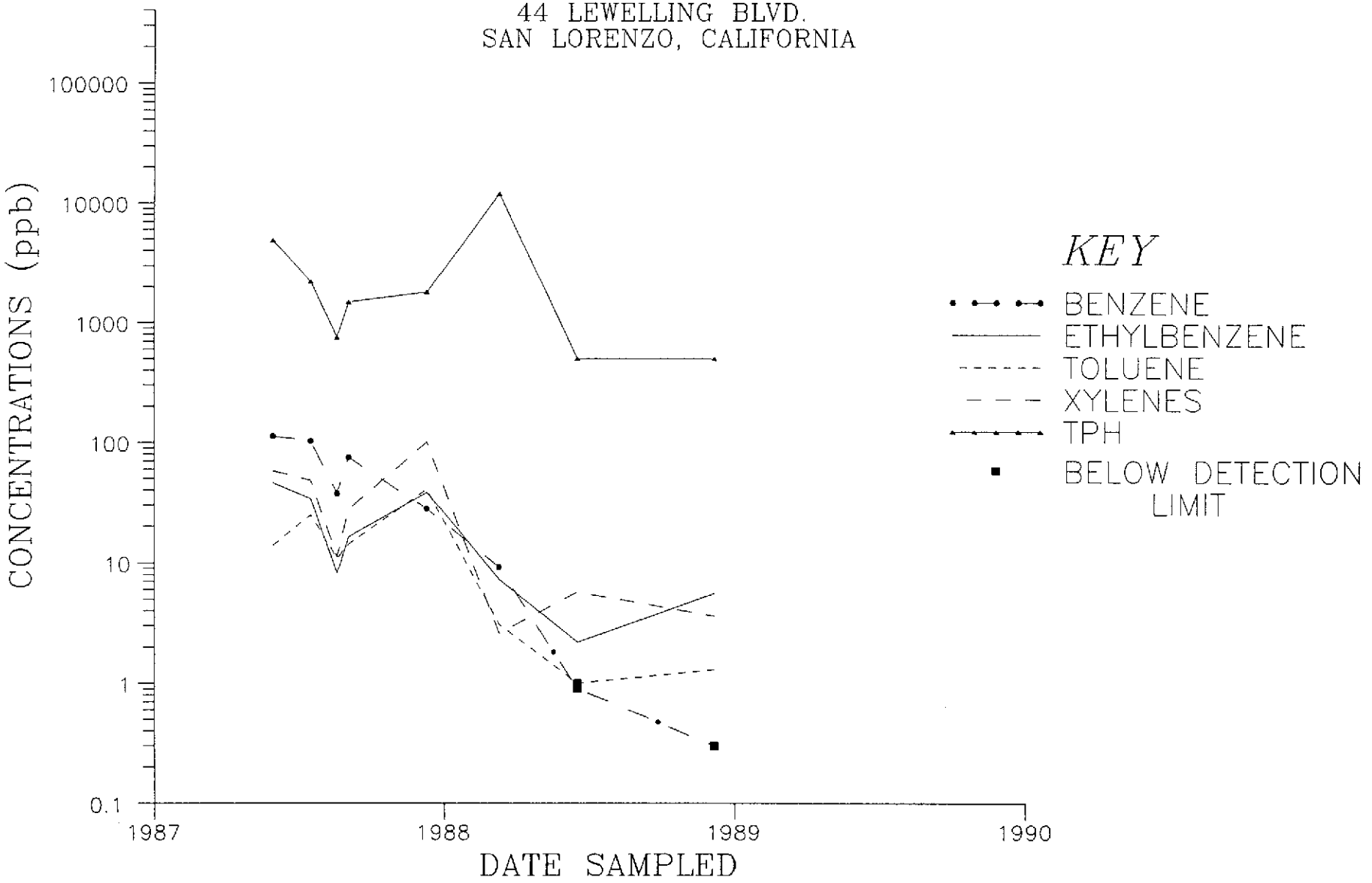


NOTE: Laboratory detection limits vary due to analytical procedures used.

GROUND-WATER ANALYSES DATA

WELL MW-2

JET GAS STATION
44 LEWELLING BLVD.
SAN LORENZO, CALIFORNIA

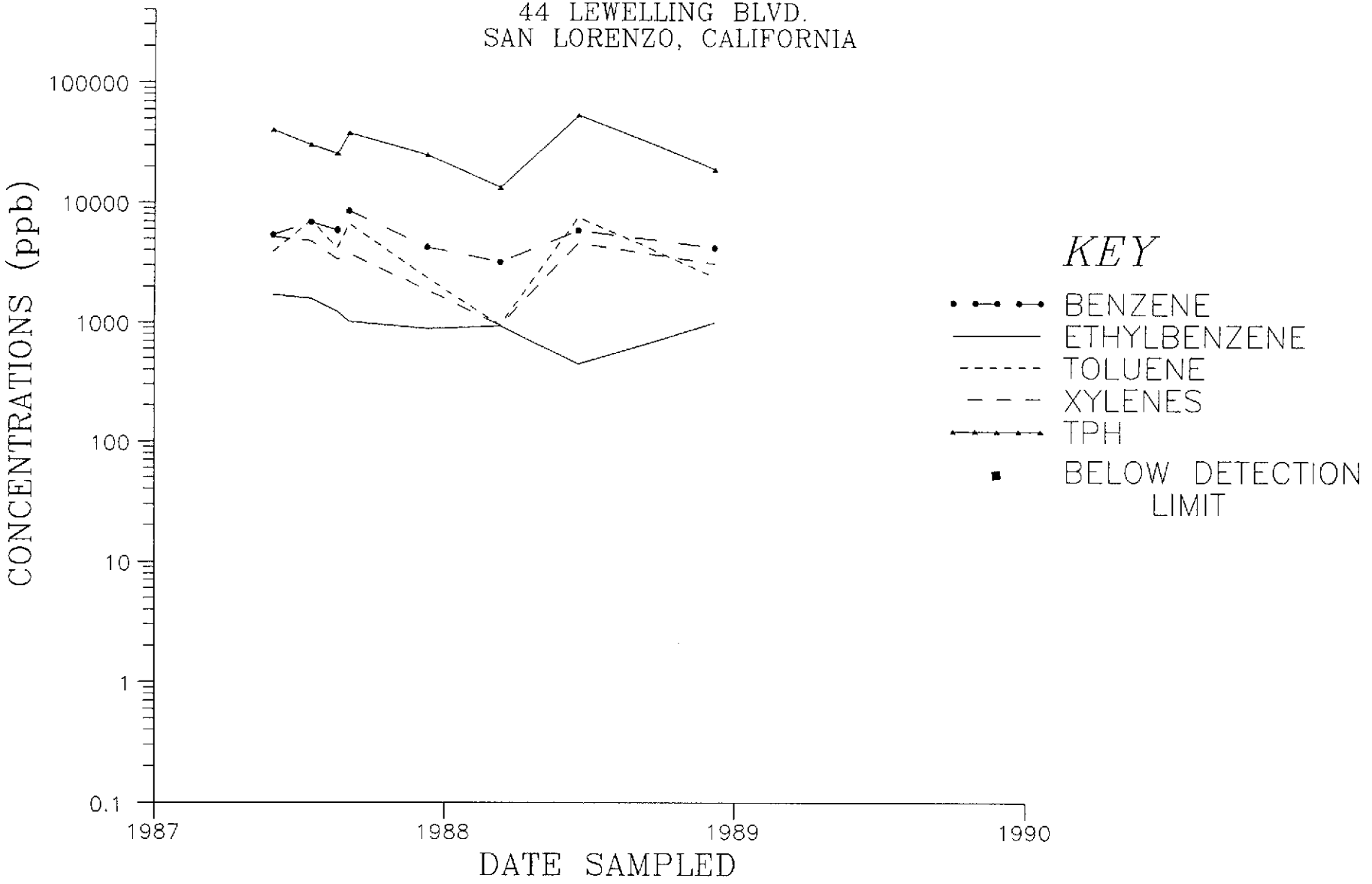


NOTE: Laboratory detection limits vary due to analytical procedures used.

GROUND-WATER ANALYSES DATA

WELL MW-3

JET GAS STATION
44 LEWELLING BLVD.
SAN LORENZO, CALIFORNIA



NOTE: Laboratory detection limits vary due to analytical procedures used.