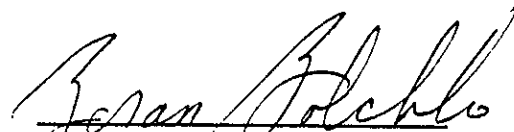




West Coast Office
Suite 370
3250 Ocean Park Blvd.
Santa Monica, CA 90405
Phone: 213-452-5078
FAX: 213-450-5787

1ST QUARTER 1990
GROUND WATER MONITORING RESULTS
[FOURTH QUARTERLY SITE MONITORING PERIOD]
VACATED ARATEX SERVICES - SERVISCO FACILITY
958 28TH STREET, OAKLAND, CALIFORNIA




Zoran Batchko, P.E.
Project Coordinator


Ronald J. Hayes
Director of Technical Operations

1660.06:SERV0509.rpt:ARATEXcmn

Project Background:

Soil samples were collected on May 19, 1988, from the area where a 7,000 gallon gasoline tank and 1,000 gallon gasoline tank had been located. Contamination in varying concentrations was detected in the subgrade and side wall samples. As a result of the contamination present in the soils, the Alameda County Health Care Services Agency (HCA) required the installation of three monitoring wells. The purpose of the wells was to determine the extent of ground water contamination, if any, and the hydraulic gradient of ground water in the area. According to the Alameda County HCA in a correspondence dated May 8, 1989, results of TPH, and 602 chemical analyses for ground water samples from the wells indicated that, "there is a ground water contamination problem associated with this site" and, "quarterly monitoring will be required for a minimum of one year."

Ground water monitoring performed during the 1st Quarter 1990 is the fifth sampling of wells MW-A1, MW-A2, and MW-A3 since these wells were installed. Four quarters of chemical analytical data have been collected since initial sampling and HCA's May 8, 1989, letter. The HCA will re-evaluate this site this quarter.

Activities Conducted this Quarter:

Well Installation

Three additional ground water monitoring wells were permitted and installed and three borings were drilled at the site on March 5th and 6th, 1990. Documentation of well installation and related field activities is described in the Supplementary Subsurface Investigation (SSI) Report which is being submitted separately from this report. A site location map and investigation plan are presented in Attachment 1 for reference.

Ground Water Monitoring

Ground water monitoring field activities were conducted on March 21 and 22, 1990. Water level measurements were taken on March 21, 1990, in the six wells (Table 1). An interface probe was used

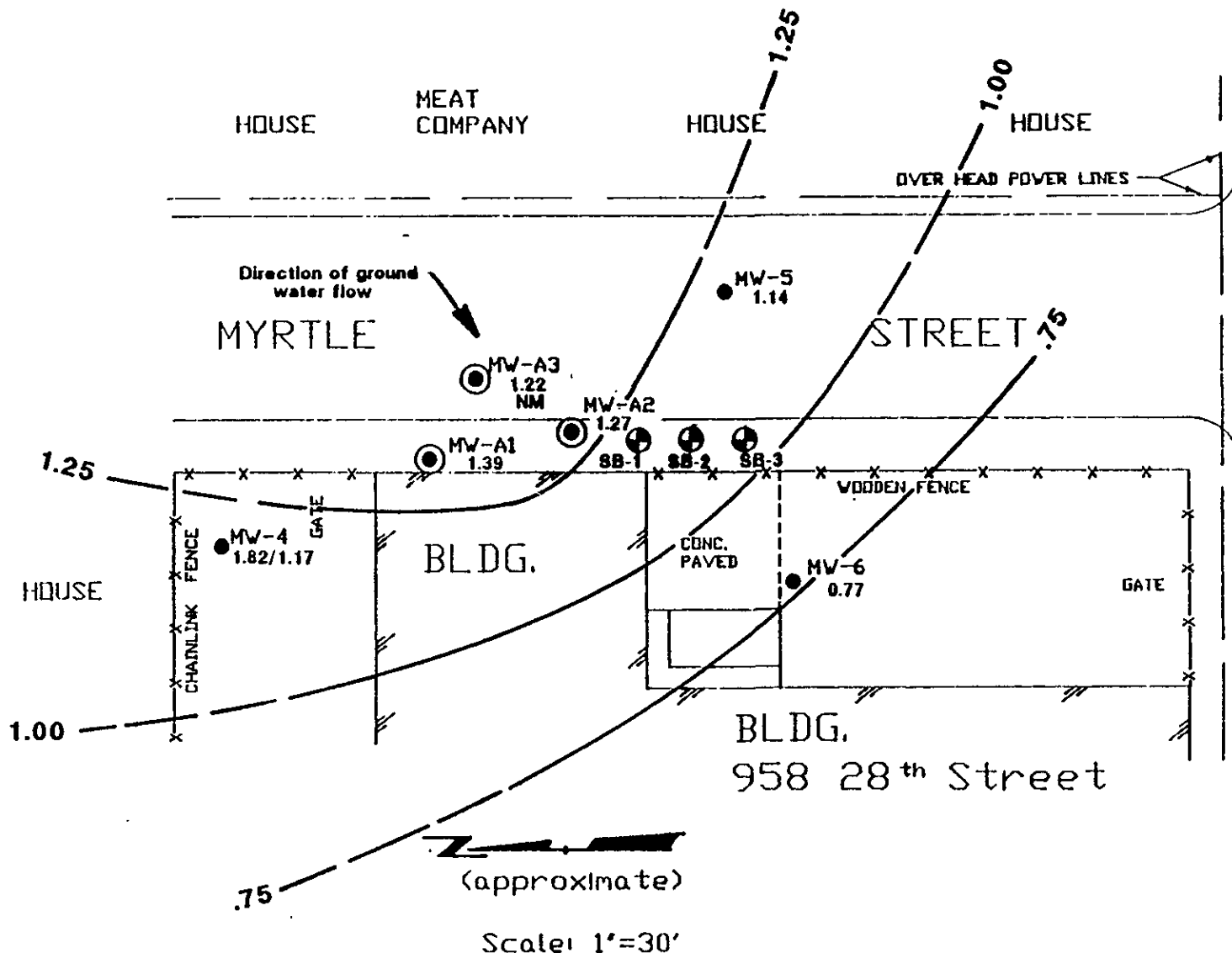
TABLE 1
 WATER TABLE ELEVATIONS
 MARCH 21, 1990

<u>Well ID</u>	<u>Top of Casing Elevation(ft)¹</u>	<u>Depth (ft) To Water</u>	<u>Depth (ft) To HC Product</u>	<u>Top of Water Table Elevation (ft)</u>	<u>Top of Liquid Elevation (ft)</u>	<u>FP Thickness (ft)</u>
MW-A1	15.03	13.64	ND	1.39	1.39	0
MW-A2	14.40	13.13	ND	1.27	1.27	0
MW-A3	14.58	13.26	ND	1.22	1.22	0
MW-4 ²	15.65	14.48	13.83	1.17	1.82	.65
MW-5	14.40	13.26	ND	1.14	1.14	0
MW-6	14.46	13.69	ND	0.77	0.77	0

NOTE:

1. Reference elevation is to site standard and not referenced to mean sea level.
2. Free floating hydrocarbon product = (FP) was detected in MW-4.

ND = Not detected.



NOTE:

- Free product present in MW-4; top of liquid / top of water elevation listed for MW-4; ground water structure modeled at uncorrected top of water elevation
- Field activities 3/21/90 to 3/22/90.
- Contours dashed where uncertain.

†# NM = Not Modeled

28

LEGEND:

- = Soil borings by RMT March 1990
- ⊙ = Ground water monitoring wells installed by IT corp. February 1989.
- = Ground water monitoring wells installed by RMT March 1990.

**Ground Water Gradient Map
Former Servisco Facility
(Modeled at Top of Water Elevation)**

RMT <small>INC.</small>	Down by: RAS
	Date: MARCH 28, 1990
	Proj # 1660.05/06

FIGURE 1

for the measurements. The ground water contour map shown on Figure 1 was constructed from this data. Interpretations of the data follows.

The water table elevation for MW-A3 may be anomalous and was not modeled on Figure 1. This could be the result of a difference in the well screen interval compared with the other five wells on the site. Newly installed well, MW-4, had .65 feet of free [floating hydrocarbon] product (FP). Floating product was not detected in any of the five other site wells. The uncorrected top of water elevation (versus. top of FP elevation) was used in constructing the ground water contours shown on Figure 1.

The local direction of southwesterly ground water flow shown on this map is consistent with the regional flow direction toward the bay, but not consistent with previous mapping. The change in direction may be a function of more well control points, seasonal changes in ground water flow direction or changes associated with local precipitation or artificial infiltration. [The direction of ground water flow was verified during the supplementary subsurface investigation's ground water measurements.]

Water levels were measured in all six wells on March 21, 1990. Chemical sample activities were performed for MW-A1, MW-A2, and MW-A3 on the 21st. Wells MW-4, MW-5, and MW-6 were sampled for the first time on the 22nd.

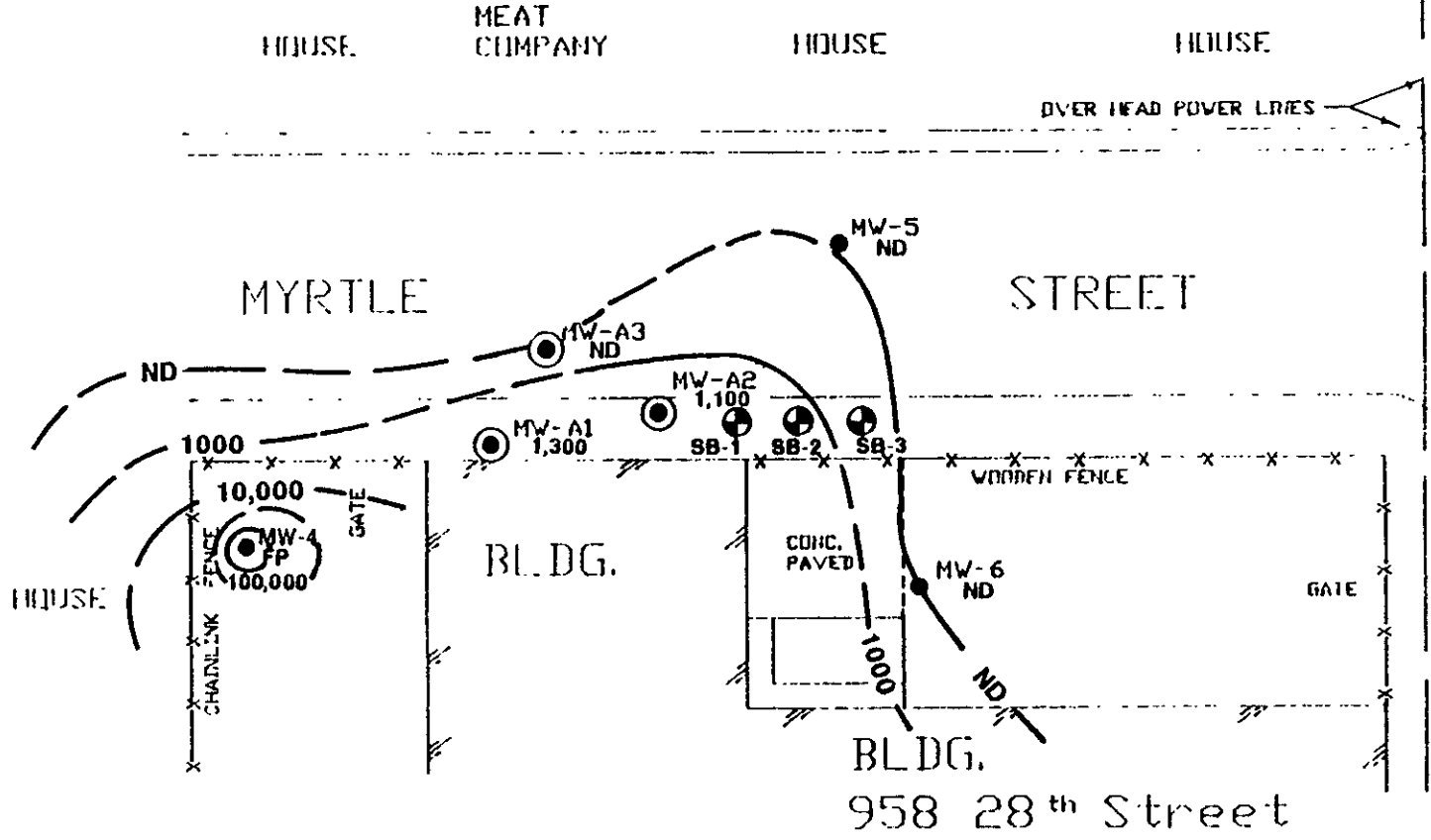
EPA SW846 protocols were followed for sample collection, handling and transport. At least three casing standing volumes of water were purged from the wells before sampling: about 55 gallons from each of the 4-inch wells and 25-gallons from the 2-inch well (MW-4). The water was placed in drums and temporarily stored on-site until it was removed by the ROMIC Corp. on April 30, 1990.

Thermo Analytical Inc. (TMA) of Richmond, California, performed the analytical work. TMA is a State of California DOHS certified laboratory. Laboratory analysis results, Chain of Custody forms, and Uniform Hazardous Waste Manifest are presented in Attachment 2.

Analysis/Interpretation of Chemical Data:

Figures 2 and 3 are maps of dissolved TPH and dissolved benzene concentrations respectively, for the March 1990 ground water monitoring. Tables 2a through 2f summarize the chemical analyses results in each

**MAP OF DISSOLVED
TPH CONCENTRATION
IN GROUND WATER
3/21/90 TO 3/22/90**



NOTE:

- Concentrations in ug/l
- Method detection limits = 500 ug/l
- Free Product detected in MW-4
- Contours dashed where uncertain.

Legend:

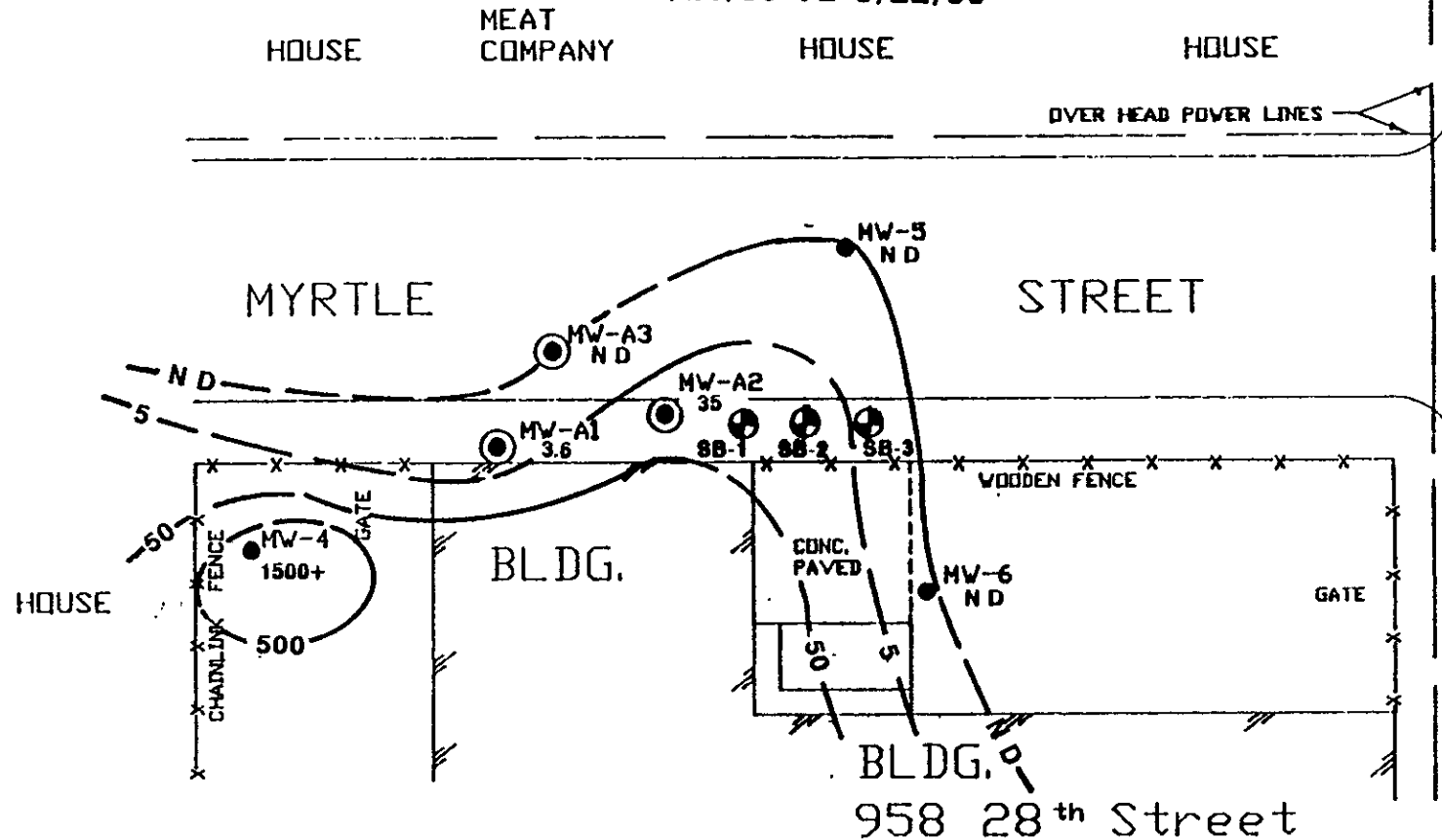
- ⊕ = Soil borings by RMT March 1990
- ⊙ = Ground water monitoring wells installed by IT corp. February 1989.
- = Ground water monitoring wells installed by RMT; March 1990.

Former Servisco Facility

RMT ^{INC}	Drawn by RAS
	Date MARCH 28, 1990
	Proj # 1660.05/06

FIGURE 2

**MAP OF DISSOLVED
BENZENE CONCENTRATION
IN GROUND WATER
3/21/90 TO 3/22/90**



Scale: 1"=30'

Former Servisco Facility

STREET

Note:

- Concentration in ug/l
- Method detection limit .2 ug/l
- Free product was detected in MW-4; concentration represents minimum concentration present.
- Contours dashed where uncertain.

28th

Legend:

- = Soil borings by RMT March 1990
- = Ground water monitoring wells installed by IT corp February 1989.
- = Ground water monitoring wells installed by RMT March 1990.

RMT ^{INC}	Drawn by: RAS
	Date: MARCH 28, 1990
	Proj # 1660.05/06

FIGURE 3

TABLE 2a

**SUMMARY OF LABORATORY RESULTS¹ ON GROUND WATER
ARATEX SERVISCO SITE, 958 28TH STREET, OAKLAND, CALIFORNIA**

EPA Test Method	Parameter	MW-A1					State DOHS DWAL's or Requirements ³
		03/08/89 ¹	05/31/89 ¹	09/13/89 ¹	12/05/89 ¹	03/21/90 ¹	
8015M	Low Boiling Hydrocarbons (Gasoline)	7,200	5,800	2,700	500	1,300	Remove Free Product
8020	Benzene	120	250	16	2.1	3.6	1.0
	Toluene	150	57	12	(1)	N.D.	100
	Ethylbenzene	60	11	8.9	1.2	4.7	680
	Xylenes	2,100	210	37	10	24.3	1,750
8015M	High Boiling Hydrocarbons (Diesel)	12,000 ²	5,070 ²	1,000 ²	N.D.	N.D.	Remove Free Product

1. All concentrations in $\mu\text{g/l}$ = ppb.

2. Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline.

3. DWAL = Drinking Water Action Levels Recommended by State DOHS (6/89) in $\mu\text{g/l}$.

NOTE:

N.D. = Not detected at laboratory detection limits. Method detection limits for the 3/89 to 12/89 samples are: TPH = 500 $\mu\text{g/l}$, BTEX = .3 $\mu\text{g/l}$. Method detection limits of the 3/21/90 samples are: TPH = 500 $\mu\text{g/l}$ and BTEX = .2, .2, .2, and 1.0 $\mu\text{g/l}$, respectively.

TABLE 2b

**SUMMARY OF LABORATORY RESULTS¹ ON GROUND WATER
ARATEX SERVISCO SITE, 958 28TH STREET, OAKLAND, CALIFORNIA**

EPA Test Method	Parameter	MW-A2					State DOHS DWAL's or Requirements ³
		03/08/89 ¹	05/31/89 ¹	09/13/89 ¹	12/05/89 ¹	03/21/90 ¹	
8015M	Low Boiling Hydrocarbons (Gasoline)	5,200	N.D.	1,900	3,500	1,100	Remove Free Product
8020	Benzene	380	150	56	63	35	1.0
	Toluene	200	4	4.4	10	2.4	100
	Ethylbenzene	N.D.	N.D.	4.8	21	N.D.	680
	Xylenes	700	10	11	2.9	18.9	1,750
8015M	High Boiling Hydrocarbons (Diesel)	7,700 ²	N.D.	600 ²	N.D.	N.D.	Remove Free Product

-
- All concentrations in $\mu\text{g/l}$ = ppb.
 - Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline.
 - DWAL = Drinking Water Action Levels Recommended by State DOHS (6/89) in $\mu\text{g/l}$.

NOTE:

N.D. = Not detected at laboratory detection limits. Method detection limits for the 3/89 to 12/89 samples are: TPH = 500 $\mu\text{g/l}$, BTEX = .3 $\mu\text{g/l}$. Method detection limits of the 3/21/90 samples are: TPH = 500 $\mu\text{g/l}$ and BTEX = .2, .2, .2, and 1.0 $\mu\text{g/l}$, respectively.

TABLE 2c

**SUMMARY OF LABORATORY RESULTS¹ ON GROUND WATER
ARATEX SERVISCO SITE, 958 28TH STREET, OAKLAND, CALIFORNIA**

EPA Test Method	Parameter	MW-A3					State DOHS DWAL's or Requirements ³
		03/08/89 ¹	05/31/89 ¹	09/13/89 ¹	12/05/89 ¹	03/21/90 ¹	
8015M	Low Boiling Hydrocarbons (Gasoline)	N.D.	N.D.	N.D.	N.D.	N.D.	Remove Free Product
8020	Benzene	N.D.	N.D.	N.D.	N.D.	N.D.	1.0
	Toluene	N.D.	N.D.	N.D.	N.D.	N.D.	100
	Ethylbenzene	N.D.	N.D.	N.D.	N.D.	N.D.	680
	Xylenes	N.D.	N.D.	N.D.	N.D.	N.D.	1,750
8015M	High Boiling Hydrocarbons (Diesel)	N.D.	930 ²	N.D.	N.D.	N.D.	Remove Free Product

1. All concentrations in $\mu\text{g/l}$ = ppb.
2. Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline.
3. DWAL = Drinking Water Action Levels Recommended by State DOHS (6/89) in $\mu\text{g/l}$.

NOTE:

N.D. = Not detected at laboratory detection limits. Method detection limits for the 3/89 to 12/89 samples are: TPH = 500 $\mu\text{g/l}$, BTEX = .3 $\mu\text{g/l}$. Method detection limits of the 3/21/90 samples are: TPH = 500 $\mu\text{g/l}$ and BTEX = .2, .2, .2, and 1.0 $\mu\text{g/l}$, respectively.

TABLE 2d

**SUMMARY OF LABORATORY RESULTS¹ ON GROUND WATER
ARATEX SERVISCO SITE, 958 28TH STREET, OAKLAND, CALIFORNIA**

EPA Test Method	Parameter	MW-4					State DOHS DWAL's or Requirements	
		03/08/89	05/31/89	09/13/89	12/05/89	03/21/90 ¹		
8015M	Low Boiling Hydrocarbons (Gasoline)	NOT DRILLED					Free Product	Remove Free Product
8020	Benzene	NOT DRILLED					Detected ³	1.0
	Toluene	NOT DRILLED					Detected ³	100
	Ethylbenzene	NOT DRILLED					N.D. ⁴	680
	Xylenes	NOT DRILLED					Detected ³	1,750
8015M	High Boiling Hydrocarbons ² (Diesel)	NOT DRILLED					N.D.	Remove Free Product

1. Dissolved concentrations from samples collected after free product was removed. Reported values by the analytical laboratory represent minimum concentration values since free product was detected. Reported values are in $\mu\text{g/l}$ or ppb as follows: TPH = 20,000; BTEX = 1,500, 17, not quantified at method detection limits, 2020 respectively.
2. Free product concentrations reported were as follows TPH = 37,500 mg/l, BTEX in $\mu\text{g/l}$ = 980,000; 240,000; 2,300,000; and 17,400,000.
3. Component detected in both free product sample and dissolved product sample.
4. Component not detected at method detection limits in dissolved sample analysis but present in free product sample.

NOTE:

N.D. = Not detected at method detection limits. FP sample method detection limits on 3/21/90 are: TPH = 500 $\mu\text{g/l}$ and BTEX = 10.0, 10.0, 10.0 and 25.0 $\mu\text{g/l}$; dissolved product method detection limits are TPH = 500 $\mu\text{g/l}$; BTEX = .2, .2, .2 and 1.0 $\mu\text{g/l}$, respectively.

TABLE 2e

SUMMARY OF LABORATORY RESULTS¹ ON GROUND WATER
ARATEX SERVISCO SITE, 958 28TH STREET, OAKLAND, CALIFORNIA

EPA Test Method	Parameter	MW-5					State DOHS DWAL's or Requirements ²	
		03/08/89	05/31/89	09/13/89	12/05/89	03/21/90 ¹		
8015M	Low Boiling Hydrocarbons (Gasoline)	NOT DRILLED					N.D.	Remove Free Product
8020	Benzene	NOT DRILLED					N.D.	1.0
	Toluene	NOT DRILLED					N.D.	100
	Ethylbenzene	NOT DRILLED					N.D.	680
	Xylenes	NOT DRILLED					N.D.	1,750
8015M	High Boiling Hydrocarbons (Diesel)	NOT DRILLED					N.D.	Remove Free Product

1. All concentrations in $\mu\text{g/l}$ = ppb.

2. DWAL = Drinking Water Action Levels Recommended by State DOHS (6/89) in $\mu\text{g/l}$.

NOTE:

N.D. = Not detected at laboratory detection limits. Method detection limits of 3/21/90 samples are:
TPH = 500 $\mu\text{g/l}$ and BTEX = .2, .2, .2, and 1.0 $\mu\text{g/l}$.

TABLE 2f

**SUMMARY OF LABORATORY RESULTS¹ ON GROUND WATER
ARATEX SERVISCO SITE, 958 28TH STREET, OAKLAND, CALIFORNIA**

EPA Test Method	Parameter	MW-6					State DOHS DWAL's or Requirements ²	
		03/08/89	05/31/89	09/13/89	12/05/89	03/21/90 ¹		
8015M	Low Boiling Hydrocarbons (Gasoline)	-----NOT DRILLED-----					N.D.	Remove Free Product
8020	Benzene	-----NOT DRILLED-----					N.D.	1.0
	Toluene	-----NOT DRILLED-----					N.D.	100
	Ethylbenzene	-----NOT DRILLED-----					N.D.	680
	Xylenes	-----NOT DRILLED-----					N.D.	1,750
8015M	High Boiling Hydrocarbons (Diesel)	-----NOT DRILLED-----					N.D.	Remove Free Product.

1. All concentrations in $\mu\text{g/l}$ = ppb.

2. DWAL = Drinking Water Action Levels Recommended by State DOHS (6/89) in $\mu\text{g/l}$.

NOTE:

N.D. = Not detected at laboratory detection limits. Method detection limits of 3/21/90 samples are:
TPH = 500 $\mu\text{g/l}$ and BTEX = .2, .2, .2, and 1.0 $\mu\text{g/l}$.

of the six wells; from this sampling and the four previous samplings. The remainder of this section discusses analytical results for the individual wells.

MW-A1

MW-A1 is situated within the limits of the former 7,000 gallon gasoline tank area. The former tank area is a known point source for soil contamination. Thirty cubic yards of contaminated soil surrounding the former tank was excavated and disposed of by IT Corp. during tank removal activities in 1988.

No free hydrocarbon product was detected in the MW-A1 ground water samples in any monitoring period. Benzene concentrations continue to exceed DOHS's Drinking Water Action Level (DWAL's) of 1 $\mu\text{g/l}$ in all monitoring periods. However, benzene concentrations show a fairly consistent decline since May 31, 1989. Concentrations of ethyl benzene did not exceed the DWAL of 680 $\mu\text{g/l}$ in any monitoring period. DWAL's for toluene (100 $\mu\text{g/l}$) and xylene (1,750 $\mu\text{g/l}$), were exceeded in only the March 8, 1989, sampling. All of these constituents have shown a significant and fairly steady decline in all monitoring periods since the initial sampling.

MW-A2

MW-A2 is southeast of MW-A1 and close to the southern limit of former location of the 7,000 gallon tank. No free product was detected in any monitoring period. Benzene has exceeded the DWAL of 1 $\mu\text{g/l}$ in all monitoring periods but has shown a fairly consistent decline since the initial sampling on March 8, 1989. Toluene has not exceeded it's DWAL of 100 $\mu\text{g/l}$ since March 8, 1989. Ethylbenzene and xylene have not exceeded DWAL's in any monitoring period.

Chemical concentrations of TPH and BTEX in the March 21, 1990, sampling are lower than those from the September 13, 1989 and December 5, 1989 quarterly monitorings. Xylene was present at a very low concentration (18.9 $\mu\text{g/l}$) in the March 21, 1990, sampling. The latest xylene concentration reported was slightly higher than the September 1989 (11 $\mu\text{g/l}$) and December 1989 (2.9 $\mu\text{g/l}$) concentrations

reported. TPH and BTEX concentrations in the most recent sampling round are significantly lower than the first sampling period (March 8, 1989).

The chemical results can probably be explained by contamination remaining in soils. A soil sample collected 14.5 to 15.0 feet (which is close to the top of the water table) contained 4,000 mg/kg of low boiling point hydrocarbons as gasoline, 22 mg/kg benzene, 190 mg/kg toluene, 67 mg/kg ethylbenzene, and 420 mg/kg xylenes. TPH and associated chemicals may be migrating from the soils into the well water through gravity processes and/or may be the result of fluctuating water levels and remobilization of the hydrocarbons within the former capillary fringe zones.

MW-A3

Well MW-3 is located east of the former tank's location and approximately midway between MW-A1 and MW-A2. Except for a sample collected on May 31, 1989, ground water samples from MW-A3 have remained below detection limits for tested hydrocarbons. That sample had 930 $\mu\text{g/l}$ TPH-G. BTEX components were not detected. MW-A3 is located near the excavated area so the one-time presence of contamination is possible, although laboratory error in this sample is possible.

MW-A3 was drilled to 35.5 feet below grade and screened from 24.5 to 34.5 feet below grade. This is slightly deeper than monitoring wells MW-A1 and MW-A2 which are screened from 15 to 25 feet below grade. During this latest (March 21, 1990) monitoring period, MW-A3 had lower water levels and anomalously lower chemical concentrations. Water bearing zones in the open intervals of MW-A3 may not be interconnected locally with water bearing zones in the open intervals of MW-A1 and MW-A2 due to interbedded clays within the stratigraphic column at juxtaposed structural positions. If interbedded clays are areally extensive, it may explain the water quality difference observed between the three closely-spaced wells around the former tank locations.

MW-4

Free floating hydrocarbon product (.65 feet) was present in MW-4. A sample of the floating product obtained at the onset of purging was chemically analyzed by EPA Method 8015 and 602. Lowing boiling point hydrocarbons and BTEX were present. Reported concentrations for BTEX were 980,000; 240,000; 2,300,000; and 17,400,000 $\mu\text{g/l}$, respectively. These concentrations are minimum due to dilution effects of ground water during sampling. Chlorobenzene and dichlorobenzene were not detected at method detection limits of 25,000 $\mu\text{g/l}$. The high levels of volatile component (BTEX) suggest the low boiling hydrocarbon product is not particularly degraded.

After the free product was removed a second sample was collected following well purging and analyzed for dissolved constituents. Respective concentrations reported by the analytic laboratory for TPH-G and BTEX were 37,000 mg/l (as gasoline), 1,500 $\mu\text{g/l}$, 17 $\mu\text{g/l}$, ND (not quantified at detection limits) and 2,020 $\mu\text{g/l}$. Because of mixing during purging and sampling, these concentrations are also likely minimum values. Ethylbenzene was not quantified at method detection limit of 10 $\mu\text{g/l}$. High boiling point hydrocarbons such as diesel were not present at method detection limits of 500 $\mu\text{g/l}$. The dissolved constituents analyses results are consistent with other monitoring results for dissolved constituent during this quarter. Ethylbenzene was detected in the free product sample that was tested; ethylbenzene was not detected in the dissolved constituents ground water sample.

MW-4 was installed about 50 feet northwest of MW-A1 and the former 7,000 gallon tank; it is about 15 feet north of the former 1,000 gallon gasoline tank's location. International Technology Corp.'s tank closure report (IT Corp.; July 5, 1988) noted the absence of hydrocarbon contamination in the area of the 1000 gallon tank. Thus, the presence of TPH and BTEX concentrations are difficult to explain. A reconnaissance of the area upgradient to MW-4 and the site in general was inconclusive regarding potential off site source(s).

MW-5 and MW-6

No TPH nor BTEX were detected at concentrations above their respective method detection limits in MW-5 and MW-6 during the ground water monitoring activities conducted on March 21, 1990. These two locations are interpreted to be outside the influence of the former underground tank areas.

MW-5 and MW-6 will be used as definition of the eastern downgradient limits of the chemical plumes.

ATTACHMENT 1
SITE LOCATION MAP
AND
SITE INVESTIGATION PLAN

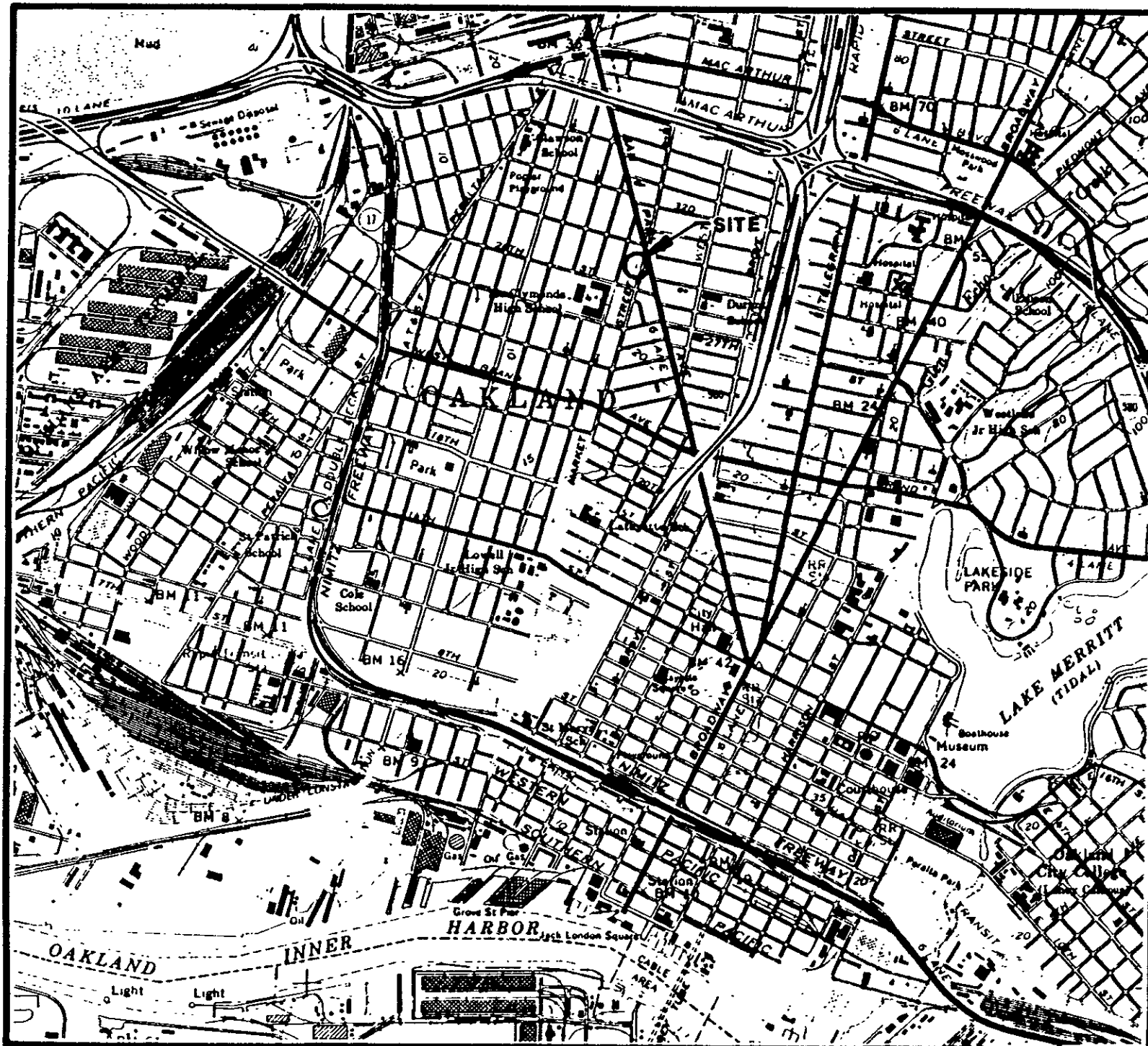


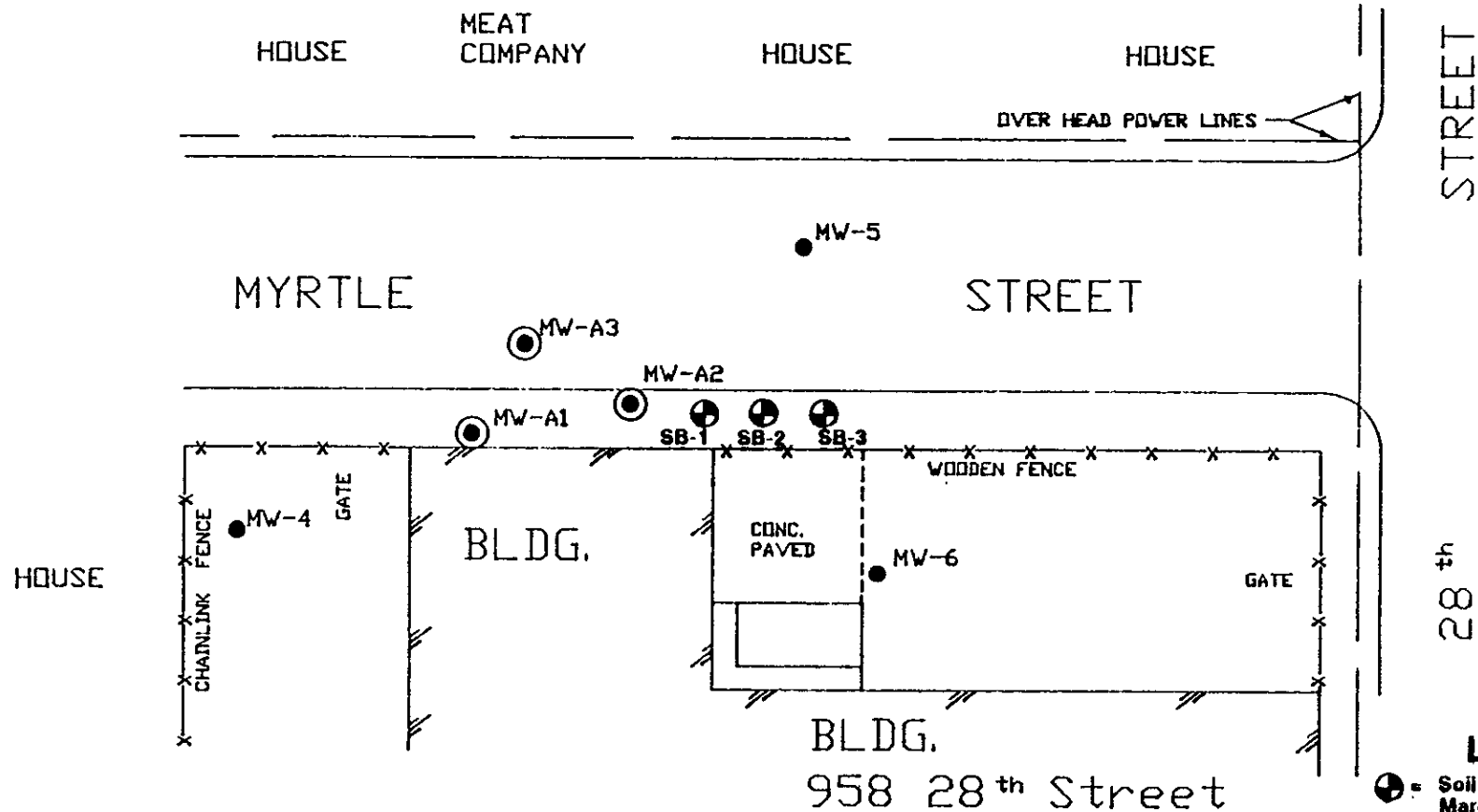
FIGURE 1
LOCATION OF SERVISCO
SITE, OAKLAND, CAL.

SOURCE: USGS OAKLAND
WEST QUADRANGLE MAP,
7.5 MIN. SERIES.



SCALE: 1"=2000'

RMT INC.	DWN. BY: SRC
	DATE: 7/89
	PROJ. #: 1622.01



Scale: 1"=30'

Site Investigation Plan
Former Servisco Facility

- Legend:**
- = Soil borings by RMT March 1990
 - ⊙ = Ground water monitoring wells installed by IT corp February 1989.
 - = Ground water monitoring wells installed by RMT March 1990.

RMT <small>INC.</small>	Dwn by: RAS
	Date: MARCH 28, 1990
	Proj # 1660.05/06

PETROLEUM HYDROCARBONS ANALYSIS RESULTS REPORT

Lab Name: TMA/Norcal
Client: RMT, INCORPORATED
Matrix: Water

Date Received: 3-22-90
Date Analyzed: 3-27-90

Analysis/Method: MODIFIED - 8015

TMA/Norcal ID	Client ID	Gasoline (mg/L)	Detection Limit (mg/L)
6607-6-11	MW-4-A1 ✓	37,500	0.5

Renee Doherty
Analyst

[Signature]
Data Release Authorized By

START

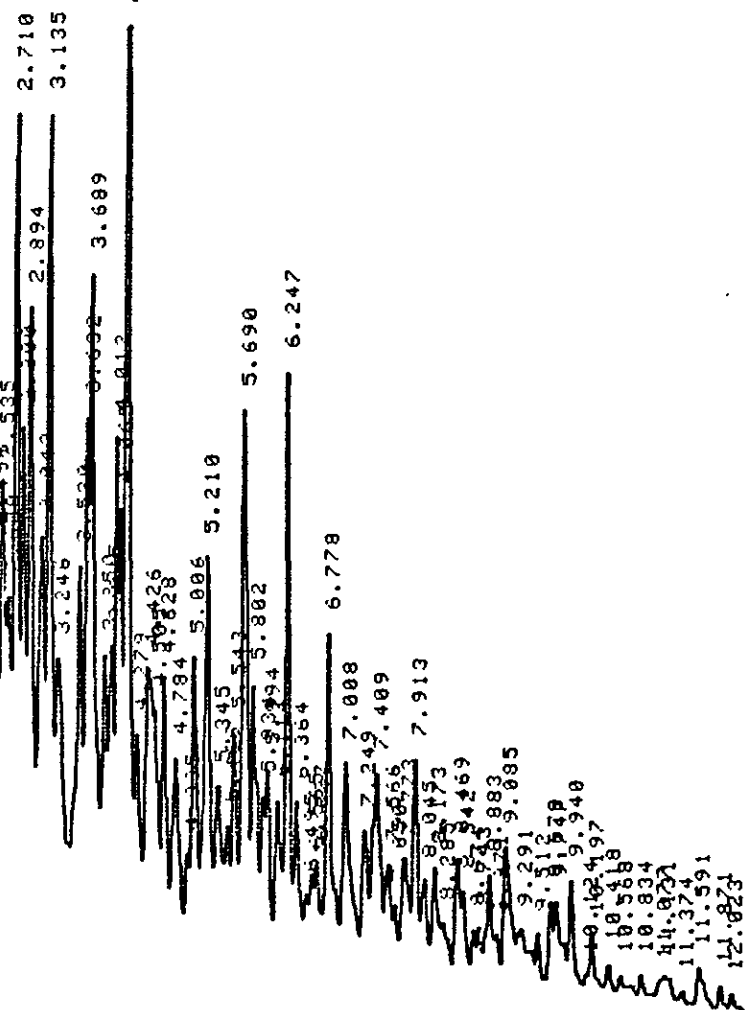
6607-6-11 1/1000

Gasoline⁶

0.555
1.030
1.520
2.289

INSTRUMENT: S
(GC-FID)
COLUMN DB-5
CAPILLARY

INJ VOL: 1ul



12.708
12.914
13.272
13.670

14.820

16.293

17.702

19.040

20.315
21.021
21.390
22.095

STOP

RUN# 2694

MAR 31, 1990 10:37:54

SAMPLE# 27

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.655	1019	PP	.052	.00014
.948	296	PP	.021	.00004
1.030	745880000	SPB	.114	99.74093
1.783	52065	TBY	.086	.00696
1.920	240731	TVV	.077	.03219
2.020	12225	TVV	.026	.00163
2.050	30965	TVP	.051	.00414
2.289	78146	TPV	.065	.01045
2.368	13776	TVV	.054	.00184
2.451	14520	TVV	.053	.00194
2.535	22463	TVV	.055	.00300
2.600	13287	TVV	.057	.00178
2.710	62443	TVV	.058	.00835
2.800	32663	TVV	.058	.00437
2.894	44428	TVV	.056	.00594
3.043	34776	TVV	.078	.00465
3.135	74680	TVV	.063	.00999
3.246	26126	TVP	.090	.00349
3.530	31586	TPV	.065	.00422
3.632	41649	TVV	.057	.00557

3.943	25234	TVV	.078	.00337
4.012	32896	TVV	.046	.00440

RUN # 2694-002

4.065	26238	TVV	.044	.00351
4.137	124634	TVV	.064	.01667
4.279	13735	TVP	.064	.00184
4.426	23391	TPV	.083	.00313
4.505	5406	TVB	.034	.00072
4.628	16196	PP	.051	.00217
4.784	20175	PP	.083	.00270
4.935	4782	PH	.046	.00064
5.006	31747	HH	.072	.00425
5.210	55475	HH	.091	.00742
5.345	17420	HV	.079	.00233
5.466	11051	VV	.071	.00148
5.543	20036	VV	.066	.00279
5.690	74779	VV	.086	.01000
5.802	29713	VV	.073	.00397
5.934	12725	VV	.058	.00170
5.994	14583	VV	.054	.00195
6.114	15966	VV	.074	.00214
6.247	52254	VV	.055	.00699
6.364	15024	VV	.068	.00201
6.495	3611	VV	.054	.00048
6.565	5912	VV	.056	.00079
6.627	7551	VV	.062	.00101
6.778	39932	VV	.077	.00534
7.008	32056	VV	.104	.00429
7.249	16056	VV	.082	.00215
7.409	33814	VV	.113	.00452
7.566	12761	VV	.087	.00171
7.650	4509	VV	.055	.00060
7.773	16894	VV	.103	.00226
7.913	25593	VV	.076	.00342
8.045	11182	VV	.082	.00150
8.173	13026	VV	.081	.00174
8.285	4128	VV	.060	.00055
8.469	12633	PV	.068	.00169
8.542	7514	VV	.058	.00100
8.674	3408	VV	.051	.00046
8.743	4155	VV	.053	.00056
8.883	13196	VV	.079	.00176
8.971	4225	VV	.063	.00056
9.085	23825	VV	.109	.00319
9.291	9505	VV	.113	.00127
9.512	4558	VP	.057	.00061
9.678	7571	PV	.054	.00101
9.747	10587	VV	.075	.00142
9.940	12900	VV	.071	.00173
10.124	1079	VV	.046	.00014
10.197	6263	VV	.068	.00084
10.418	3315	VV	.070	.00044
10.568	1957	VV	.063	.00026
10.834	2363	VV	.062	.00032
11.077	1994	VV	.059	.00027
11.131	2914	VV	.067	.00039
11.374	1715	VP	.079	.00023
11.591	6947	VP	.104	.00093
11.871	2476	PV	.063	.00033

12.914	780	VP	.075	.00010
13.272	1570	PV	.084	.00021

RUN # 2694-003

13.670	1097	BP	.096	.00015
14.820	1469	PV	.077	.00020
16.293	1394	VV	.074	.00019
17.702	1018	BV	.067	.00014
19.040	970	PV	.080	.00013
20.315	1084	PV	.108	.00014
21.390	1570	VV	.257	.00021
22.095	3649	VV	.464	.00049

TOTAL AREA=7.4782E+08
MUL FACTOR=1.0000E+00

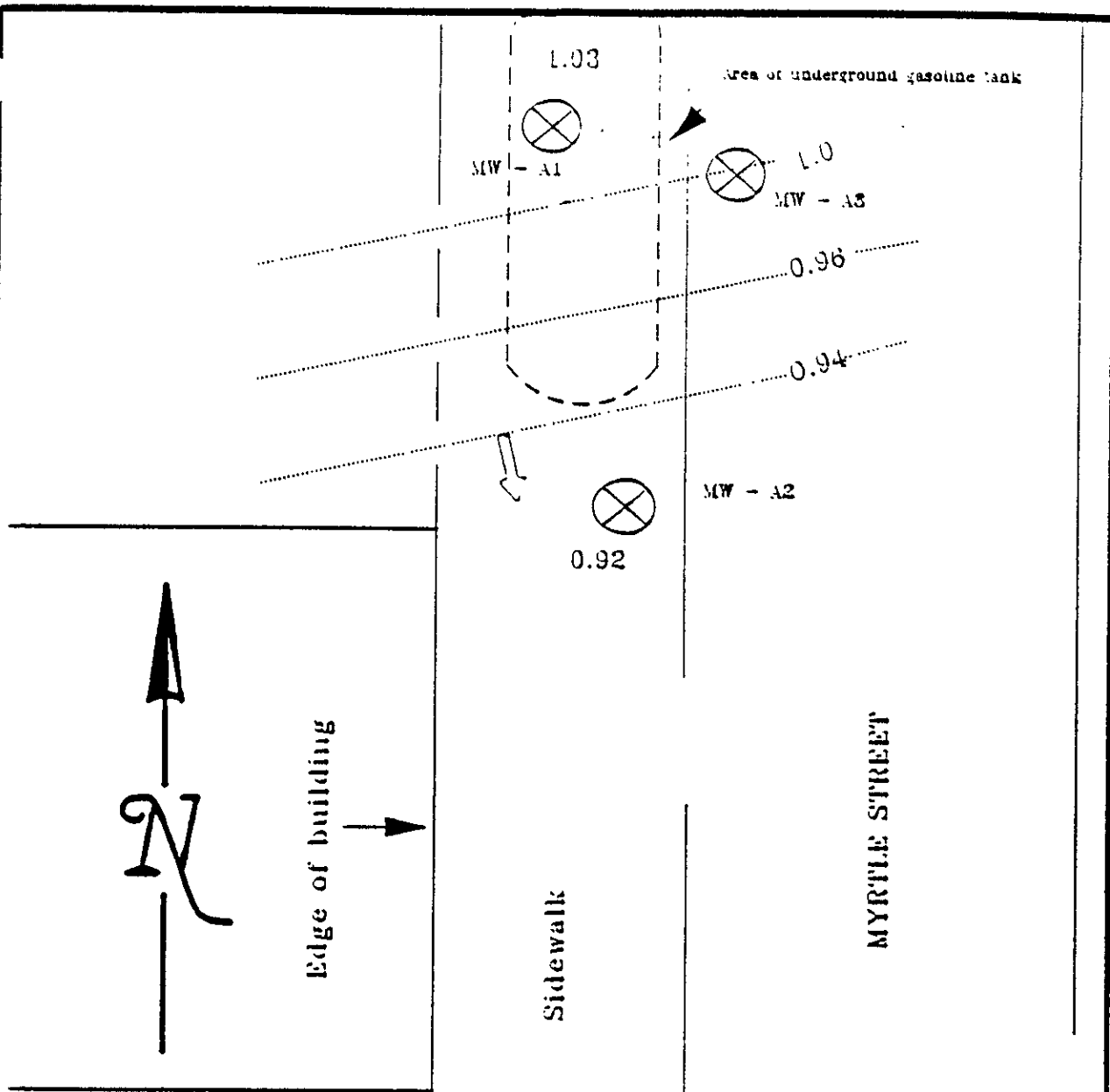
TABLE 1

SUMMARY OF LABORATORY RESULTS ON GROUNDWATER^{1,2}

MARCH 8 AND MAY 31, 1989

Parameter	Sample Point					
	MW-A1		MW-A2		MW-A3	
	3/08/89	5/31/89	3/08/89	5/31/89	3/08/89	5/31/89
Low Boiling Hydrocarbons (Gasoline)	7,200	5,800	5,200	N.D. ⁴	N.D.	N.D.
Benzene	120	250	380	150	10	N.D.
Toluene	150	57	200	4	N.D.	N.D.
Ethylbenzene	60	11	N.D.	N.D.	N.D.	N.D.
Xylenes	2,100	210	700	10	5	N.D.
High Boiling Hydrocarbons ³ (diesel)	12,000	5,070	7,700	N.D.	N.D.	930

1. All concentrations in ug/l.
2. See Appendix A for analytical methods.
3. Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline.
4. See Appendix A for detection limits.



Scale 1" = 12'

- LEGEND —
- 0.94--- Water table surface contour
 - ⊗ MW-A2 Groundwater well
 - ⇒ Direction of groundwater flow

Figure 1. - Direction of groundwater flow on May 31, 1989.

RMT	SERVISCO SITE
	OAKLAND, CA.