Texaco Refining
and Marketing Inc

108 Cutting Boulevard
Richmond CA 94804

March 22, 1991

Mr. Gil Wistar
Alameda County Environmental Health Department
80 Swan Way, Suite 200
Oakland, Ca 94612

Dear Mr. Wistar:

Enclosed, please find the Quarterly Status Report dated January 31, 1991 for the former Texaco Station located at 930 Springtown Boulevard, in Livermore, California. The report includes the information requested by Mr. Rico Duazo of the Regional Water Quality Control Board in a recent telephone conversation with Mr. Gary Jacobson of Texaco Refining and Marketing Inc.

We are currently preparing a proposal for onsite contaminant assessment work which will be competitively bid. We anticipate that the contaminant assessment work will be initiated by May 1, 1991. Any future remediation work would be based on our evaluation of existing data and the upcoming onsite assessment work. We anticipate that the assessment work will be completed and that a remedial work plan, if needed, will be submitted by August 1, 1991.

If you have any questions, please feel free to contact Gary Jacobson or Karel Detterman at (415) 236-3541.

Sincerely,
Karel Detter
Karel Detterman
Environmental Geologist

Enclosure

cc: Mr. Rico Duazo
California Regional Water Quality Control Board
1800 Harrison St.
Oakland, CA 94612

Mr. E.E. Freed
Texaco Environmental Services, 7th Floor-Room 730
10 Universal City Plaza
Universal City, CA 91608

Mr. E. Dinkfeld
Texaco Environmental Services, 7th Floor-Room 730
10 Universal City Plaza
Universal City, CA 91608

930S.GW
pr: GRT

91 MAR 29 PM 12:07

GROUNDWATER TECHNOLOGY, INC.

1401 Halyard Drive, Suite 140, West Sacramento, CA 95691, (916) 372-4700
FAX (916) 372-8781

January 31, 1991

Project No. 202/150-4051

Mr. R. W. Conlon
Texaco Environmental Services
10 Universal City Plaza
Universal City, CA 91608-1756

RE: QUARTERLY STATUS REPORT (R-1 OF 91)
FORMER TEXACO SERVICE STATION
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

Dear Mr. Conlon:

This letter is presented as a quarterly report on groundwater conditions at the site referenced above for the quarter ending December 1990. Groundwater monitoring and sampling were conducted to determine water table elevation, the thickness of any separate-phase petroleum hydrocarbons (SP), and the distribution of dissolved hydrocarbons in the 10 monitoring wells (MWs) at this site. Groundwater monitoring data and results of laboratory analyses of groundwater samples collected on January 10, 1991 are included.

WORK PERFORMED

GROUNDWATER MONITORING

Water table elevations at the site have decreased an average of 0.5 foot from levels reported the previous quarter. The estimated groundwater flow direction is to the north (Figure 1) with a hydraulic gradient of approximately 0.07. Monitoring results are presented in Figure 1 and Table 1 (Attachment A).

GROUNDWATER SAMPLING

Prior to water-sample collection, the groundwater monitoring wells were purged 4 - 10 well volumes and allowed to recharge with representative formation water. A Teflon^{R} sampler, cleaned with an industrial detergent and distilled water, was used for the groundwater sampling. The water samples were transferred to 40-milliliter glass vials with Teflon^{R} septum caps, preserved on ice, and transported to GTEL Environmental Laboratories, Inc. (GTEL), in Concord, California, accompanied by a chain-of-custody manifest. Groundwater samples were analyzed using modified EPA methods 5030/8020/8015, which measure concentrations of total petroleum hydrocarbons-as-gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylenes (BTEX). Copies of the laboratory analyses reports and chain-of-custody manifest are presented in Attachment B.

GROUNDWATER ANALYTICAL RESULTS

Concentrations of TPH-G in the groundwater samples ranged from below the method detection limit (<MDL) to 50,000 parts per billion (ppb). The benzene concentrations ranged from <MDL to 1,900 ppb. The distribution of dissolved TPH-G and benzene concentrations in groundwater for January 10, 1991 are shown in Figure 2 and Figure 3, respectively. Results of the laboratory analyses are presented in Table 2, Attachment A.

WASTE WATER DISPOSAL

Purge water from the 10 monitoring wells is stored in Department of Transportation (DOT)-approved 55-gallon drums. Purge water found to contain petroleum hydrocarbons will be transported by a licensed trucking company to the Texaco Refining facility in Bakersfield, California.

Please contact Groundwater Technology's West Sacramento Office if you have questions or comments regarding this quarterly report.

Sincerely,

GROUNDWATER TECHNOLOGY, INC.

JOHN E. BOWER
Environmental Geologist
Project Manager

E.K. SIMONIS
California Registered
Geologist, No. 4422

REGISTERED GEOLOGIST
EDWARD (ED) K. SIMONIS
No. 4422
STATE OF CALIFORNIA

JEB/EKS:rc

Attachments

cc: R. R. Zielinski, Texaco Environmental Services

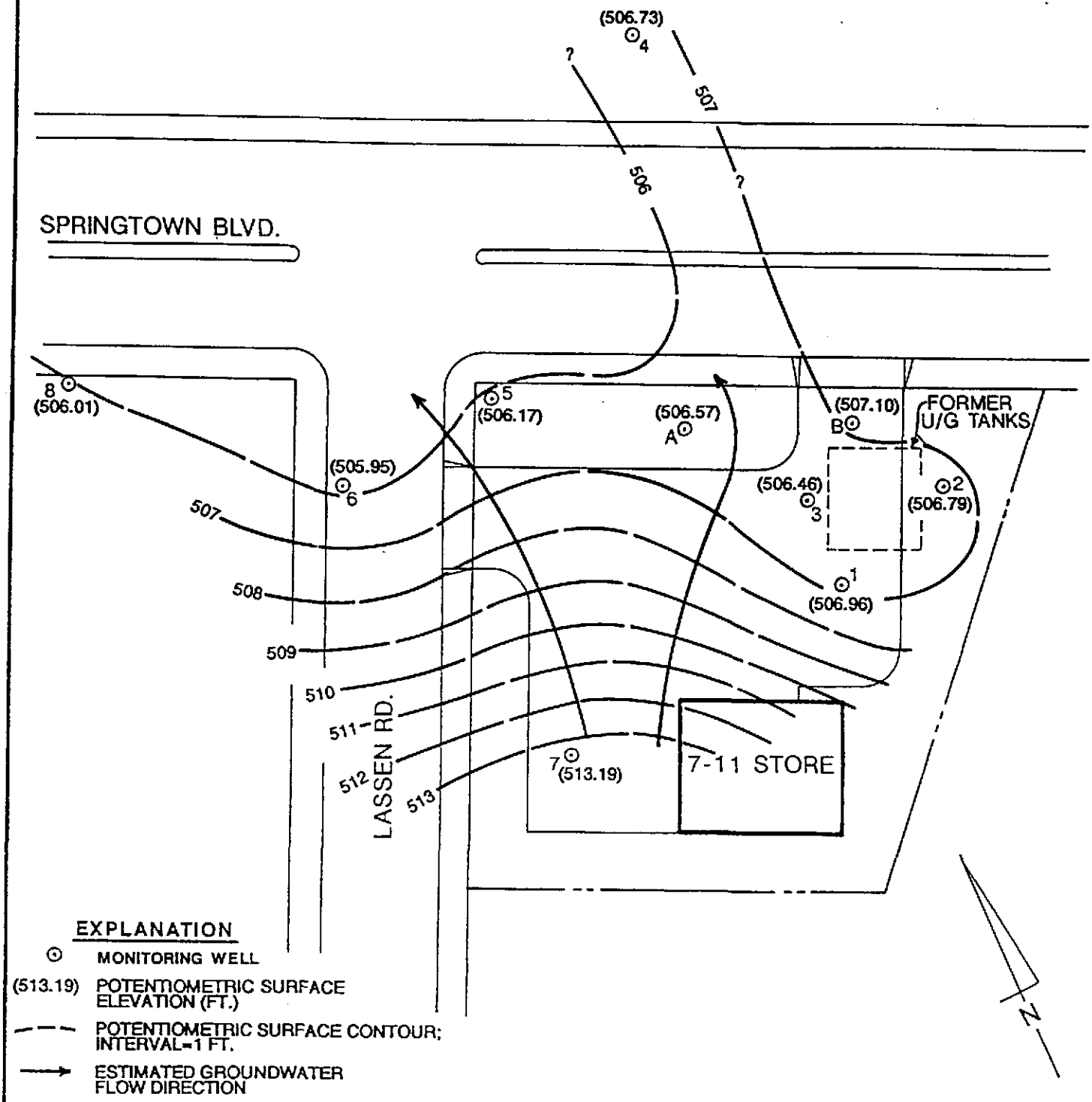

FIGURE 1

POTENTIOMETRIC SURFACE MAP

(DATUM: MEAN SEA LEVEL)
JANUARY 10, 1991

0 FEET 50

202/150-4051
TEXACO REFINING & MARKETING INC.
930 SPRINGTOWN BLVD.
LIVERMORE, CA. 1/25/91

GROUNDWATER TECHNOLOGY, INC.

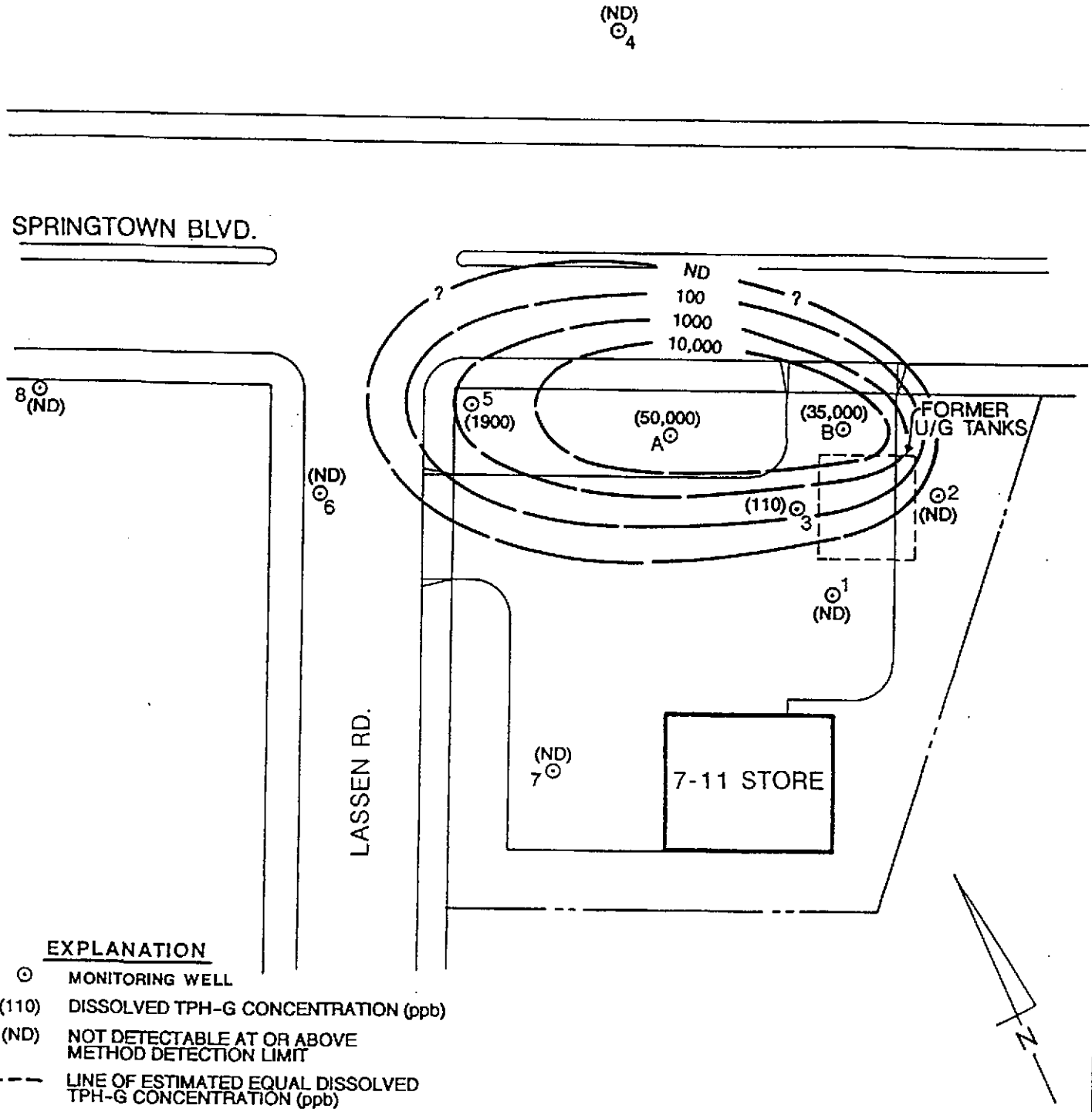

FIGURE 2

DISSOLVED TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (TPH-G) CONCENTRATION MAP

(IN PARTS PER BILLION [ppb])
JANUARY 10, 1991

0 FEET 50

202/150-4051
TEXACO REFINING & MARKETING INC.
930 SPRINGTOWN BLVD.
LIVERMORE, CA. 1/25/91

GROUNDWATER TECHNOLOGY, INC.

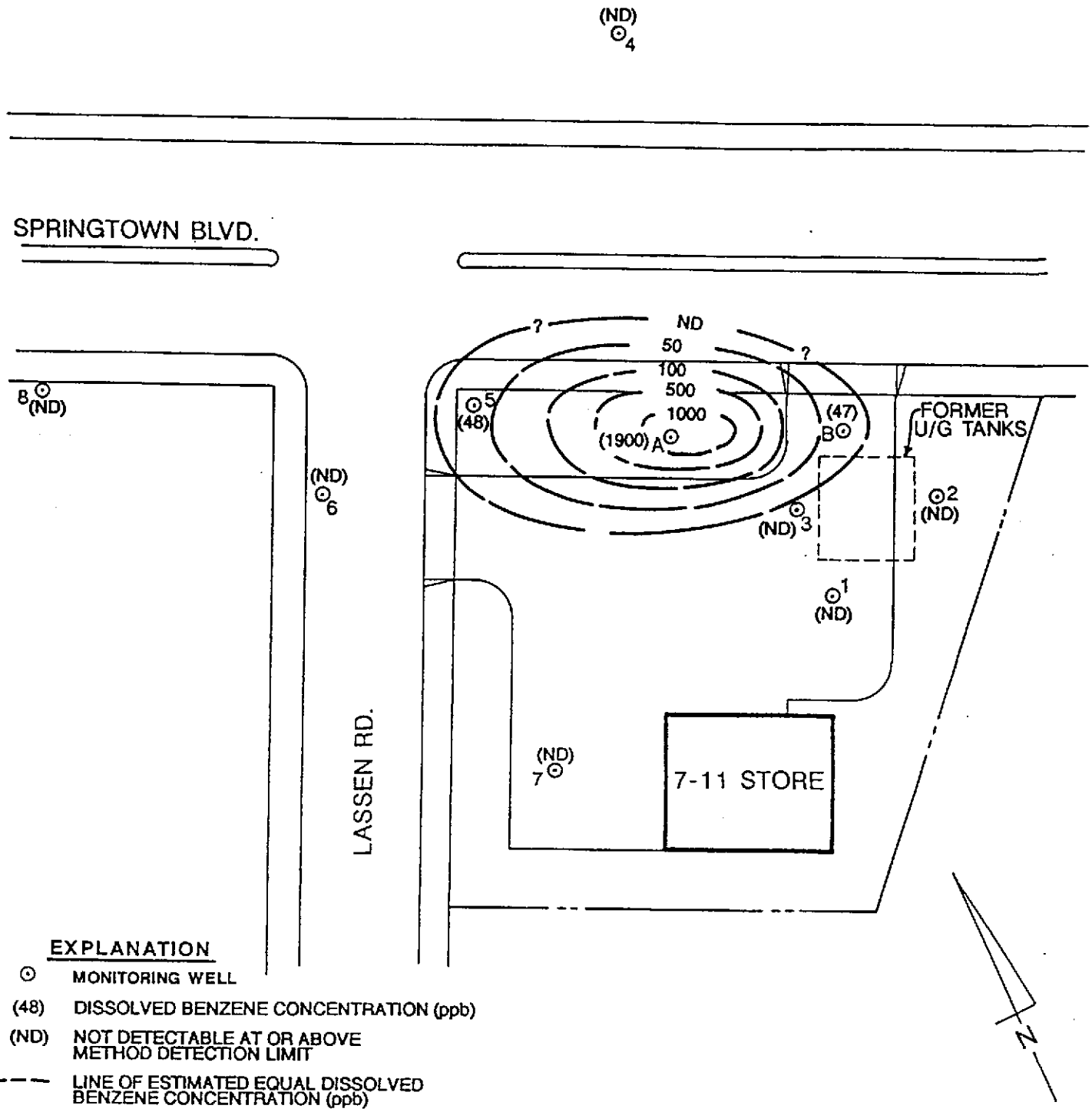

FIGURE 3

DISSOLVED BENZENE CONCENTRATION MAP

(IN PARTS PER BILLION [ppb])
JANUARY 10, 1991

0 FEET 50

202/150-4051
TEXACO REFINING & MARKETING INC.
930 SPRINGTOWN BLVD.
LIVERMORE, CA. 1/25/91

GROUNDWATER TECHNOLOGY, INC.

TABLE 1
1990/91 GROUNDWATER MONITORING DATA
(measured in feet)

Former Texaco Service Station
930 Springtown Blvd.
Livermore, California

WELL ID ELEVATION	DATE	DEPTH TO WATER	DEPTH TO SP	SP THICK	WATER TABLE ELEVATION
MW-A	03/27/90	12.55	--	--	507.30
519.85	06/25/90	12.58	--	--	507.27
	09/21/90	12.75	--	--	507.10
	01/10/91	13.28	--	--	506.57
MW-B	03/27/90	10.62	--	--	507.54
518.16	06/25/90	10.68	--	--	507.48
	09/21/90	10.76	--	--	507.40
	01/10/91	11.06	--	--	507.10
MW-1	03/27/90	13.20	--	--	507.56
520.76	06/25/90	13.22	--	--	507.54
	09/21/90	13.39	--	--	507.37
	01/10/91	13.80	--	--	506.96
MW-2	03/27/90	10.86	--	--	507.59
518.45	06/25/90	10.91	--	--	507.54
	09/21/90	11.34	--	--	507.11
	01/10/91	11.66	--	--	506.79
MW-3	03/27/90	11.84	--	--	507.46
519.30	06/25/90	11.85	--	--	507.45
	09/21/90	12.37	--	--	506.93
	01/10/91	12.84	--	--	506.46
MW-4	03/27/90	11.43	--	--	507.32
518.75	06/25/90	11.55	--	--	NA
	09/21/90	11.79	--	--	506.96
	01/10/91	12.02	--	--	506.73
MW-5	03/27/90	13.17	--	--	507.33
520.50	06/25/90	13.18	--	--	507.32
	09/21/90	13.79	--	--	506.71
	01/10/91	14.33	--	--	506.17

Table 1
(Cont.)

WELL ID ELEVATION	DATE	DEPTH TO WATER	DEPTH TO SP	SP THICK	WATER TABLE ELEVATION
MW-6	03/27/90	15.04	--	--	507.22
522.26	06/25/90	15.03	--	--	507.23
	09/21/90	15.40	--	--	506.86
	01/10/91	16.31	--	--	505.95
MW-7	03/27/90	9.41	--	--	512.76
522.17	06/25/90	9.22	--	--	512.95
	09/21/90	8.38	--	--	513.79
	01/10/91	9.07	--	--	513.10
MW-8	03/27/90	16.15	--	--	507.89
524.04	06/25/90	16.90	--	--	507.14
	09/21/90	17.56	--	--	506.48
	01/10/91	18.03	--	--	506.01

EXPLANATION
SP = Separate phase petroleum hydrocarbons
NA = Not Available

TABLE 2

CUMULATIVE LABORATORY ANALYSES OF GROUNDWATER IN PARTS PER BILLION (PPB)

Former Texaco Service Station
930 Springtown Blvd.
Livermore, California

WELL ID	SAMPLE DATE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENE	TPH-G
MW-A	03/27/90	SP	SP	SP	SP	SP
	06/25/90	2700	4000	2600	6500	39000
	09/21/90	1400	1900	1800	4200	30000
	01/10/91	1900	3700	2600	8300	50000
MW-B	03/27/90	SP	SP	SP	SP	SP
	06/25/90	28	230	87	260	5400
	09/21/90	150	1700	1200	3700	45000
	01/10/91	47	1300	770	3100	35000
MW-1	03/27/90	ND	ND	ND	ND	ND
	06/25/90	ND	ND	ND	ND	ND
	09/21/90	ND	ND	ND	ND	ND
	01/10/91	ND	ND	ND	ND	ND
MW-2	03/27/90	ND	ND	ND	ND	ND
	06/25/90	ND	ND	ND	ND	14
	09/21/90	ND	ND	ND	ND	ND
	01/10/91	ND	ND	ND	ND	ND
MW-3	03/27/90	1	ND	ND	ND	1100
	06/25/90	0.3	ND	ND	ND	340
	09/21/90	ND	ND	ND	ND	96
	01/10/91	ND	ND	ND	ND	110
MW-4	03/27/90	ND	ND	ND	ND	ND
	06/25/90	ND	ND	ND	ND	ND
	09/21/90	ND	ND	ND	ND	ND
	01/10/91	ND	ND	ND	ND	ND
MW-5	03/27/90	230	32	420	250	5100
	06/25/90	160	8	140	42	2000
	09/21/90	98	2	120	5	2100
	01/10/91	48	2	87	9	1900
MW-6	03/27/90	ND	ND	ND	ND	ND
	06/25/90	ND	ND	ND	ND	3
	09/21/90	ND	ND	ND	ND	ND
	01/10/91	ND	ND	ND	ND	ND
MDL		0.3	0.3	0.3	0.6	1

Table 2
(Cont.)

WELL ID	SAMPLE DATE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENE	TPH-G
MW-7	03/27/90	ND	ND	ND	ND	ND
	06/25/90	ND	ND	ND	ND	ND
	09/21/90	ND	ND	ND	ND	ND
	01/10/91	ND	ND	ND	ND	ND
MW-8	03/27/90	ND	ND	ND	ND	ND
	06/25/90	ND	ND	ND	ND	ND
	09/21/90	ND	ND	ND	ND	ND
	01/10/91	ND	ND	ND	ND	ND
MDL		0.3	0.3	0.3	0.6	1

EXPLANATION
MDL = Method Detection Limit
ND = Non-Detectable Concentration (below MDL)
TPH-G = Total Petroleum Hydrocarbons as Gas
SP = Separate - Phase Petroleum Hydrocarbons

ATTACHMENT B

LABORATORY ANALYSES REPORTS

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080 Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 from inside California
(800) 423-7143 from outside California

Client Number: 202-199-4051.
Project ID: Livermore, CA
Work Order Number: C1-01-202

January 16, 1991

John Bower
Groundwater Technology, Inc.
1401 Halyard Dr., Ste. 140
West Sacramento, CA 95691

Enclosed please find the analytical results report prepared by GTEL for samples received on 01/11/91, under chain of custody number 72-5005.

GTEL is certified by the California State Department of Health Services to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

If you have any questions concerning this analysis or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Emma P. Popek
Laboratory Director

Table 1

ANALYTICAL RESULTS

Aromatic Volatile Organics and Total Petroleum Hydrocarbons as Gasoline in Water

EPA Methods 5030, 8020, and Modified 8015[a]

GTEL Sample Number		01	02	03	04
Client Identification		MW4	MW8	MW7	MW6
Date Sampled		01/10/91	01/10/91	01/10/91	01/10/91
Date Analyzed		01/11/91	01/11/91	01/11/91	01/11/91
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	< 0.3	< 0.3	< 0.3	< 0.3
Toluene	0.3	< 0.3	< 0.3	< 0.3	< 0.3
Ethylbenzene	0.3	< 0.3	< 0.3	< 0.3	< 0.3
Xylene, total	0.6	< 0.6	< 0.6	< 0.6	< 0.6
BTEX, total	--	--	--	--	--
TPH as Gasoline	1	< 1	< 1	< 1	< 1
Detection Limit Multiplier		1	1	1	1

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Table 1 (Continued)

ANALYTICAL RESULTS

Aromatic Volatile Organics and
Total Petroleum Hydrocarbons as Gasoline in Water

EPA Methods 5030, 8020, and Modified 8015[a]

GTEL Sample Number		05	06	07	08
Client Identification		MW1	MW2	MW3	MW5
Date Sampled		01/10/91	01/10/91	01/10/91	01/10/91
Date Analyzed		01/11/91	01/11/91	01/11/91	01/11/91
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	< 0.3	< 0.3	< 0.3	48
Toluene	0.3	< 0.3	< 0.3	< 0.3	2
Ethylbenzene	0.3	< 0.3	< 0.3	< 0.3	87
Xylene, total	0.6	< 0.6	< 0.6	< 0.6	9
BTEX, total	--	--	--	--	150
TPH as Gasoline	1	< 1	< 1	110	1900
Detection Limit Multiplier		1	1	1	1

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

Table 1 (Continued)

ANALYTICAL RESULTS

Aromatic Volatile Organics and Total Petroleum Hydrocarbons as Gasoline in Water

EPA Methods 5030, 8020, and Modified 8015[a]

GTEL Sample Number		09	10	11	12
Client Identification		MWA	MWB	FIELD BLK	RMW4
Date Sampled		01/10/91	01/10/91	01/10/91	01/10/91
Date Analyzed		01/14/91	01/14/91	01/14/91	01/14/91
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	1900	47	< 0.3	< 0.3
Toluene	0.3	3700	1300	< 0.3	< 0.3
Ethylbenzene	0.3	2600	770	< 0.3	< 0.3
Xylene, total	0.6	8300	3100	< 0.6	< 0.6
BTEX, total	--	17000	5200	--	--
TPH as Gasoline	1	50000	35000	< 1	< 1
Detection Limit Multiplier		1	1	1	1

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

GTEL ENVIRONMENTAL LABORATORIES, INC
4080- Pike Lane
Concord, CA 94520
415-685-7852
800-544-3422 (In CA)
800-423-7143 (Outside CA)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

72-[illegible] 0101/02 5BOX

Project Manager: John Brewer
Phone #: [illegible]
FAX #: [illegible]-8781
Address: W/Sac Office Livermore
Site location:
Project Number: 202/199/4051
Project Name: Springtown Blvd
I attest that the proper field sampling procedures were used during the collection of these samples.
Sampler Name (Print): Steven Thompson

Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	# CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO3	H2SO4	ICE	NONE	OTHER	Sampling: DATE	TIME	BTEX/TPH Gas 602/8020/8015 MTBE
MW 4	Monitor Wells	01	2	✓					✓			✓			1/10	1:30	2
8	↓	02	↓	↓					↓			↓			↓	1:40	↓
7		03														1:50	
6		04														2:00	
1		05														2:10	
2		06														2:20	
3		07														2:30	
5		08														2:40	
9		09														2:50	
13	↓	10														3:00	
Field Blank	"	11														1:20	
Rinsate	mw	12	↓	↓					↓			↓			↓	1:25	↓

ANALYSIS REQUEST: BTEX 602 ☐ 8020 ☐ with MTBE ☐; BTEX/TPH Gas 602/8020/8015 ☒ MTBE ☐; TPH as ☐ Gas ☐ Diesel ☐ Jet Fuel; Product I.D. by GC (SIMDIS) ☐; Total Oil & Grease: 413.1 ☐ 413.2 ☐ 503A ☐; Total Petroleum Hydrocarbons: 418.1 ☐ 503E ☐; EPA 601 ☐ 8010 ☐ DCA only ☐; EPA 602 ☐ 8020 ☐; EPA 608 ☐ 8080 ☐ PCBs only ☐; EPA 610 ☐ 8310 ☐; EPA 624 ☐ 8240 ☐ NBS +15 ☐; EPA 625 ☐ 8270 ☐ NBS +25 ☐; EPTOX: Metals ☐ Pesticides ☐ Herbicides ☐; TCLP Metals ☐ VOA ☐ Semi VOA ☐; EPA Priority Pollutant Metals ☐ HSL ☐; LEAD 7420 ☐ 7421 ☐ 239.2 ☐ 6010 ☐ Org. Lead ☐; CAM Metals ☐ STLC ☐ TTLC; Corrosivity ☐ Flashpoint ☐ Reactivity

CUSTODY RECORD

Relinquished by	Received by	Date	Time
Relinquished by Sampler: [signature]	Received by: [signature]	1-10	5:10
Relinquished by: [signature]	Received by: M. Wirth	1-11-91	9:30
Relinquished by: [signature]	Received by Laboratory: [signature]	1-11-91	12:00

Way bill #

SPECIAL HANDLING
24 HOURS ☐
EXPEDITED 48 Hours ☐
SEVEN DAY ☐
OTHER ____ (#) BUSINESS DAYS
QA/QC CLP Level ☐ Blue Level ☐
FAX ☐

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)

REMARKS: 2 Weeks Turnaround

Lab Use Only
Lot #:
Storage Location
Work Order #: