Bob Robles
Environmental Coordinator
(818) 505 2476

92 MAR 27 PM 2:01

April 20, 1992

Mr. Ariu Levi
ALAMEDA COUNTY DEPARTMENT OF
ENVIRONMENTAL PROTECTION
80 Swan Way, Room 200
Oakland, CA 95621

SUBJECT: QUARTERLY GROUNDWATER MONITORING REPORT
Site: 1127 Lincoln Avenue
Alameda, California

Dear Mr. Levi: 4/20/92

Enclosed is a copy of the Quarterly Groundwater Monitoring Report dated March 23, 1992, for the above site. In addition, a report on the recently completed soil vapor extraction test is in the process of being completed. I expect to be in a position to mail you a copy of the results of this report no later than May 25, 1992.

If you have any questions or wish to discuss these reports, please call me at (818) 505 2476.

Very truly yours,

Bob Robles

RR:rr

pr

Enclosure

cc: Mr.Leo Pagano
1127 Lincoln Avenue
Alameda, California

California Regional Water Quality Control Board
San Francisco Bay Region
Attention: Alameda County Oversite Group
2201 Webster Street, Suite 500
Oakland, California 94612

RRZielinski-Richmond

Applied GeoSystems, Inc.
A RESNA Company

RESNA
Working To Restore Nature

3315 Almaden Expressway, Suite 34
San Jose, CA 95118
Phone: (408) 264-7723
Fax: (408) 264-2435

REPORT
QUARTERLY GROUNDWATER MONITORING
First Quarter 1992
at
Former Texaco Station
1127 Lincoln Avenue
Alameda, California

61006.02

Applied GeoSystems, Inc.
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Working To Restore Nature

3315 Almaden Expressway, Suite 34
San Jose, CA 95118
Phone: (408) 264-7723
Fax: (408) 264-2435

March 23, 1992
0228RROB
61006.02

Mr. Robert Robles
Texaco Environmental Services
10 Universal City Plaza, 7th Floor
Universal City, California 91608

Subject: First Quarter 1992 Groundwater Monitoring Report at the former Bay Street Texaco Station, 1127 Lincoln Avenue, Alameda, California.

Mr. Robles:

As requested by Texaco Environmental Services (TES), this report summarizes the methods and results of the first quarter 1992 groundwater monitoring and sampling performed by RESNA Industries, Inc. (RESNA) at the subject site. TES has contracted RESNA to perform quarterly groundwater depth measurements, sampling, and laboratory analyses to monitor trends in the groundwater flow direction, gradient, and gasoline hydrocarbon concentrations over time.

The subject site is located on the northwestern corner of Lincoln Avenue and Bay Street in the City and county of Alameda, California, as shown on the Site Vicinity Map (Plate 1). The subject site is presently occupied by an operating auto repair shop that is utilizing the buildings and facilities of the former service station. The site is bounded by residential properties to the north, Lincoln Avenue and other commercial properties to the south, Bay Street and commercial property to the east, and a plant nursery to the west. The site is nearly flat and paved with asphalt.

Previous Work

Prior to the present monitoring, McLaren/Hart performed an environmental investigation and subsequent limited subsurface investigations related to the removal of four underground gasoline-storage tanks and one waste-oil tank from the site in September 1989 (McLaren/Hart, 88705-001, January 1991). In March 1991, RESNA performed an Initial Subsurface Investigation (RESNA, 61006.01, May 1991) which included the installation of three groundwater monitoring wells (MW-1, MW-2, and MW-3), five vapor wells (VW-1

through VW-5), and an additional seven subsurface borings. RESNA began quarterly groundwater monitoring at the request of TES in May 1991. Results of these investigations are presented in the reports listed in the References Section at the end of this report. The locations of subsurface borings, groundwater monitoring, vapor extraction wells, and pertinent site features are shown on the Generalized Site Plan (Plate 2). RESNA performed the fourth quarter 1991 monitoring on November 14, 1991 (RESNA, January 1992).

Groundwater Sampling and Gradient Evaluation

RESNA personnel performed quarterly groundwater monitoring and sampling at the site on February 19, 1992. Field work consisted of measuring depth-to-water (DTW) levels in all the wells (MW-1 through MW-3 and VW-1 through VW-5), subjectively analyzing the groundwater for the presence of a hydrocarbon sheen or floating product in the three groundwater monitoring wells (MW-1 through MW-3) and four vadose wells (VW-2 through VW-5). The groundwater in wells MW-1 through MW-3 was purged and sampled for laboratory analysis. Although water was observed in four of the five vadose wells (VW-2 through VW-5), we believe that this water collected from the recent winter rains. As a result, the water levels from these vadose wells was not used to evaluate the groundwater gradient and samples were not collected for laboratory analyses.

Groundwater elevations were calculated for each well by subtracting the measured DTW from the surveyed wellhead elevations. The measured DTW levels for this and previous monitoring episodes are shown in Table 1, Cumulative Groundwater Monitoring Data. The gradient magnitude and flow direction interpreted from the February 19, 1992, groundwater elevation data is approximately 0.001 towards the northeast. The Groundwater Surface Contour Map (Plate 3) is a graphic presentation of the groundwater surface from the February 19, 1992, groundwater monitoring data. The gradient from the two previous groundwater monitorings was towards the north-northwest.

Groundwater samples were collected from monitoring wells MW-1 through MW-3 and vadose wells VW-2 through VW-5 for subjective analysis before the monitoring wells were purged and sampled. No evidence of a measurable floating product or hydrocarbon sheen was observed in the groundwater samples collected from these wells, as reported in Table 1.

Monitoring wells MW-1, MW-2, and MW-3 were purged and sampled in accordance with the enclosed groundwater sampling protocol (Appendix A). Monitoring well purge data sheets and stabilization graphs for the parameters monitored are included in Appendix B.

Laboratory Methods and Results

Groundwater samples collected from monitoring wells MW-1 through MW-3 were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX), total petroleum hydrocarbons as gasoline (TPHg), dissolved oxygen, and ethylene glycol (MW-1 only) by modified Environmental Protection Agency (EPA) Methods 5030/8015/8020, 360.1, and 8015 modified, respectively. The groundwater samples were delivered to RESNA's Environmental Laboratories in Fremont, California (Hazardous Waste Testing Laboratory Certification No. 1211) for BTEX and TPHg analysis, under Chain-of-Custody protocol. Groundwater samples analyzed for dissolved oxygen and ethylene glycol were analyzed at Sequoia Analytical Laboratory in Redwood City, California (Hazardous Waste Testing Laboratory Certification No. 1210) under Chain-of-Custody protocol. The Chain-of-Custody Record and Laboratory Analysis Reports are presented in Appendix C. The results of these and previous analyses are summarized in Table 2, Cumulative Laboratory Analyses of Groundwater Samples. The analyses for dissolved oxygen and ethylene glycol was performed at the request of TES.

This quarter's laboratory analyses of groundwater samples from monitoring wells MW-1, MW-2, and MW-3 indicated:

- TPHg was detected in the groundwater samples collected from wells MW-1, MW-2 and MW-3 at concentrations ranging from 440 parts per billion (ppb) (MW-1) to 2,100 ppb (MW-2). Interpreted concentration contours for TPHg are shown on Plate 4.

- Benzene was not detected in the groundwater sample from well MW-3.

- Benzene was detected in the groundwater samples collected from wells MW-1 and MW-2, at concentrations of 14 ppb and 57 ppb, respectively. These concentrations exceed the California Department of Health Services Maximum Contaminant Level for the presence of benzene in drinking water (1.0 ppb). Interpreted concentration contours for benzene are shown on Plate 5.

- Concentrations of the other purgeable gasoline constituents detected which included toluene, ethylbenzene, and total xylenes are below the California Department of Health Services Maximum Contaminant Levels or recommended action levels for drinking water which are 100 ppb for toluene, 680 ppb for ethylbenzene, and 1,750 ppb for xylene.

- Dissolved oxygen was detected in the groundwater samples collected from wells MW-1 through MW-3 at concentrations ranging from 3.2 parts per million (ppm) in MW-2 to 4.0 ppm in MW-1.

- Ethylene glycol was not detected in the groundwater sample collected from well MW-1.

It is recommended that copies of this report be forwarded to:

Mr. Ariu Levi
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, California 95621

Mr. Tom Callaghan
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

If you have any questions or comments regarding the information contained in this letter report, please call us at (408) 264-7723.

Sincerely,
RESNA

Stephen Ryder

Stephen T. Ryder
Geological Technician

Philip J. Mayberry

Philip J. Mayberry
Project Geologist

James Nelson
Certified Engineering
Geologist No. 1463

RESNA

Enclosures: References:

Plate 1: Site Vicinity Map
Plate 2: Generalized Site Plan
Plate 3: Groundwater Surface Contour Map
Plate 4: TPHg Concentrations in Groundwater
Plate 5: Benzene Concentrations in Groundwater

Table 1: Cumulative Groundwater Monitoring Data
Table 2: Cumulative Laboratory Analyses of Groundwater Samples

Appendix A: Groundwater Sampling Protocol
Appendix B: Well Purge Data Sheets and Stabilization Graphs
Appendix C: Chain of Custody Records and Laboratory Analysis Reports

REFERENCES

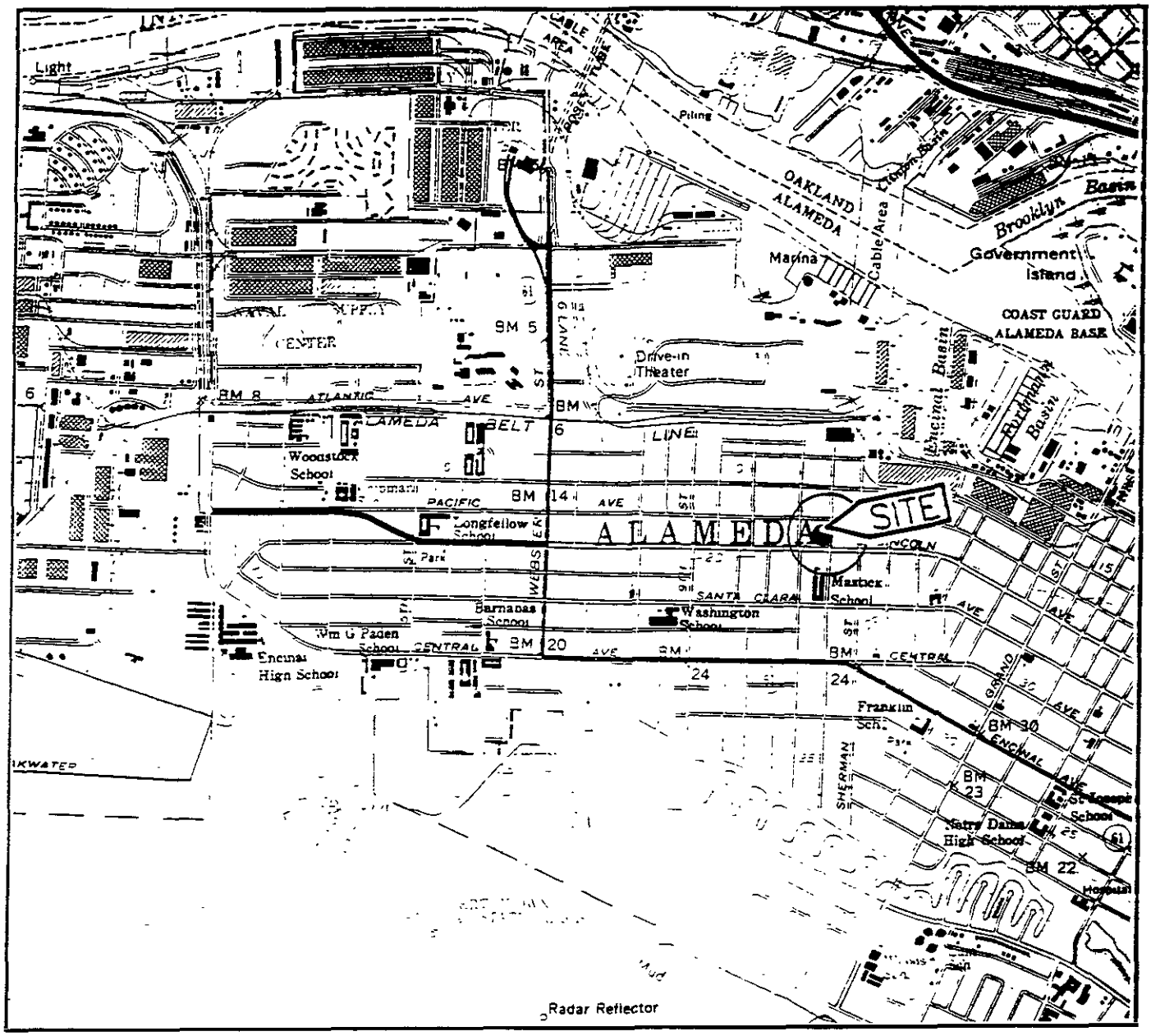
McLaren/Hart, November 29, 1990, Texaco-Alameda Site Safety and Health Plan, Project 88705-001.

McLaren/Hart, January 23, 1991, Work Plan for Phase I Investigation, Lewis Bay Street Service Station, Alameda, California, Project 88705-001.

RESNA, August 1991, Initial Subsurface Environmental Investigation at Former Bay Street Station, 1127 Lincoln Avenue, Alameda, California. RESNA Report No. 61006.01

RESNA, September 24, 1991, Letter Report, Quarterly Groundwater Monitoring, Third Quarter 1991 at Former Bay Street Texaco Station, 1127 Lincoln Avenue, Alameda, California. RESNA Report No. 61006.01

RESNA, January 9, 1992, Letter Report, Quarterly Groundwater Monitoring, Fourth Quarter 1991 at Former Bay Street Texaco Station, 1127 Lincoln Avenue, Alameda, California. RESNA Report No. 61006.01



Base: U.S. Geological Survey
7.5-Minute Quadrangle
Oakland West, California
Photorevised 1980

LEGEND

= Site Location

Approximate Scale

2000 1000 0 2000 4000

feet

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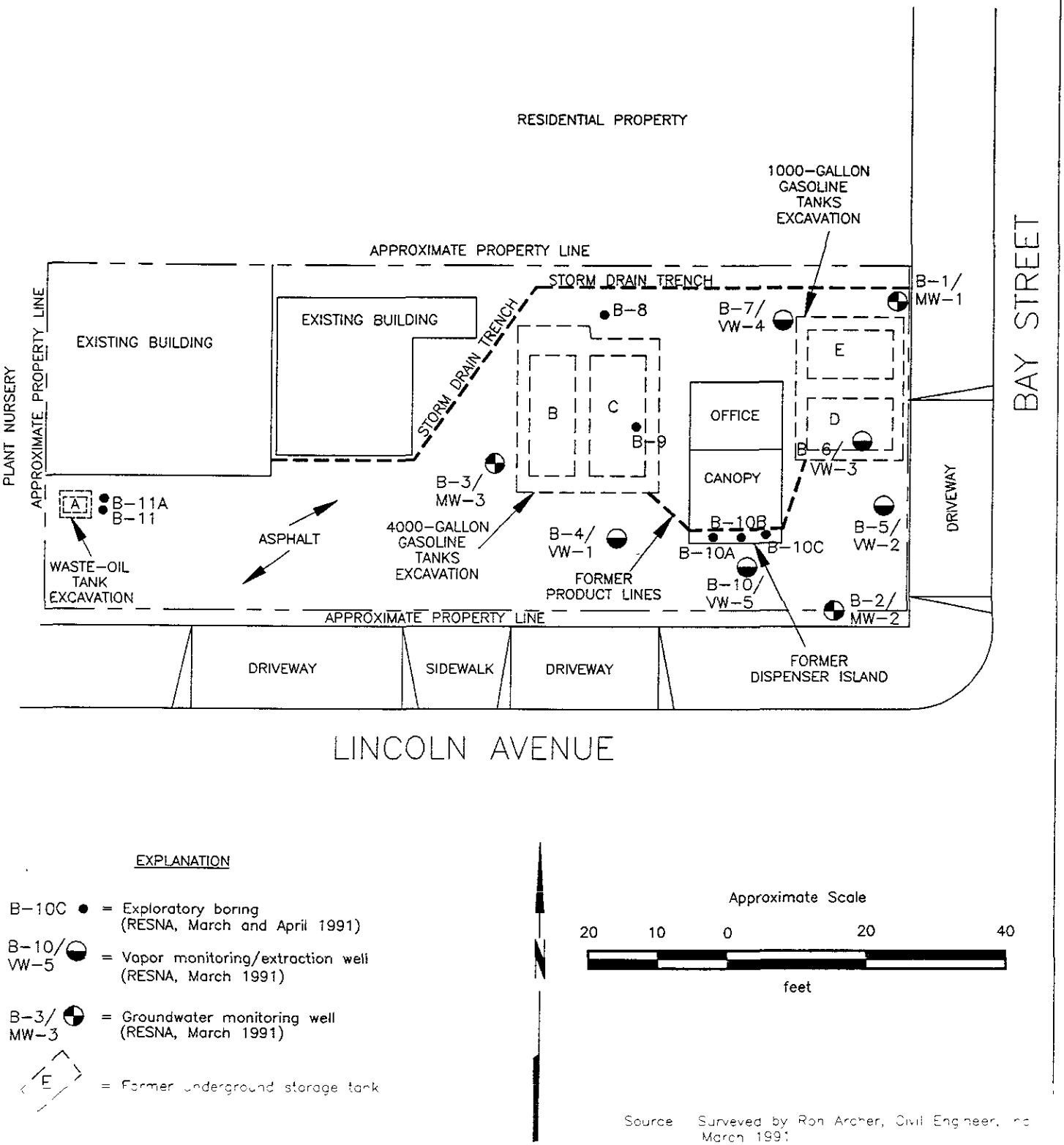
SITE VICINITY MAP
Former Bay Street Texaco Station
1127 Lincoln Avenue
Alameda, California

PLATE
1



EXPLANATION

B-10C ● = Exploratory boring (RESNA, March and April 1991)

B-10/ VW-5 ◒ = Vapor monitoring/extraction well (RESNA, March 1991)

B-3/ MW-3 ◓ = Groundwater monitoring well (RESNA, March 1991)

E = Former underground storage tank

N

Approximate Scale

20 10 0 20 40

feet

Source: Surveyed by Ron Archer, Civil Engineer, on March 1991

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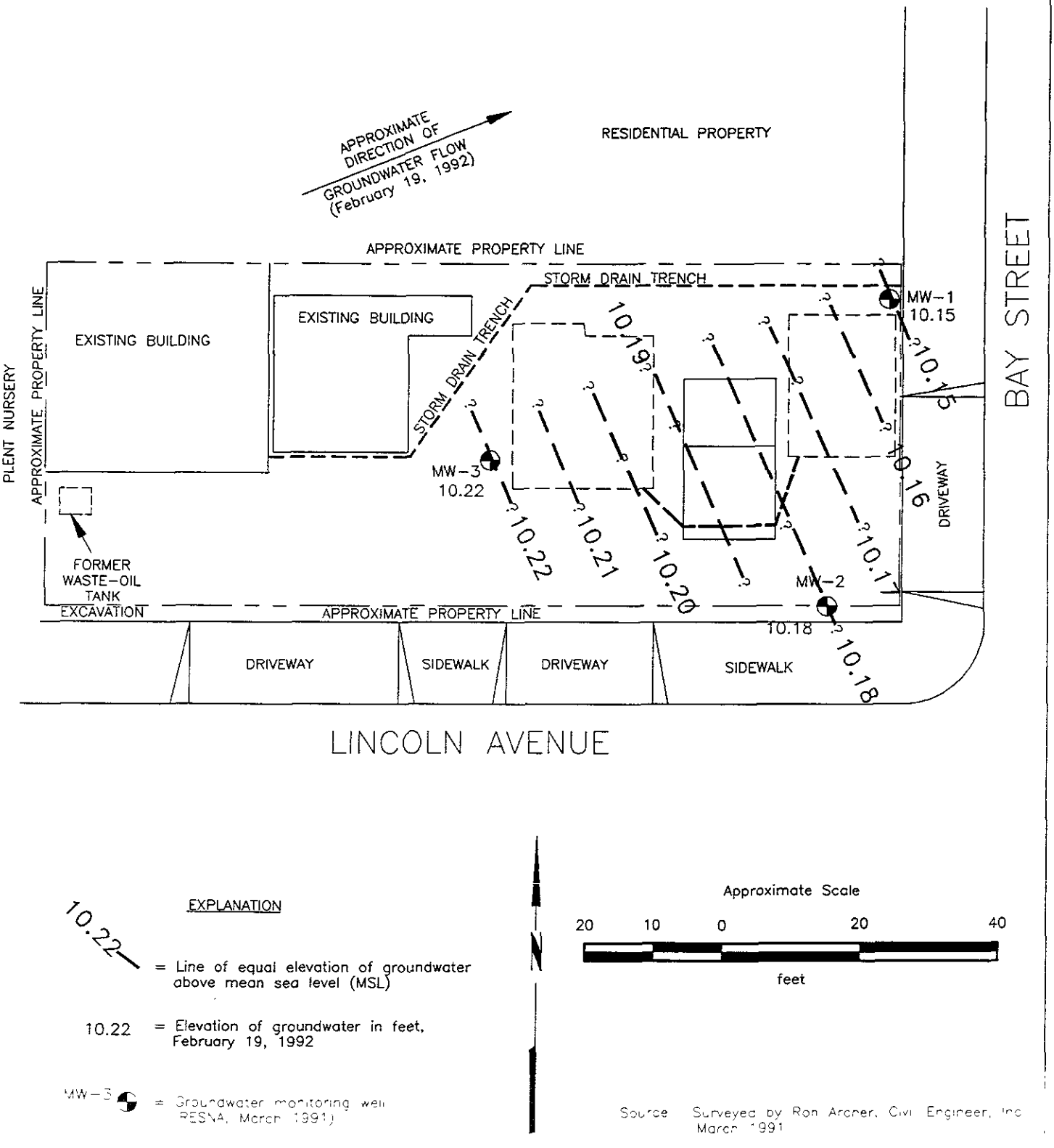
GENERALIZED SITE PLAN
Former Bay Street Texaco Station
1127 Lincoln Avenue
Alameda, California

PLATE 2



EXPLANATION

10.22 = Line of equal elevation of groundwater above mean sea level (MSL)

10.22 = Elevation of groundwater in feet, February 19, 1992

MW-3 = Groundwater monitoring well (RESNA, March 1991)

N

Approximate Scale

20 10 0 20 40

feet

Source: Surveyed by Ron Archer, Civil Engineer, Inc. March 1991

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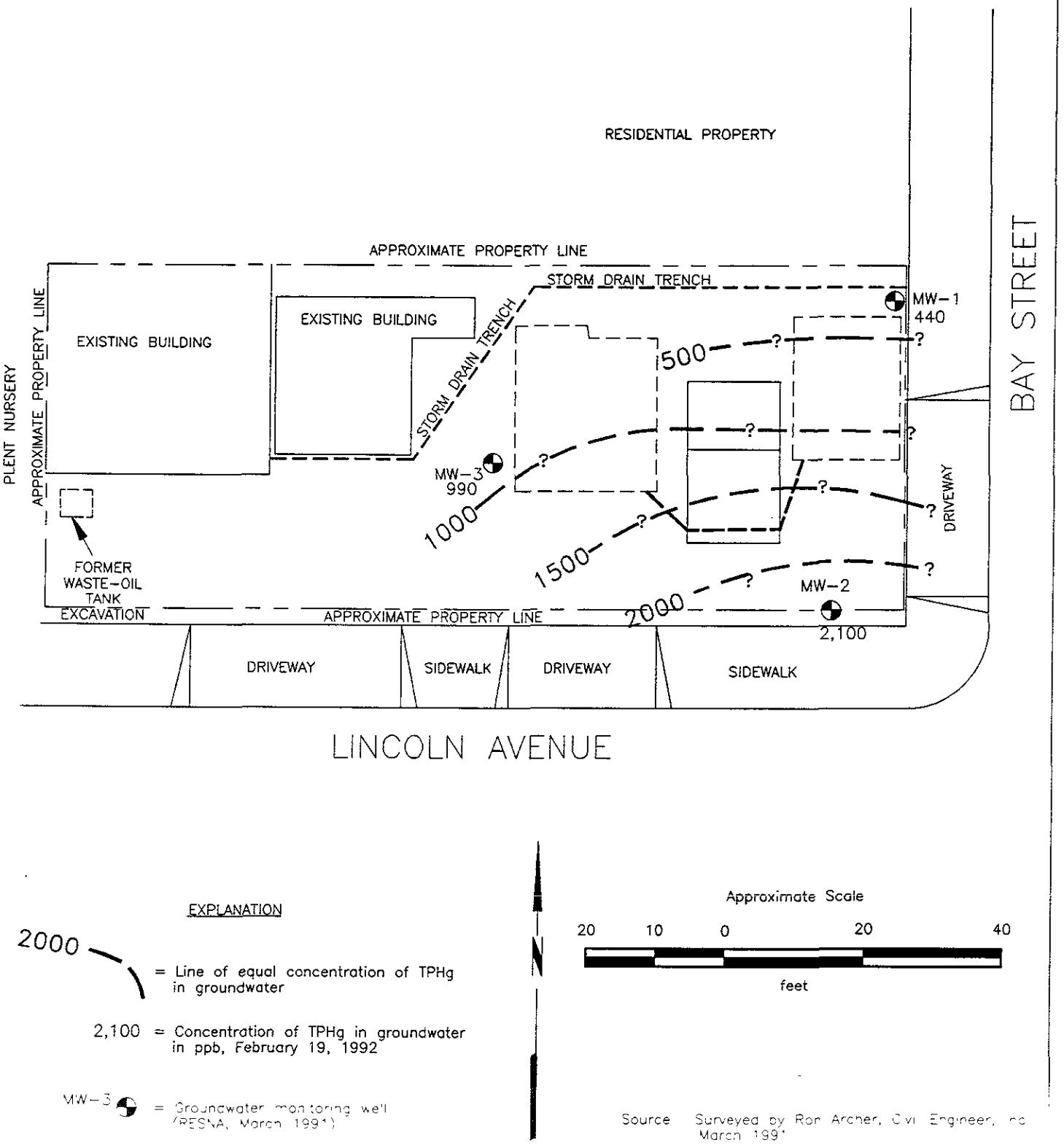
GROUNDWATER SURFACE CONTOUR MAP

Former Bay Street Texaco Station
1127 Lincoln Avenue
Alameda, California

PLATE

3



EXPLANATION

2000 = Line of equal concentration of TPHg in groundwater

2,100 = Concentration of TPHg in groundwater in ppb, February 19, 1992

MW-3 = Groundwater monitoring well (RESNA, March 1991)

N

Approximate Scale

20 10 0 20 40

feet

Source: Surveyed by Ron Archer, Civil Engineer, inc March 1991

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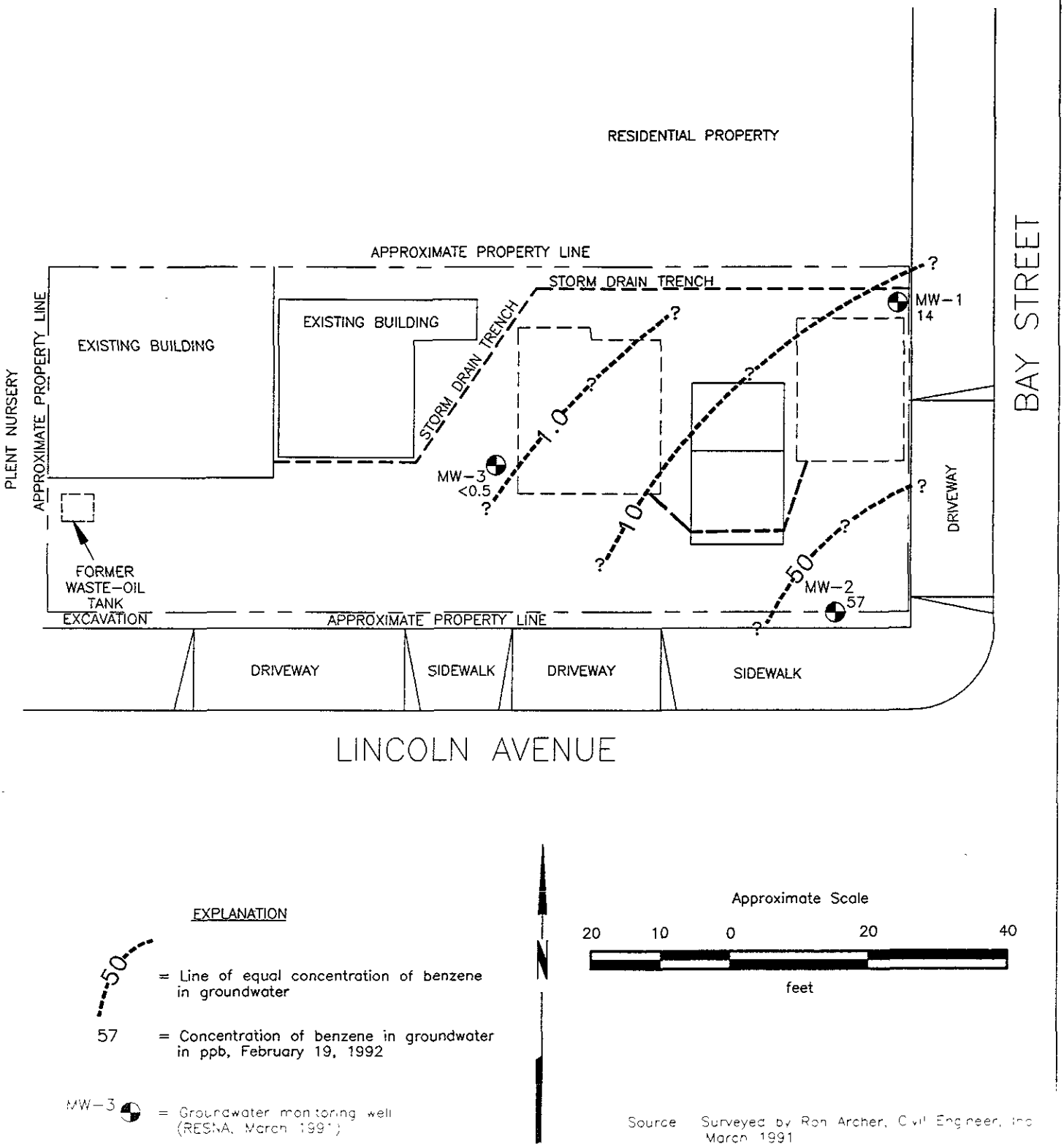
PROJECT 61006.02

TPHg CONCENTRATIONS IN GROUNDWATER

Former Bay Street Texaco Station
1127 Lincoln Avenue
Alameda, California

PLATE 4



EXPLANATION

50 = Line of equal concentration of benzene in groundwater

57 = Concentration of benzene in groundwater in ppb, February 19, 1992

MW-3 = Groundwater monitoring well (RESNA, March 1991)

N

Approximate Scale

20 10 0 20 40

feet

Source: Surveyed by Ron Archer, Civil Engineer, Inc. March 1991

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BENZENE CONCENTRATIONS IN GROUNDWATER
Former Bay Street Texaco Station
1127 Lincoln Avenue
Alameda, California

PLATE 5

TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
Former Bay Street Texaco Station
Alameda, California
(Page 1 of 2)

Monitoring Well	Date	Elevation of Well Casing	Depth to Water	Elevation of Ground water	Floating Product
MW-1	03-22-91	16.49	7.23	9.26	none
	04-04-91		6.68	9.81	none
	08-13-91		8.59	7.90	none
	11-14-91		9.38	7.11	none
	02-19-92		6.34	10.15	none
MW-2	03-22-91	17.14	7.60	9.54	none
	04-04-91		7.07	10.07	none
	08-13-91		8.85	8.29	none
	11-14-91		9.60	7.54	none
	02-19-92		6.96	10.18	none
MW-3	03-22-91	16.91	7.43	9.48	none
	04-04-91		6.80	10.11	none
	08-13-91		8.88	8.03	none
	11-14-91		9.68	7.23	none
	02-19-92		6.69	10.22	none
VW-1	03-22-91	16.83	dry	dry	none
	04-04-91		6.89	9.92	none
	08-13-91		dry	dry	none
	11-14-91		dry	dry	none
	02-19-92		dry	dry	none
VW-2	03-22-91	17.00	7.59	9.41	none
	04-04-91		7.04	9.96	none
	08-13-91		dry	dry	none
	11-14-91		dry	dry	none
	02-19-92		6.94	10.06	none
VW-3	03-22-91	16.94	7.71	9.23	none
	04-04-91		6.92	10.02	none
	08-13-91		8.45	8.49	none
	11-14-91		dry	dry	none
	02-19-92		7.40	9.54	none
VW-4	03-22-91	16 81	7.66	9.15	sheen
	04-04-91		inaccessible	–	–
	08-13-91		8 40	8 41	none
	11-14-91		dry	dry	none
	02-19-92		5 76	11 05	none

See notes on page 2 of 2

TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
Former Bay Street Texaco Station
Alameda, California
(Page 2 of 2)

Monitoring Well	Date	Elevation of Well Casing	Depth to Water	Elevation of Ground water	Floating Product
VW-5	03-22-91	17.20	7.67	9.53	sheen
	04-04-91		inaccessible	–	–
	08-13-91		dry	dry	none
	11-14-91		dry	dry	none
	02-19-92		7.04	10.16	none

Elevations above mean sea level.
Depth to water measured in feet below top of casing.

TABLE 2
CUMULATIVE LABORATORY ANALYSES
OF GROUNDWATER SAMPLES
Former Bay Street Texaco Station
Alameda, California

Well Number / Date	TPHg	B	T	E	X	TPHd*	VOCs & Semi-VOCs	DO	EG
MW-1									
03-22-91	4,500	1,300	670	180	770	1,100	ND	NA	NA
08-13-91	850	260	51	13	48	NA	NA	NA	NA
11-14-91	<30	<0.30	<0.30	<0.30	<0.30	NA	NA	NA	NA
02-19-92	440	14	14	2.1	9.9	NA	NA	4.0	<10
MW-2									
03-22-91	1,100	100	20	63	220	140	ND	NA	NA
08-13-91	1,100	270	4.7	16	49	NA	NA	NA	NA
11-14-91	870	56	8.9	21	46	NA	NA	NA	NA
02-19-92	2,100	57	5.6	9.1	75	NA	NA	3.2	NA
MW-3									
03-22-91	2,500	390	27	240	780	770	ND	NA	NA
08-13-91	1,300	180	3.8	79	200	NA	NA	NA	NA
11/14/91	870	89	9	30	82	NA	NA	NA	NA
02/19/92	990	<0.5	<0.5	2.0	72	NA	NA	3.4	NA
Jan. 1990									
MCLs	—	1.0	-.-	680	1,750				
DWALs	—	-.-	100	—	—				

Results in parts per billion (ppb)
MCLs = Adopted Maximum Contaminant Levels in Drinking Water, DHS (July 1989)
DWALs = Recommended Drinking Water Action Levels, DHS (January 1990)
ND = Below laboratory detection limit.
NA = Not Analyzed
TPHg = Total petroleum hydrocarbons as gasoline (analyzed by EPA Method 5030).
TPHd = Total petroleum hydrocarbons as diesel (analyzed by EPA Method 3510).
* = Anametrix states: "The concentrations reported as diesel for samples W-9-MW1, W-9-MW2, and W-9-MW3 are primarily due to the presence of a lighter petroleum product, possibly gasoline."
B = benzene, T = toluene, E = ethylbenzene, X = total xylene isomers.
BTEX = Measured by EPA Method 602/(624).
VOCs = Volatile organic compounds (analyzed by EPA Method 624/8240).
Semi-VOCs = Semi-volatile organic compounds (analyzed by EPA Method 8270).
DO = Dissolved oxygen in parts per million (ppm).
EG = Ethylene glycol in ppm.

APPENDIX A

GROUNDWATER SAMPLING PROTOCOL

GROUNDWATER SAMPLING PROTOCOL

The static water level in each well was measured with a Solinst® water level indicator; this instrument is accurate to the nearest 0.01 foot. These groundwater depths were subtracted from wellhead elevations to calculate the differences in water-level elevations.

Water samples collected for subjective evaluation were collected by gently lowering approximately half the length of a clean Teflon® bailer past the air-water interface (if possible) and collecting a sample from near the surface of the water in the well. The samples were checked for measurable floating hydrocarbon product.

Before groundwater samples were collected from the groundwater monitoring wells, the wells were purged of approximately six well casing volumes until stabilization of the temperature, Ph, and conductivity was obtained. Turbidity measurements were also taken on the purged well water. The quantity of water purged from each well was calculated as follows:

1 well casing volume = $\pi r^2 h(7.48)$ where:

r = radius of the well casing in feet.
h = column of water in the well in feet
(depth to bottom - depth to water).
7.48 = conversion constant from cubic feet to gallons

gallons removed/1 well casing volume = number of well casing volumes removed from the well.

After purging, each well was allowed to recharge to at least 80 percent of the approximate initial water level. Water samples were collected with a U.S. Environmental Protection Agency (EPA) approved Teflon® bailer subsequent to being cleaned with Alconox® and deionized water. The water samples were poured into 40-milliliter (ml) glass vials, which were filled so as to produce a positive meniscus. Each vial was preserved with hydrochloric acid, sealed with a cap containing a Teflon® septum, and subsequently examined for air bubbles to avoid headspace which would allow volatilization to occur. The samples were transported in iced storage in a thermally insulated ice chest, accompanied by a Chain of Custody form, to a California-certified laboratory.

APPENDIX B

WELL PURGE DATA SHEETS
AND
STABILIZATION GRAPHS

WELL PURGE DATA SHEET

Project Name: Texaco Alameda Job No. 61006.02

Date: February 19, 1992 Page 1 of 1

Well No. MW-1 Time Started 12:32

Time (hr)	Gallons (cum.)	Temp. (F)	pH	Conduct. (micromoh)	Turbidity (NTU)
12:32	Start purging MW-1				
12:35	0	63.4	5.03	1.44	>200
12:43	5	62.6	5.16	1.43	43.9
12:48	10	61.3	5.35	1.43	28.3
Pump Repair					
13:12	15	60.3	5.51	1.44	24.6
13:16	20	60.4	5.80	1.47	23.4
13:21	25	60.5	5.82	1.46	22.6
13:25	30	60.9	5.80	1.47	20.4
13:29	35	60.8	5.79	1.47	20.6
13:33	40	60.7	5.79	1.46	20.5
	Stop purging MW-1				

Notes:

Well diameter (inches) :	4"
Depth to Bottom (feet) :	19.40
Depth to Water - initial (feet) :	6.34
Depth to Water - final (feet) :	6.35
% recovery :	99.8%
Time Sampled :	16.05
Gallons per Well Casing Volume :	8.53
Gallons Purged :	40
Well Casing Volumes Purged :	4.69
Approximate Pumping Rate (gpm) :	0.68

RESNA

WELL PURGE DATA SHEET

Project Name: Texaco Alameda Job No. 61006.02

Date: February 19, 1992 Page 1 of 1

Well No. MW-2 Time Started 13:40

Time (hr)	Gallons (cum.)	Temp. (F)	pH	Conduct. (micromoh)	Turbidity (NTU)
13:40	Start purging MW-2				
13:43	0	61.2	6.34	1.03	21.4
13:47	5	61.5	6.75	1.01	20.4
13:51	10	61.3	6.80	0.95	23.4
13:55	15	61.6	7.12	0.84	27.4
13:59	20	61.8	7.09	0.82	30.8
14:04	25	61.7	7.07	0.77	30.6
14:10	30	61.6	7.08	0.79	30.9
14:15	35	61.5	7.07	0.80	30.7
14:19	40	61.5	7.07	0.79	30.8
	Stop purging MW-2				

Notes:

Well diameter (inches)	:	4"
Depth to Bottom (feet)	:	19.45
Depth to Water - initial (feet)	:	6.96
Depth to Water - final (feet)	:	6.97
% recovery	:	99.8%
Time Sampled	:	16:15
Gallons per Well Casing Volume	:	8.14
Gallons Purged	:	40
Well Casing Volumes Purged	:	4.90
Approximate Pumping Rate (gpm)	:	1.11

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WELL PURGE DATA SHEET

Project Name: Texaco Alameda Job No. 61006.02

Date: February 19, 1992 Page 1 of 1

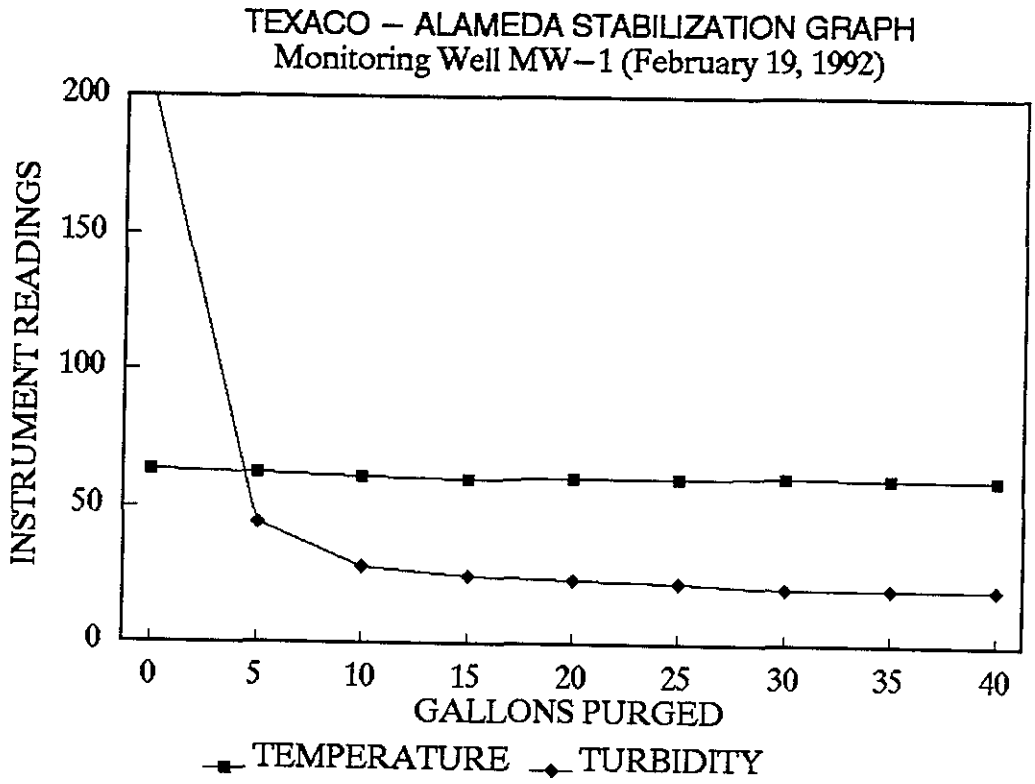
Well No. MW-3 Time Started 14:22

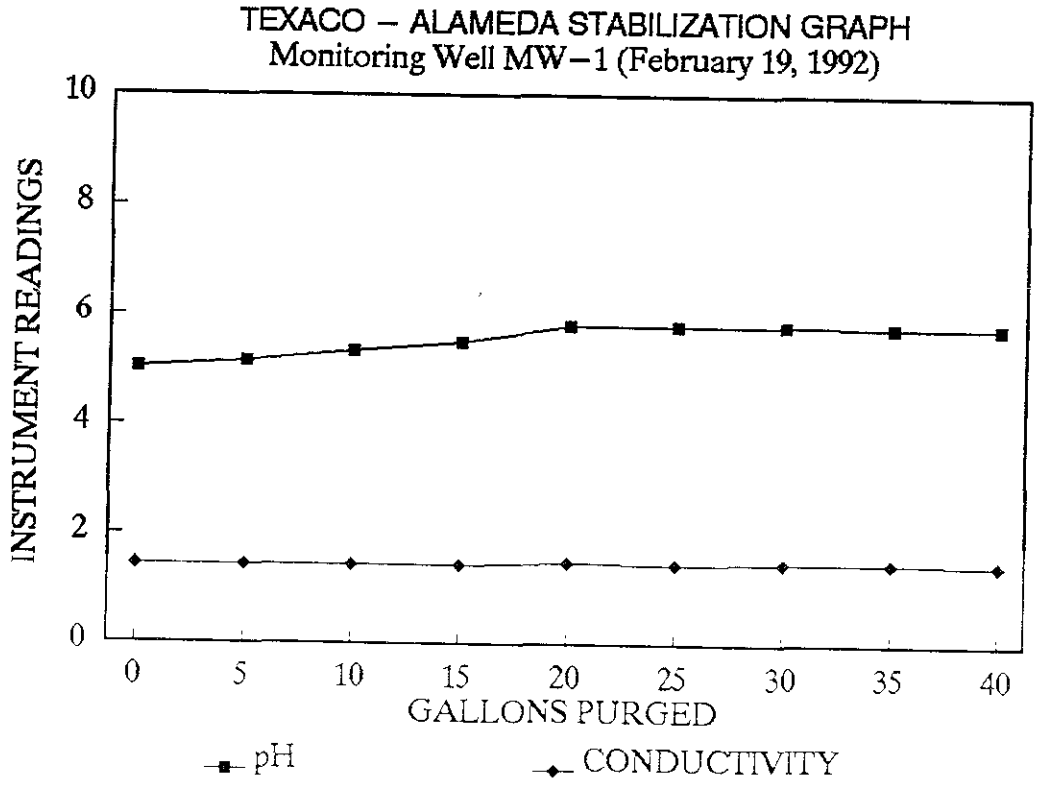
Time (hr)	Gallons (cum.)	Temp. (F)	pH	Conduct. (micromoh)	Turbidity (NTU)
14:22	Start purging MW-3				
14:35	0	60.9	6.63	0.88	83.9
14:39	5	62.4	6.76	0.87	51.0
14:44	10	62.3	6.87	0.89	43.2
14:49	15	62.3	6.79	0.88	39.7
14:53	20	62.1	6.78	0.89	39.4
14:57	25	62.3	6.75	0.88	39.0
15:02	30	62.4	6.76	0.88	38.7
15:07	35	62.2	6.77	0.89	38.9
15:13	40	62.3	6.77	0.87	38.8
	Stop purging MW-3				

Notes:

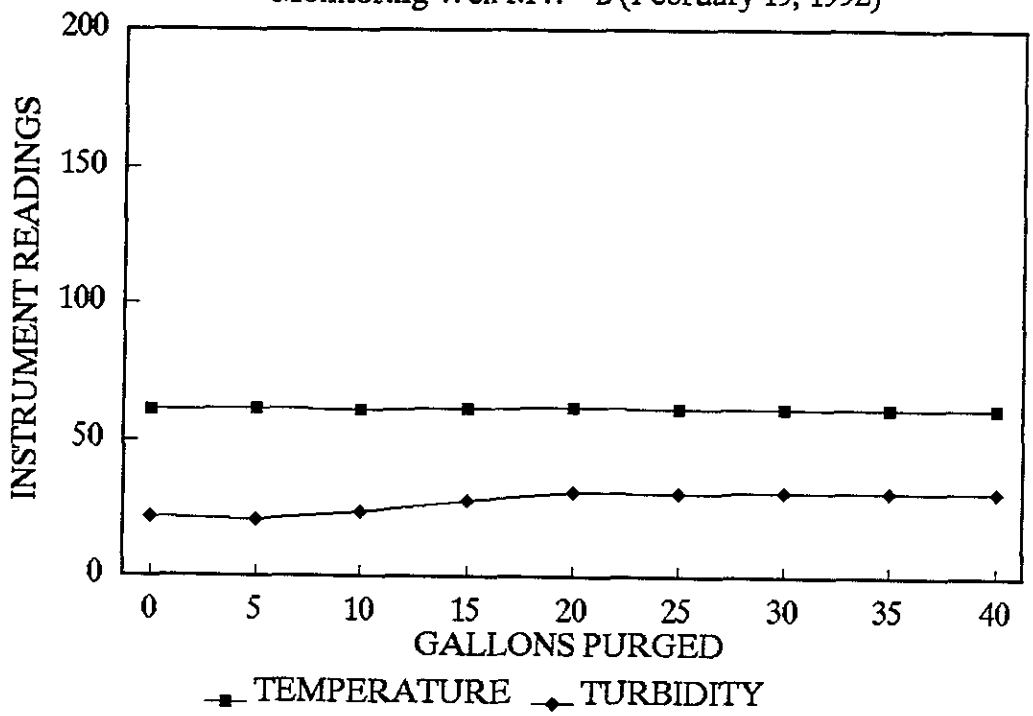
Well diameter (inches) :	4"
Depth to Bottom (feet) :	19.71
Depth to Water - initial (feet) :	6.69
Depth to Water - final (feet) :	6.69
% recovery :	100%
Time Sampled :	16:25
Gallons per Well Casing Volume :	8.50
Gallons Purged :	40
Well Casing Volumes Purged :	4.70
Approximate Pumping Rate (gpm) :	1.05

RESNA

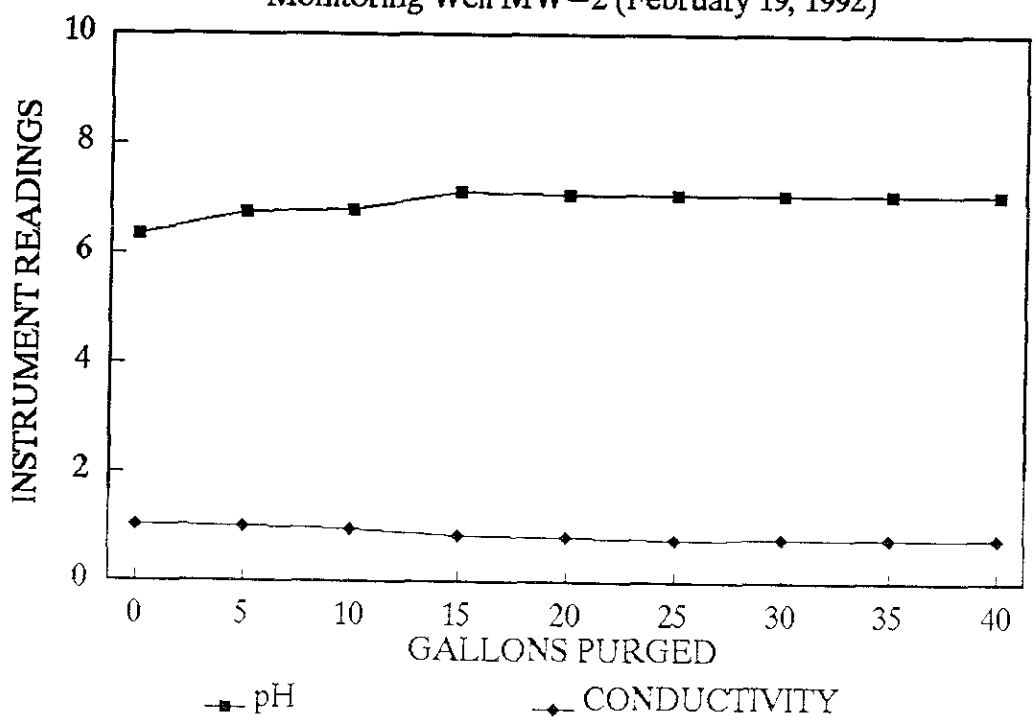

TEXACO – ALAMEDA STABILIZATION GRAPH
Monitoring Well MW–1 (February 19, 1992)
INSTRUMENT READINGS
200
150
100
50
0
0
5
10
15
20
25
30
35
40
GALLONS PURGED
TEMPERATURE
TURBIDITY


TEXACO – ALAMEDA STABILIZATION GRAPH
Monitoring Well MW–1 (February 19, 1992)
INSTRUMENT READINGS
10
8
6
4
2
0
0
5
10
15
20
25
30
35
40
GALLONS PURGED
pH
CONDUCTIVITY

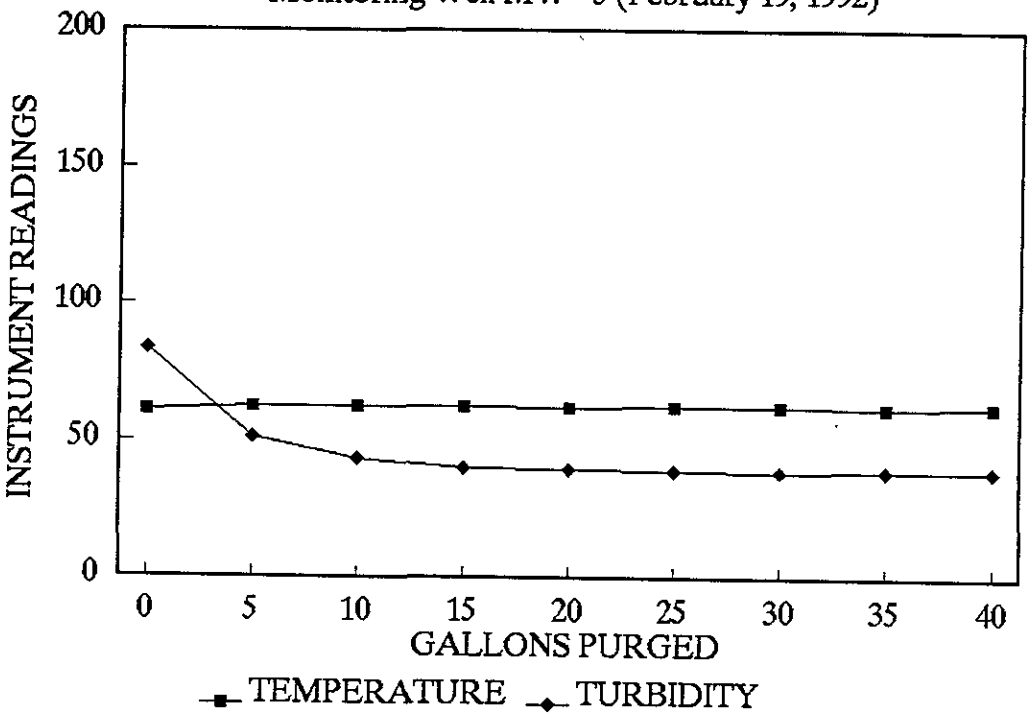
TEXACO – ALAMEDA STABILIZATION GRAPH
Monitoring Well MW–2 (February 19, 1992)



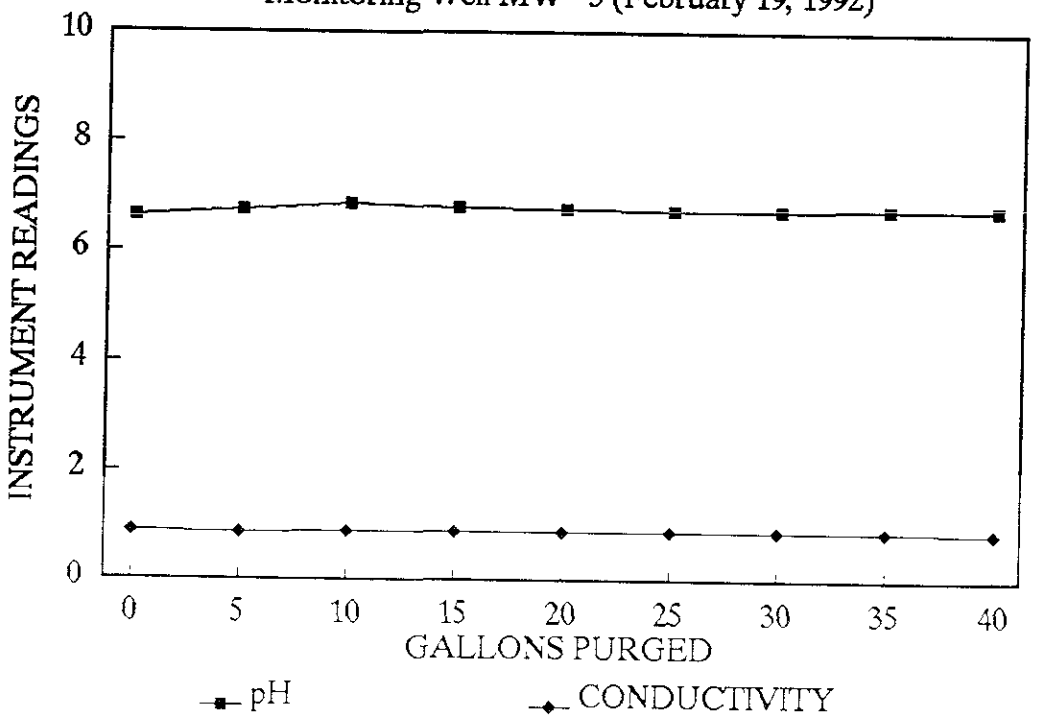
TEXACO – ALAMEDA STABILIZATION GRAPH
Monitoring Well MW–2 (February 19, 1992)



TEXACO – ALAMEDA STABILIZATION GRAPH
Monitoring Well MW–3 (February 19, 1992)



TEXACO – ALAMEDA STABILIZATION GRAPH
Monitoring Well MW–3 (February 19, 1992)



APPENDIX C

CHAIN-OF-CUSTODY RECORDS
AND
LABORATORY ANALYSIS REPORTS

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

CHAIN OF CUSTODY REPORT

CLIENT: RESNA
ADDRESS: 3315 Almaden Expressway #34
PHONE: 408 264 7723
PROJECT NAME/SITE: Texaco, Alameda
SAMPLER: Steve Ryder
DATE: 2-20-92

REPORT TO: Dave Higgins
BILLING TO: RESNA

TURNAROUND TIME: 1 Day - 2-21-92

8 HR.				
24 HR.	✓	48 HR.		72 HR.
5 DAY		10 DAY		15 DAY

PO#/BILLING REFERENCE:

SAMPLE ID#/ STATION	SAMPLE DESCRIPTION	NUMBER OF CONT.	TYPE CONT.	SAMPLING TIME/DATE	ANALYSIS REQUESTED: 8020	ANALYSIS REQUESTED: Extend Hold	REMARKS	SAMPLE NUMBER
	W-6 MW-1DD	1	OD	1:35/2-20-92	✓			2023021
	W-6 MW-1E	3	VOAs	1:30/2-20-92		✓		20
	W-6 MW-2E	3	VOAs	1:40/ "		✓		
	W-6 MW-3E	3	VOAs	1:50/ "		✓		
	W-6 MW-2DD	1	OD	1:45/ "	✓			22
	W-6 MW-3DD	1	OD	1:55/ "	✓			23

RELINQUISHED BY: Stephen Ryder — DATE: 2-20-92 — TIME: 4:10
RELINQUISHED BY: — DATE: — TIME:
RELINQUISHED BY: — DATE: — TIME:

RECEIVED BY:
RECEIVED BY:
RECEIVED IN LAB BY: Sophia Fatigo 2-20 4:10

TRAVEL TIME:
ON SITE TIME:
OTHER:

	YES	NO
WERE SAMPLES:		
PRESERVED ?		
IN GOOD CONDITION?		

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

RECEIVED
FEB 27 1992
RESNA
SAN JOSE

RESNA	Client Project ID:	Texaco, Alameda	Sampled:	Feb 20, 1992
3315 Almaden Expressway, Ste 34	Sample Descript:	Water	Received:	Feb 20, 1992
San Jose, CA 95118	Analysis for:	Dissolved Oxygen		
Attention: Dave Higgins	First Sample #:	202-3021	Analyzed:	Feb 20, 1992
			Reported:	Feb 21, 1992

LABORATORY ANALYSIS FOR: Dissolved Oxygen

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
202-3021	W-6 MW-1DO	0.20	4.0
202-3022	W-6 MW-2DO	0.20	3.2
202-3023	W-6 MW-3DO	0.20	3.4

Analytes reported as N.D. were not present above the stated limit of detection

SEQUOIA ANALYTICAL

Maria Lee
Project Manager

SEQUOIA ANALYTICAL

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(415) 364-9600 • FAX (415) 364-9233

RESNA	Client Project ID:	Texaco, Alameda	Sampled:	Feb 20, 1992
3315 Almaden Expressway, Ste 34	Sample Descript:	Water, W-6 MW-1E	Received:	Feb 20, 1992
San Jose, CA 95118			Analyzed:	Feb 21, 1992
Attention: Dave Higgins	Lab Number:	202-3020	Reported:	Feb 21, 1992

LABORATORY ANALYSIS

Analyte	Detection Limit mg/L	Sample Results mg/L
Ethylene Glycol	10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection

SEQUOIA ANALYTICAL

Maria Lee
Project Manager

2023021 APG <2>

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

RESNA
3315 Almaden Expressway, Ste 34
San Jose, CA 95118
Attention: Dave Higgins

Client Project ID: Texaco, Alameda
QC Sample Group: 202-3020
Reported: Feb 21, 1992

QUALITY CONTROL DATA REPORT

ANALYTE
Ethylene Glycol

Method:	Sequoia
Analyst:	L. Haar
Reporting Units:	mg/L
Date Analyzed:	Feb 21, 1992
QC Sample #:	BLK022192
Sample Conc.:	N.D.
Spike Conc. Added:	100
Conc. Matrix Spike:	110
Matrix Spike % Recovery:	110
Conc. Matrix Spike Dup.:	100
Matrix Spike Duplicate % Recovery:	100
Relative % Difference:	9.5

SEQUOIA ANALYTICAL

Maria Lee
Project Manager

% Recovery	$\frac{\text{Conc of M S - Conc of Sample}}{\text{Spike Conc Added}}$	x 100
Relative % Difference	$\frac{\text{Conc of M S - Conc of M S D}}{(\text{Conc of M S + Conc of M S D}) / 2}$	x 100

RESNA

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

MAR 2 - 1992 094654

PROJECT NO	PROJECT NAME/SITE
6100.01	1127 Lincoln Ave. Texaco / Alameda

SAMPLERS (SIGN) (PRINT) Steve Rapic

SAMPLE IDENTIFICATION	DATE	TIME	COMP	GRAB	PRES. USED	ICED	NO. CONTAINERS	SAMPLE TYPE	BTEX (602/8020)	TPHg (8015)	TPHd (8015)	TOG 418.1/5520	601/8010	624/8240	625/8270	Metals				REMARKS
W-6 MW-1R	2-20-92	2:00			HCl	✓	1	W	✓	✓										
W-6 MW-1		2:05					3		✓	✓										
W-6 MW-2R		2:10					1									✓				
W-6 MW-2		2:15					3		✓	✓										
W-6 MW-3R		2:20					1									✓				
W-6 MW-3		2:25					3		✓	✓										

ANALYSIS REQUESTED

P.O. #:

RELINQUISHED BY	DATE	TIME	RECEIVED BY:
	2-20	3:15	
RELINQUISHED BY	DATE	TIME	RECEIVED BY:
RELINQUISHED BY	DATE	TIME	RECEIVED BY:
RELINQUISHED BY	DATE 2/20/92	TIME 3:15	RECEIVED BY LABORATORY: Anthony Enciso

LABORATORY: RESNA ENVIRONMENTAL LABORATORY
42501 Albrae St.
Fremont, CA 94538
Tel # (510) 651-1906
Fax # (510) 651-6754

REQUESTED TURNAROUND TIME: 2 wks.

RECEIPT CONDITION: Gold

PLEASE SEND RESULTS TO:

PROJECT MANAGER: D. Higgins

Environmental Laboratories

RESNA
Working to Restore Nature

42501 Albrae Street
Fremont, CA 94538
Phone: (510) 623-0775
(800) 247-5223
FAX: (510) 651-8754

ANALYSIS REPORT

1020lab.frm

Attention:	Mr. Dave Higgins	Date Sampled:	02-20-92
	RESNA/Applied GeoSystems	Date Received:	02-20-92
	3315 Almaden Expressway	BTEX Analyzed:	02-20-92
	San Jose, CA 95811	TPHg Analyzed:	02-20-92
Project:	AGS 61006.01	TPHd Analyzed:	NR
		Matrix:	Water

	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPHg	TPHd
	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit:	0.5	0.5	0.5	0.5	50	100
SAMPLE Laboratory Identification						
W-6-MW-1R W1202406	ND	ND	ND	ND	ND	NR
W-6-MW1 W1202339	14	14	2.1	9.9	440	NR
W-6-MW2 W1202409	57	5.6	9.1	75	2100	NR
W-6-MW3 W1202411	ND	ND	2.0	72	990	NR

ppb = parts per billion = µg/L = micrograms per liter.
ND = Not detected. Compound(s) may be present at concentrations below the detection limit.
NR = Analysis not requested.

ANALYTICAL PROCEDURES

BTEX-- Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction using EPA Method 5030 followed by analysis using EPA Method 8020/602, which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID) and a flame-ionization detector (FID) in series

TPHg--Total petroleum hydrocarbons as gasoline (low-to-medium boiling points) are measured by extraction using EPA Method 5030, followed by analysis using modified EPA Method 8015 which utilizes a GC equipped with an FID

TPHd--Total petroleum hydrocarbons as diesel (high boiling points) are measured by extraction using EPA Method 3550 for soils and EPA Method 3510 for water, followed by modified EPA Method 8015 with direct sample injection into a GC equipped with an FID

Laboratory Representative

February 26, 1992
Date Reported