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LF

Conoco Inc.  
P.O. Box 2197  
Houston, TX 77252

CONOCO INC. (KAYO OIL COMPANY)

09861 77 100

October 2, 1989

KAYO  
AA Lewelling

TO WHOM IT MAY CONCERN

Conoco Inc. (Kayo Oil Company) is consolidating offices and is closing the Lodi, California Environmental Office. Following a short transition period, all California and Nevada environmental matters will be handled by Mr. Gregory Fletcher from the Houston office.

Ms. Joyce Miley will be in Houston to assist in a smooth transfer of projects before acquiring sites on the east coast. Billing or invoicing questions should be directed to either Mr. Fletcher or Ms. Dawn Ghormley from the Du Pont offices in Pleasanton. Ms. Wanda Lighthiser will be available in Lodi to direct your questions until October 31, 1989.

**EFFECTIVE IMMEDIATELY,** please note the following changes of address:

Mr. Gregory P. Fletcher  
Conoco Inc.  
TR 3038  
P. O. Box 4784  
Houston, TX 77210  
713/293-5683 or 1-800/251-7252, extension 5683

Ms. Joyce M. Miley  
Conoco Inc.  
TR 3040  
P. O. Box 4784  
Houston, TX 77210  
713/293-5659 or 1-800/251-7252, extension 5659

Ms. Dawn Ghormley  
Du Pont Environmental Services  
7068 Koll Center Parkway, Suite 401  
Pleasanton, CA 94566  
415/462-7772 or 1-800/468-2122

Sincerely,

Wanda Lighthiser  
Administrative Assistant  
209/368-2731



Conoco Inc.  
P.O. Box 2197  
Houston, TX 77252

October 2, 1989

Mr. Steven Ritchie  
San Francisco Bay Region  
Regional Water Quality Control Board  
1111 Jackson Street, Room 6040  
Oakland, CA 94602

RE: Econo Station  
44 Lewelling Boulevard  
San Lorenzo, CA

Dear Mr. Ritchie:

Enclosed is a report prepared by DuPont Environmental Services presenting the June 1989 groundwater monitoring results.

If you have any questions, please call me at 1-800-251-7252.

Sincerely,

Gregory P. Fletcher  
Coordinator - Environmental Affairs

GPF/wml

Enclosure

cc: Larry Seto, Alameda County Health Care Services

QUARTERLY GROUND-WATER SAMPLING REPORT

JUNE 1989

JET GAS STATION

44 LEWELLING BOULEVARD

SAN LORENZO, CALIFORNIA

FOR

CONOCO INC.

900 SOUTH CHEROKEE LANE

LODI, CALIFORNIA 95240

PREPARED BY

DU PONT ENVIRONMENTAL SERVICES

7068 KOLL CENTER PARKWAY, SUITE 401

PLEASANTON, CALIFORNIA 94566

AUGUST 31, 1989

JOB NO. 211-Q8-11

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## Du Pont Environmental Services

September 1, 1989  
Job No. 211-Q8-11

Conoco Inc.  
Attention: Mr. Michael Hansen  
900 South Cherokee Lane  
Lodi, California 95240

SUBJECT: Quarterly Ground-Water Sampling Report  
June 1989  
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, San Lorenzo, California (see the Location Map, Figure 1), on June 22, 1989. 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 data regarding ground-water levels for the June 1989 quarter is presented in Table A. In general, ground-water levels have decreased approximately 0.5 foot since the last quarterly sampling. Ground-water flow for this quarter is directed towards the west with a gradient of approximately 0.005 (see the Ground-Water Gradient Map, Figure 2). Chemical analytical results have remained relatively constant since the last quarter (see Table B and Appendix B). Figure 3 presents interpretive isopleths of benzene concentrations within the ground water for the site. This site is scheduled to be resampled during September 1989.

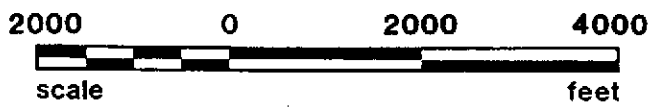
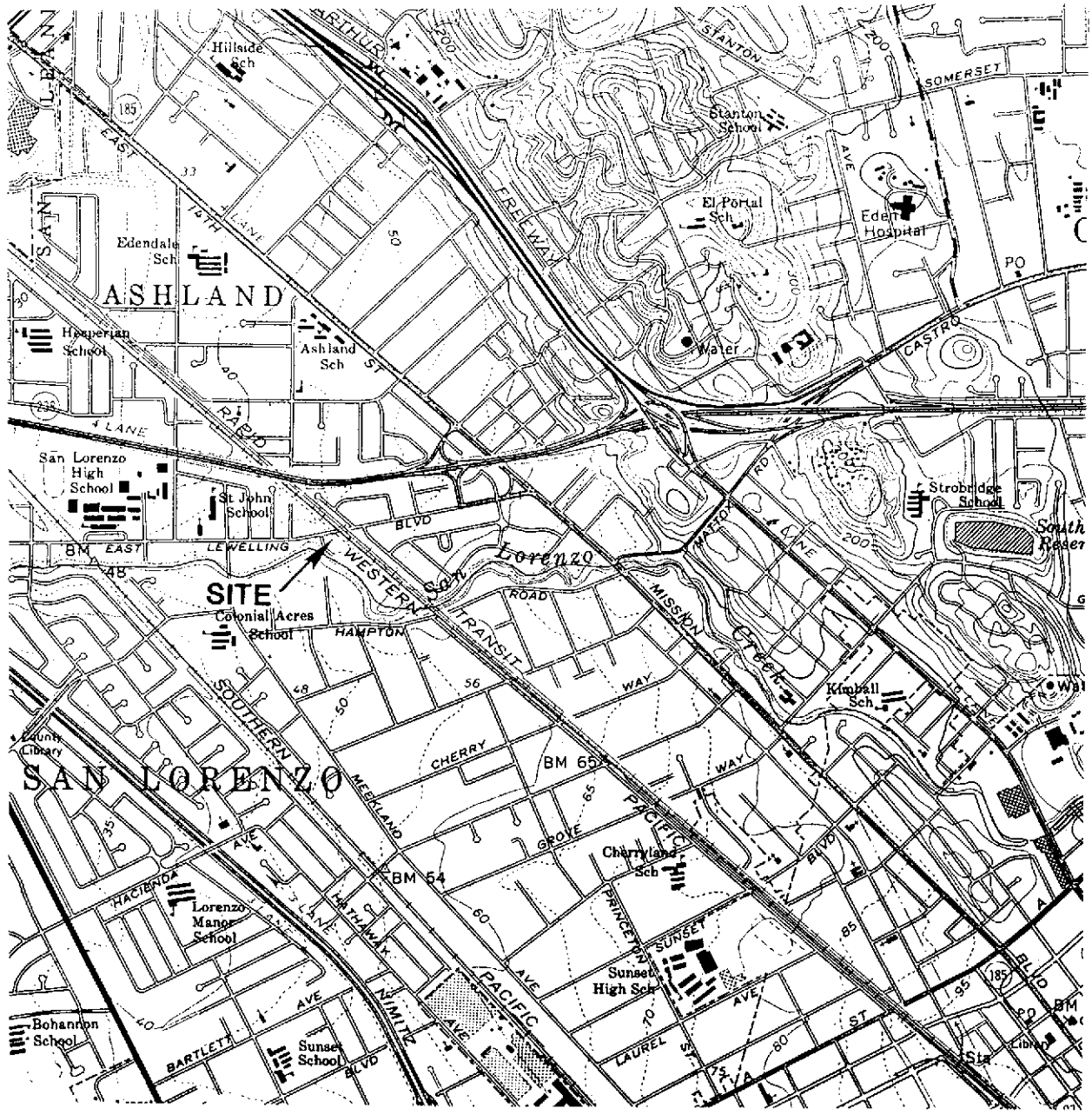
Respectfully submitted,

DU PONT ENVIRONMENTAL SERVICES

Marjorie Lane  
Staff Geologist

George Reid  
CEG 1068

ML/GR:cb



**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

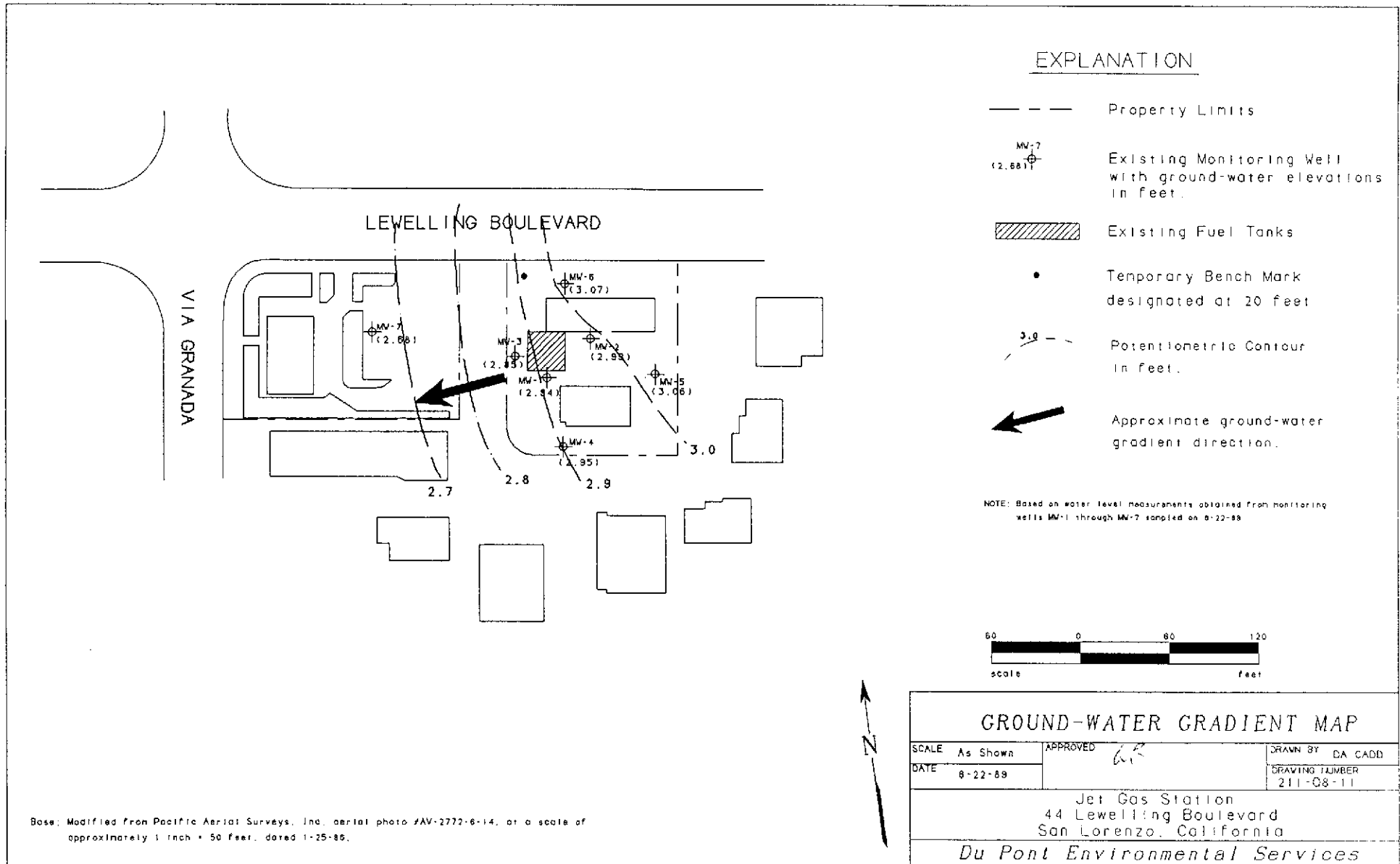


Figure 2

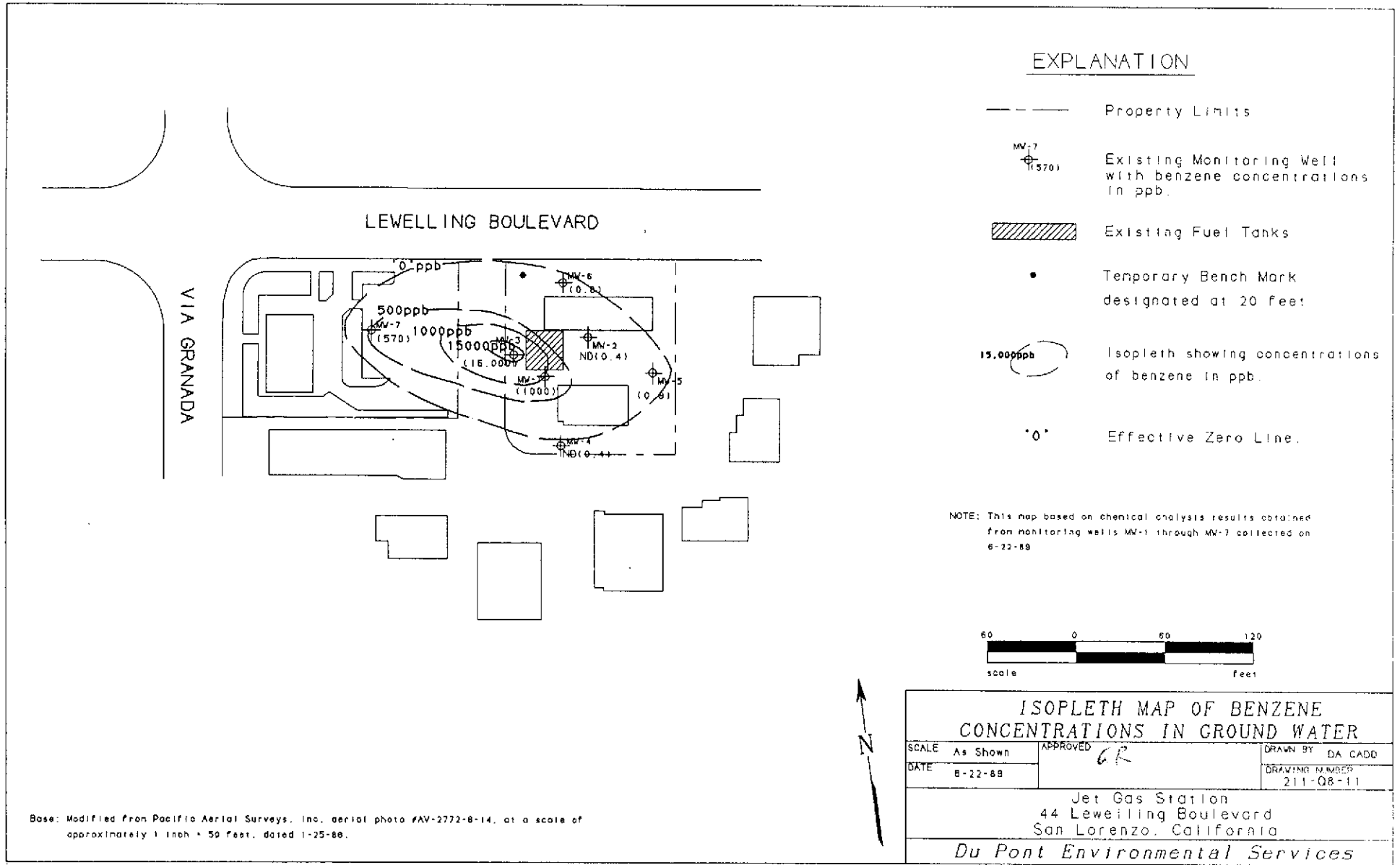


Figure 3



## TABLE A

### GROUND-WATER POTENTIOMETRIC ELEVATIONS

JET GAS STATION  
44 LEWELLING BOULEVARD  
SAN LORENZO, CALIFORNIA

WELL ID	TOP OF CASING ELEVATION	GROUND-WATER ELEVATION		DEPTH TO GROUND-WATER				
		Jun 1989	Dec 1987	Mar 1988	Jun 1988	Dec 1988	Mar 1989	Jun 1989
MW-1	21.54	2.94	17.54	17.12	18.05	19.48	18.07	18.60
MW-2	20.91	2.99	16.71	16.43	17.35	18.79	17.31	17.92
MW-3	20.96	2.85	16.90	16.68	17.59	18.96	17.60	18.11
MW-4	22.52	2.95	---	---	---	20.47	19.03	19.57
MW-5	21.66	3.06	---	---	---	19.48	18.00	18.60
MW-6	20.37	3.07	---	---	---	17.99	16.75	17.30
MW-7	19.40	2.68	---	---	---	17.61	16.27	16.72

- 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 BOULEVARD  
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	
	08-MAR-89	670	580	20	1200	9100	Odor, Sheen
	22-JUN-89	1000	1200	20	2200	12000	Odor, Sheen
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	
	08-MAR-89	ND(1.0)	3.5	1.3	3.7	730	
	22-JUN-89	ND(0.4)	ND(0.5)	ND(0.4)	ND(0.8)	570	
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	Odor
	08-MAR-89	11000	2300	9400	9900	53000	Odor, Sheen
	22-JUN-89	16000	2100	5900	6600	60000	Odor, Sheen
MW-4	05-DEC-88	ND(2.0)	2.3	ND(2.0)	6.5	4500	
	08-MAR-89	ND(9.0)	ND(10)	ND(8.0)	ND(10)	3900	
	22-JUN-89	ND(0.4)	ND(0.5)	ND(0.4)	ND(0.8)	1500	
MW-5	05-DEC-88	ND(0.2)	0.23	0.78	0.92	3.9	
	08-MAR-89	2.7	2.7	6.7	15	58	
	22-JUN-89	0.91	ND(0.1)	ND(0.1)	ND(0.3)	5.0	
MW-6	05-DEC-88	4.0	0.63	1.3	1.3	190	
	08-MAR-89	2.2	ND(0.5)	ND(0.4)	1.1	23	
	22-JUN-89	0.82	0.18	2.6	1.2	57	
MW-7	05-DEC-88	140	40	150	370	1500	
	08-MAR-89	730	180	72	370	2400	
	22-JUN-89	570	180	43	220	2000	

- 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 of free product.

The monitoring wells were sampled on June 22, 1989. 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, one of which was the duplicate quality control sample. A travel blank and a duplicate travel blank were also submitted (numbered as the next monitoring well in sequence) for quality assurance. The sample bottles were immediately placed in an ice chest and maintained at 4 °C until delivery to a State of California licensed laboratory. Routine chain-of-custody procedures were employed.

DATE: 7/14/89

LOG NO.: 7554

DATE SAMPLED: 6/21/89

DATE RECEIVED: 6/23/89

CUSTOMER: DuPont Biosystems

REQUESTER: Marjorie Lane

PROJECT: No. 211-Q8-11, San Lorenzo

## Sample Type: Water

Method and Constituent	Units	MW-1		MW-2		MW-3	
		Concen- tration	Detection Limit	Concen- tration	Detection Limit	Concen- tration	Detection Limit
DHS Method:							
Total Petroleum Hydro- carbons as Gasoline	ug/l	12,000	40	570	20	60,000	900
Modified EPA Method 8020:							
Benzene	ug/l	1,000	8	< 0.4	0.4	16,000	200
Toluene	ug/l	20	7	< 0.4	0.4	5,900	200
Xylenes	ug/l	2,200	30	< 0.8	0.8	6,600	700
Ethyl Benzene	ug/l	1,200	10	< 0.5	0.5	2,100	200

DATE: 7/14/89  
 LOG NO.: 7554  
 DATE SAMPLED: 6/21/89  
 DATE RECEIVED: 6/23/89  
 PAGE: Two

Sample Type: Water

Method and Constituent	Units	MW-4		MW-5		MW-6	
		Concen- tration	Detection Limit	Concen- tration	Detection Limit	Concen- tration	Detection Limit
DHS Method:							
Total Petroleum Hydro- carbons as Gasoline	ug/l	1,500	20	5	4	57	4
Modified EPA Method 8020:							
Benzene	ug/l	< 0.4	0.4	0.91	0.1	0.82	0.1
Toluene	ug/l	< 0.4	0.4	< 0.1	0.1	2.6	0.1
Xylenes	ug/l	< 0.8	0.8	< 0.3	0.3	1.2	0.3
Ethyl Benzene	ug/l	< 0.5	0.5	< 0.1	0.1	0.18	0.1

Method and Constituent	Units	MW-7		MW-8	
		Concen- tration	Detection Limit	Concen- tration	Detection Limit
DHS Method:					
Total Petroleum Hydro- carbons as Gasoline	ug/l	2,000	200	< 4	4
Modified EPA Method 8020:					
Benzene	ug/l	570	4	< 0.1	0.1
Toluene	ug/l	43	4	< 0.2	0.2
Xylenes	ug/l	220	20	< 0.9	0.9
Ethyl Benzene	ug/l	180	5	< 0.2	0.2

*Dan Farah*

Dan Farah, Ph.D.  
 Supervisory Chemist

A-3

Du Pont Environmental Services

7068 Koll Center Parkway \* Suite 401 \* Pleasanton, California \* (415) 462-7772

CHAIN-OF-CUSTODY/WORK ORDER

Testing Laboratory Trace Analysis Laboratory Phone 415-783-6960  
 Address 3423 Investment Blvd, Unit 8  
 City, State, Zip Hayward, CA 94545

PROJECT NAME <u>San Lorenzo</u>						NO. OF CON- TAINERS	Collected, labeled, iced analyze for TPHs + BTEX 2 week turn around				REMARKS	
JOB NUMBER <u>211-28-11</u>												
SAMPLERS (Signature) <u>Margie Jane</u>												
SAMPLE I.D.	DATE	TIME	COMP	GRAB	LOCATION							
MW-1	<u>6/21/09</u>			-	monitoring well 1	2	-	-	-	odor		
MW-2				-	"	2	-	-	-			
MW-3				-	"	3	-	-	-	slight sheen, odor		
MW-4				-	"	4	-	-	-			
MW-5				-	"	5	-	-	-			
MW-6				-	"	6	-	-	-			
MW-7				-	"	7	-	-	-			
MW-8				-	"	8	-	-	-			
RELINQUISHED BY (Signature) <u>Margie Jane</u>						DATE <u>6/23/09</u>	TIME <u>3:50</u>	RECEIVED BY (Signature) <u>Margie Jane</u>			DATE <u>6/23/09</u>	TIME <u>3:50</u>
REPRESENTING:						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

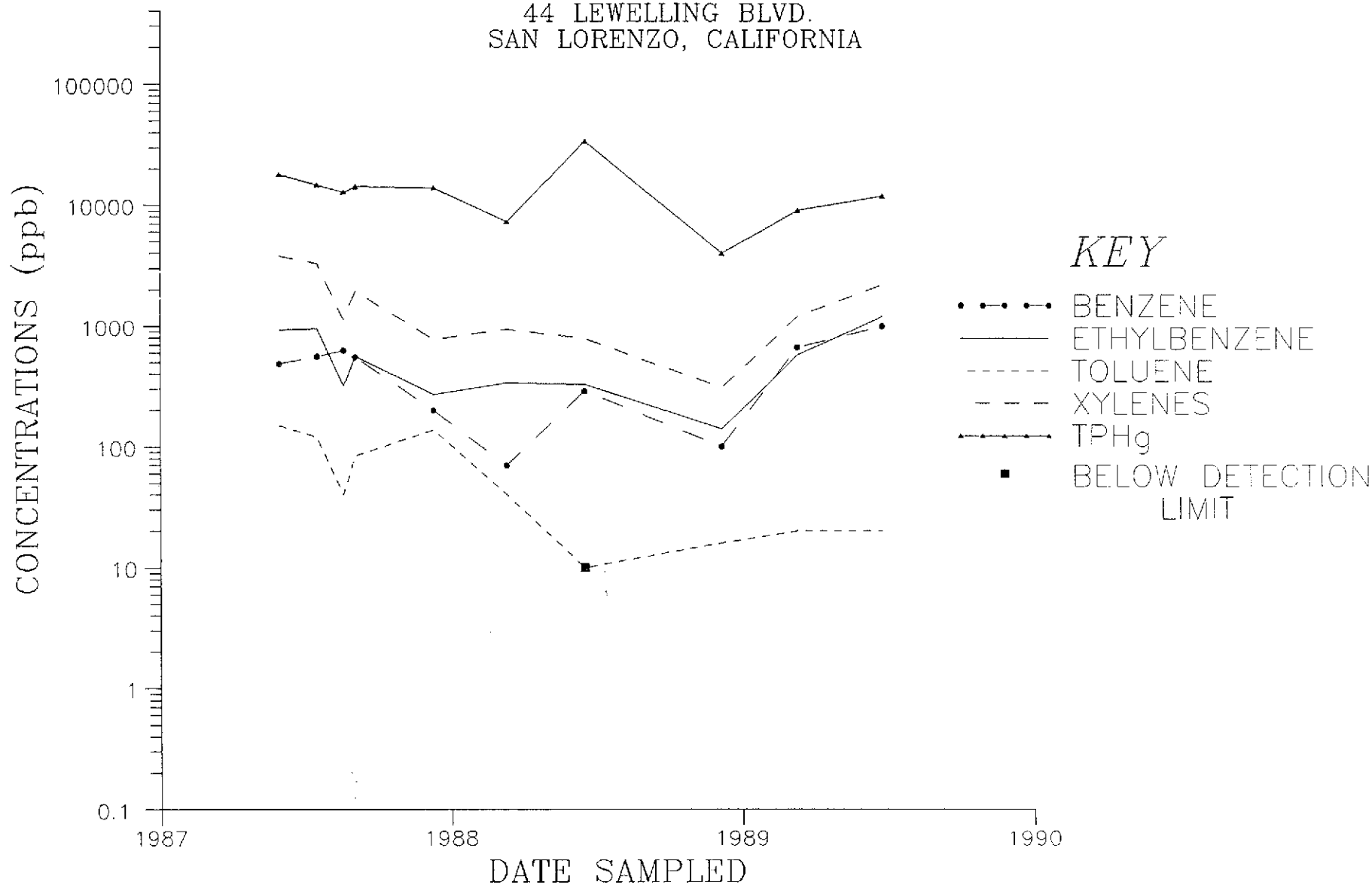
GRAPHS SHOWING LABORATORY TEST DATA



# GROUND-WATER ANALYSES DATA

## WELL MW-1

JET GAS STATION  
44 LEWELLING BLVD.  
SAN LORENZO, CALIFORNIA

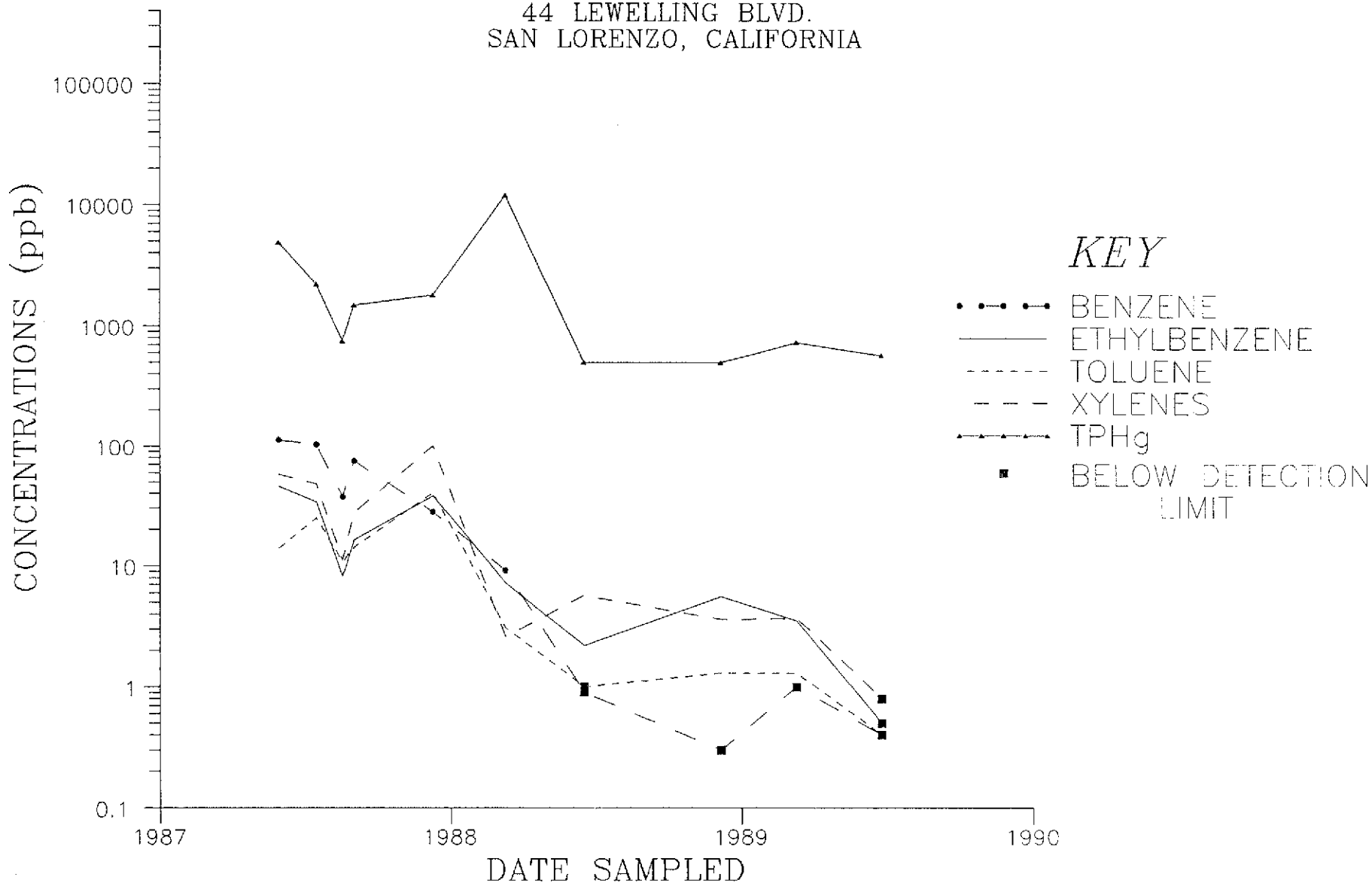


NOTE: Laboratory detection limits may vary due to analytical procedures used.

# GROUND-WATER ANALYSES DATA

## WELL MW-2

JET GAS STATION  
44 LEWELLING BLVD.  
SAN LORENZO, CALIFORNIA

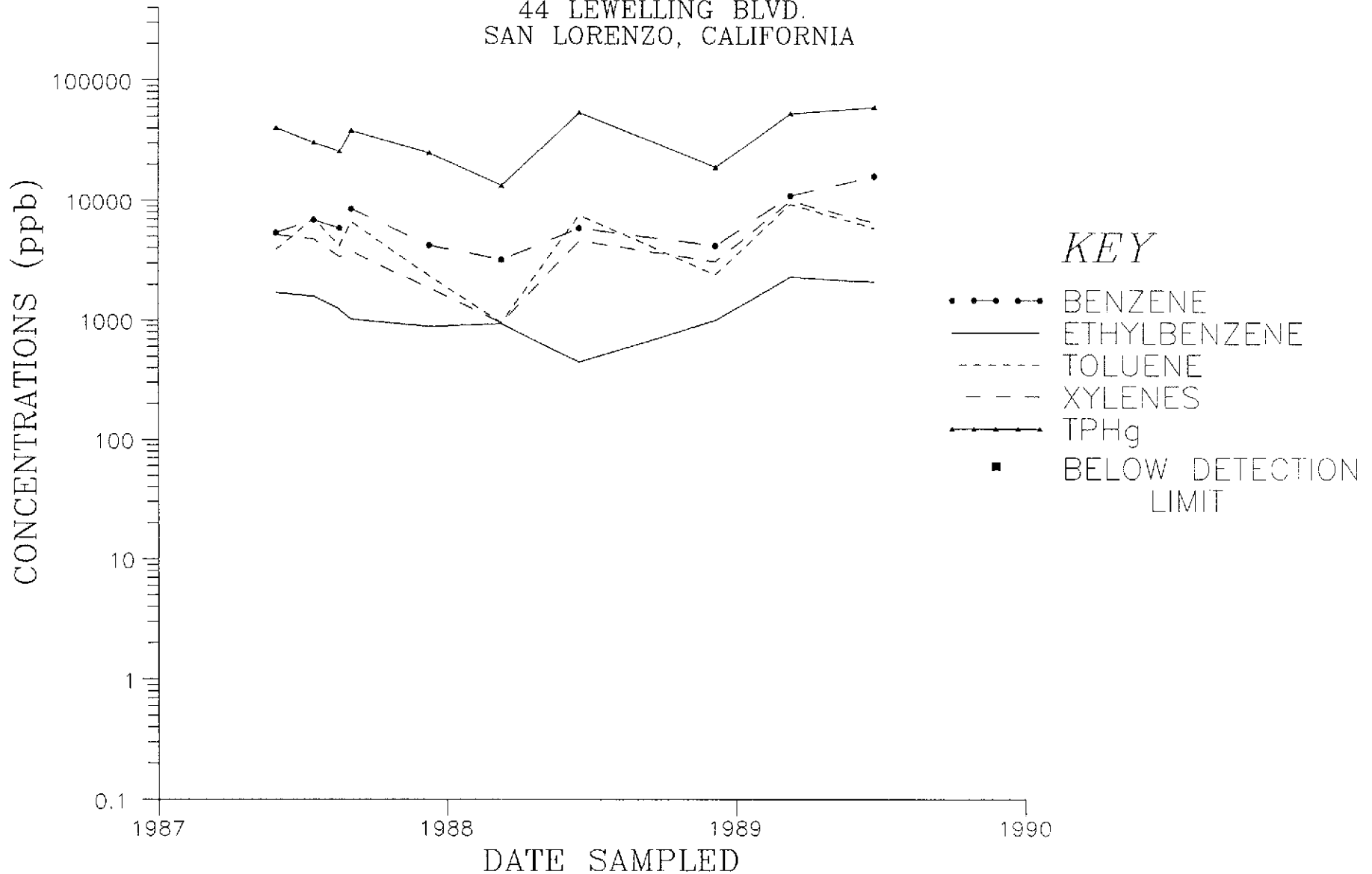


NOTE: Laboratory detection limits may vary due to analytical procedures used.

# GROUND-WATER ANALYSES DATA

## WELL MW-3

JET GAS STATION  
44 LEWELLING BLVD.  
SAN LORENZO, CALIFORNIA

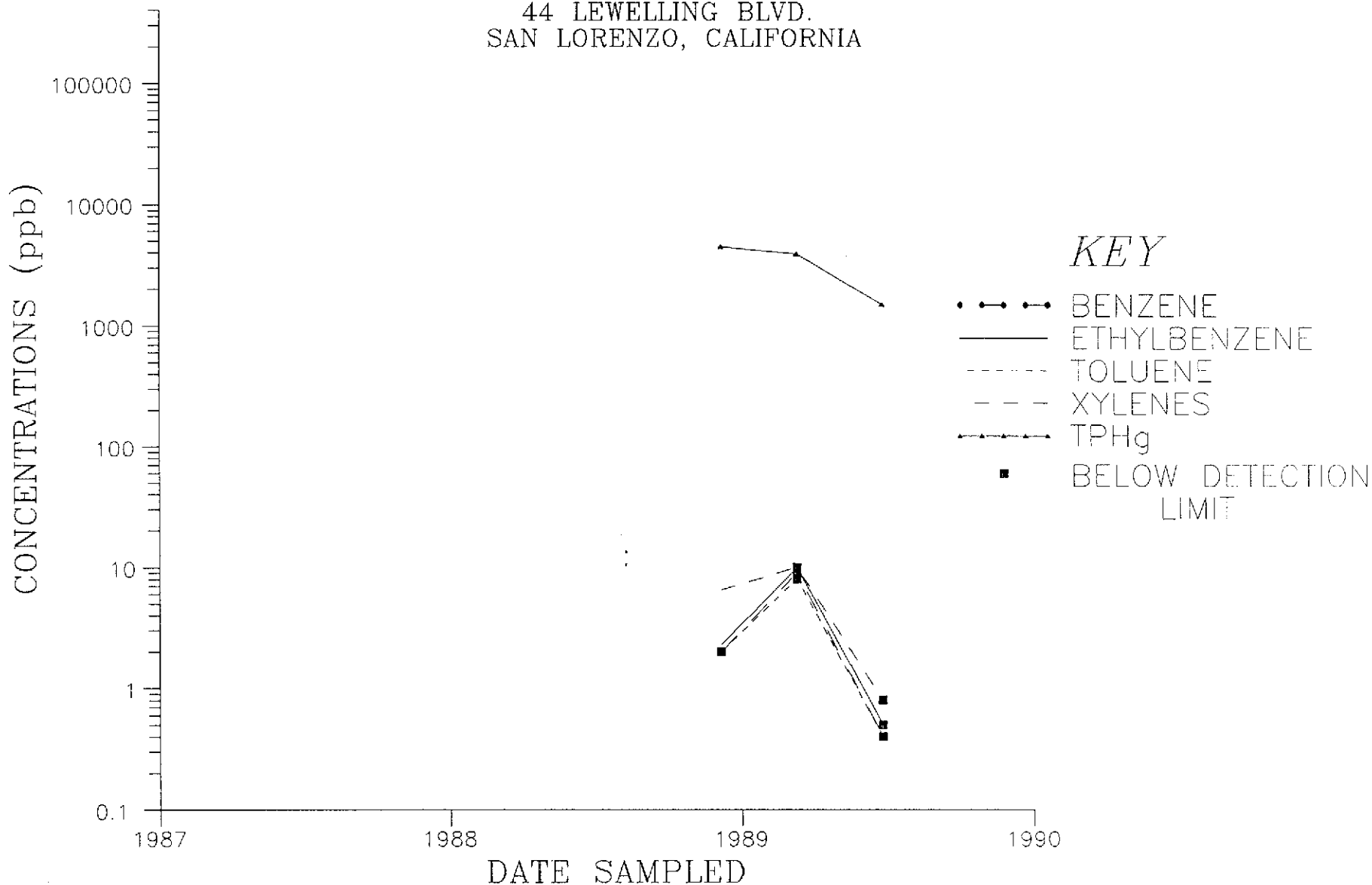


NOTE: Laboratory detection limits may vary due to analytical procedures used.

# GROUND-WATER ANALYSES DATA

## WELL MW-4

JET GAS STATION  
44 LEWELLING BLVD.  
SAN LORENZO, CALIFORNIA

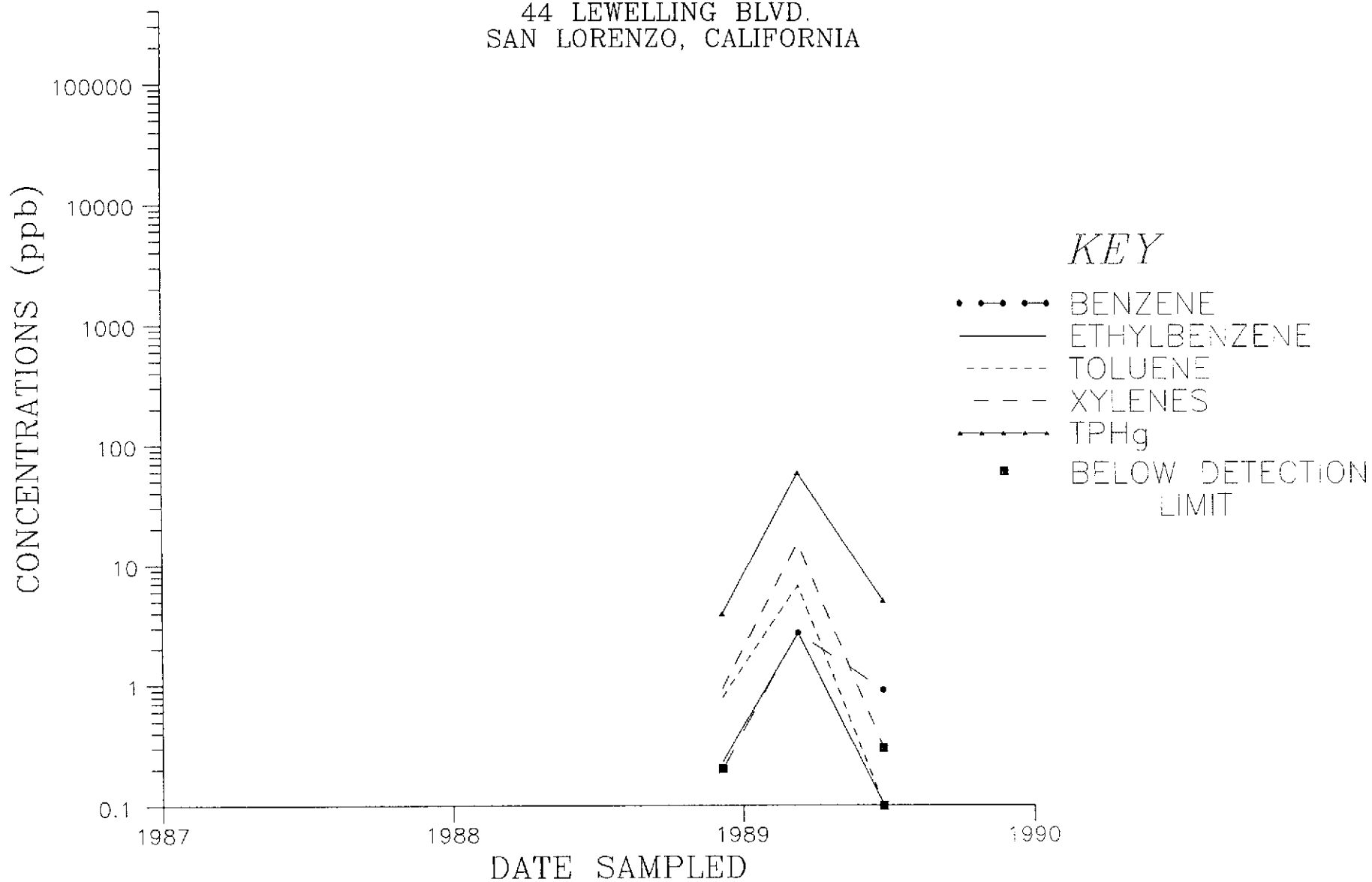


NOTE: Laboratory detection limits may vary due to analytical procedures used.

# GROUND-WATER ANALYSES DATA

## WELL MW-5

JET GAS STATION  
44 LEWELLING BLVD.  
SAN LORENZO, CALIFORNIA

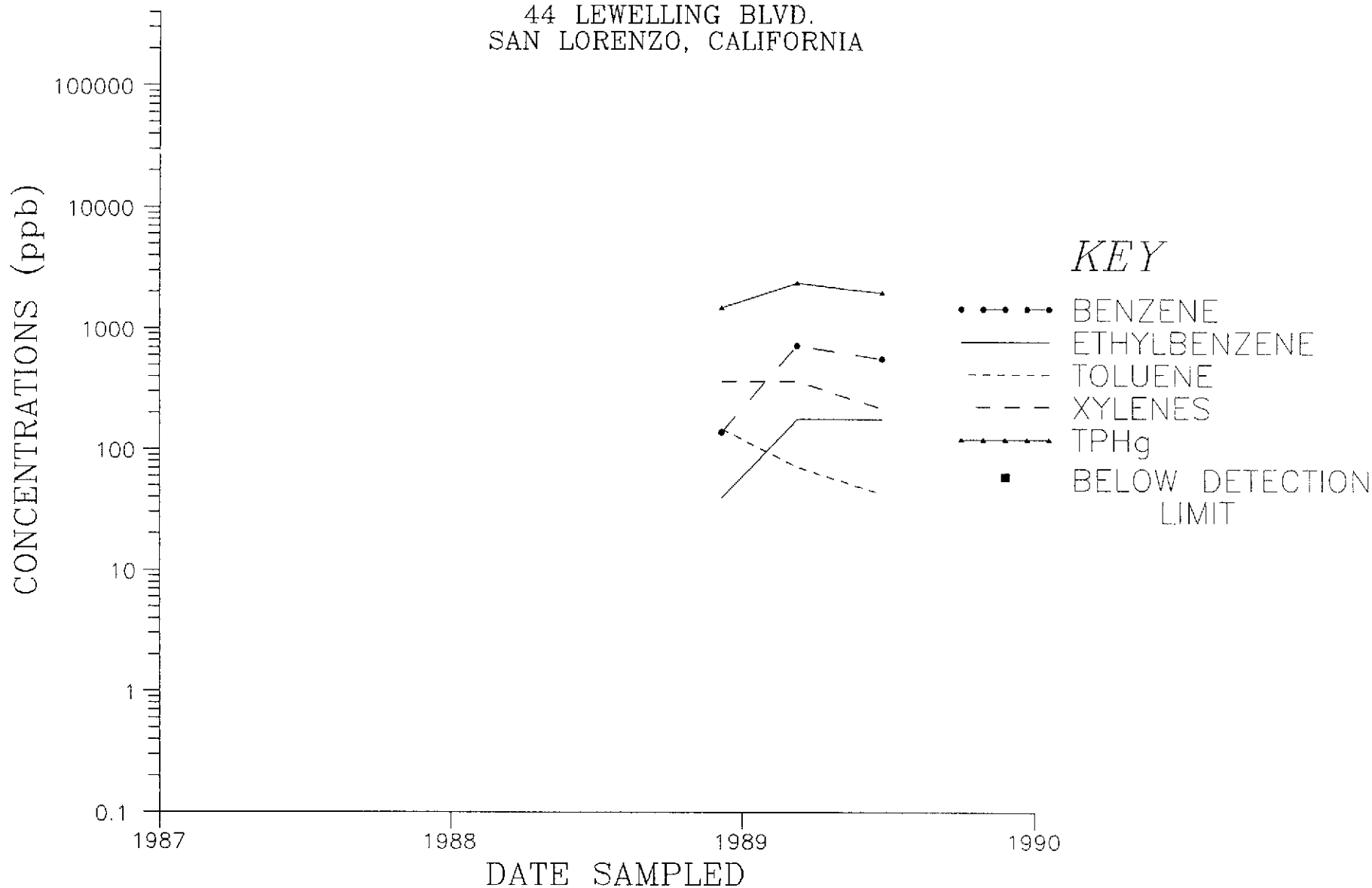


NOTE: Laboratory detection limits may vary due to analytical procedures used.

# GROUND-WATER ANALYSES DATA

## WELL MW-7

JET GAS STATION  
44 LEWELLING BLVD.  
SAN LORENZO, CALIFORNIA



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