

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

ARNOLD PERKINS, DIRECTOR

February 5, 1996

Alameda County CC458
Environmental Protection Division
1131 Harbor Bay Parkway, Room 250
Alameda CA 94502-6577

REMEDIAL ACTION COMPLETION CERTIFICATION (510)

Mr. Robert Robbins
Aramark Services
154 South Main Street
Lodi, WI 53555

Ms. Bea Slater
GSL Properties
599 Loganberry Drive
San Rafael, CA 94903

RE: Former Aratex Services, Inc.
958 28th Street, Oakland, California 94608
STID # 337

Dear Mr. Robbins and Ms. Slater:

This letter confirms the completion of site investigation and remedial action for the three underground storage tanks (500 gallon heating oil, 1000 gallon gasoline, and 7000 gallon gasoline) removed on May 19, 1988 at the above described location. Enclosed is the Case Closure Summary for the referenced site for your records.

Based upon the available information, including the current land use, and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the three underground storage tanks release is required.

This notice is issued pursuant to a regulation contained in Title 23, California Code of Regulations, Division 3, Chapter 16, Section 2721 (e). If a change in the present land use is proposed, the property owner must promptly notify this agency.

Please contact Susan L. Hugo at (510) 567-6780 if you have any questions regarding this matter.

Sincerely,

Jun Makishima, Interim Director

Enclosure

c: Gordon Coleman, Acting Chief, Environmental Protection - files
Kevin Graves, RWQCB
Mike Harper, SWRCB (with enclosure)

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, DIRECTOR

January 8, 1996
STID # 337

DEPARTMENT OF ENVIRONMENTAL HEALTH
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6777

Mr. Robert Robbins
Aramark Services
154 South Main Street
Lodi, WI 53555

Ms. Bea Slater
GSL Properties
599 Loganberry Drive
San Rafael, CA 94903

RE: Case Closure - Former Aratex Services, Inc.
958 28th Street, Oakland, California 94608

Dear Mr. Robbins and Ms. Slater:

The Alameda County Department of Environmental Health, Environmental Protection Division has recently received concurrence from the Regional Water Quality Control Board regarding this office determination that no further action is required concerning the removal of three underground storage tanks (500 gallon heating fuel, 1000 gallon gasoline and 7000 gallon gasoline) at the referenced site.

Please be advised that the eight groundwater monitoring wells (MW-A1, MW-A2, MW-A3, MW-A4, MW-5, MW-6, MW-7 and MW-8) and the recovery well RW-1 at the site must be properly decommissioned before our agency will issue the Remedial Action Completion Certification (closure letter) for the subject site. A report must be submitted documenting the abandonment of the monitoring wells.

Additionally, you will need to notify this office 72 hours in advance of the well abandonment field activities.

If you have any questions concerning this letter, please contact me at (510) 567- 6780.

Sincerely,

A handwritten signature in black ink.

Susan L. Hugo
Senior Hazardous Materials Specialist

c: Jun Makishima, Interim Director, Environmental Health
Gordon Coleman, Acting Chief, Environmental Protection / files
Kevin Graves, San Francisco Bay RWQCB

CASE CLOSURE SUMMARY

Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Agency name: Alameda County-HazMat Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502 Phone: (510) 567-6700
Responsible staff person: Susan Hugo Title: Sr. Hazardous Materials Spec.

II. CASE INFORMATION

Site facility name: Former Aratex Services Inc.
Site facility address: 958 28th Street, Oakland, CA 94608
RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 337
URF filing date: 6/14/88 SWEEPS No: N/A

<u>Responsible Parties:</u>	<u>Addresses:</u>	<u>Phone Numbers:</u>
1. Aramark Services c/o Mr. Robert Robbins	154 South Main Street Lodi, WI 53555	(608) 592-3222
2. GSL Properties c/o Ms. Bea Slater	599 Loganberry Drive San Rafael, CA 94903	(415) 491-0813

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	500 gal	Heating fuel	Removed	5/19/88
2	1000 gal	Gasoline	Removed	5/19/88
3	7000 gal	Gasoline	Removed	5/19/88

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Tanks leaked, holes found in the tanks #1 & #3

Site characterization complete? YES

Date approved by oversight agency: 5/8/89

Monitoring Wells installed? YES Number: Eight (8)

Proper screened interval? YES

Highest GW depth below ground surface: 9.87 feet Lowest depth: 15.65 feet

Flow direction: Generally south southwest

Most sensitive current use: Mixed commercial / light industrial / residential

Leaking Underground Fuel Storage Tank Program

Are drinking water wells affected? NO Aquifer name: NA

Is surface water affected? NO Nearest affected SW name: NA

Off-site beneficial use impacts (addresses/locations): NA

Report(s) on file? YES Where is report(s) filed? Alameda County
 1131 Harbor Bay Parkway
 Alameda, CA 94502-6577

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount</u> <u>(include units)</u>	<u>Action (Treatment</u> <u>of Disposal w/destination)</u>	<u>Date</u>
Tank	1-500 gallon	All USTs were disposed at	5/19/88
	1-1000 gallon	H & H, San Francisco, CA	5/19/88
	1-7000 gallon		5/19/88
Soil	324 yards	BFI Landfill Livermore, CA	4/2/92
	540 yards	Laidlaw Env. Services Buttonwillow, CA	8/4/92
Groundwater	110 gallons	Appropriate Technology	11/1/95
	185 gallons	Chula Vista, CA	1/27/95
	2,500 gallons	Refineries Service Patterson, CA	3/23/92
	220 gallons	Romic Chemical Corp. East Palo Alto, CA	5/8/92
Sludge / water	330 gallons	Romic Chemical Corp. East Palo Alto, CA	5/8/92

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)

Contaminant	Maximum Documented Contaminant Concentrations - Before and After Cleanup			
	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	530	260	** 20,000	440
TPH (Diesel)	98	* 145	12,000	2100
TPH (motor oil)	-	70	-	-
Benzene	4.8	0.026	** 1,500	38
Toluene	21	0.29	200	0.8
Xylene	-	0.051	2100	<0.5
Ethylbenzene	53	0.037	60	2.5

Leaking Underground Storage Fuel Tank program

- * Soil sample collected from MW-4 found TPH diesel in addition to 3,300 ppm TPH gas, 350 ppb benzene, 570 ppb toluene, 1,500 ppb ethylbenzene, 4,600 ppb xylene. However, this contamination is likely from an off-site source and not related to the former tanks.
- ** Groundwater sample collected from MW-4. Free product was also present in this well.

Comments (Depth of Remediation, etc.):

Two underground gasoline storage tanks located on the east side and an underground boiler fuel tank located on the west side were removed from the subject site in 1988. Evidence of a release was identified in the vicinity of the 7,000 gallon gasoline tank and the boiler fuel tank. Holes were present in both tanks. Petroleum hydrocarbon contamination was detected in the soil samples collected following the removal activities.

In February 1989, a preliminary subsurface investigation was conducted which included the installation of three monitoring wells (MW-A1, MW-A2, and MW-A3) in the vicinity of the former 7000 gallon gasoline tank. Groundwater samples collected from the three wells found contamination up 7200 ppb TPH gasoline, 12,000 ppb TPH diesel, 380 ppb benzene, 200 ppb toluene, 60 ppb ethylbenzene, and 2100 ppb xylene.

Additional subsurface investigations were performed from March 1990 through February 1994 to further define the extent of the petroleum hydrocarbon contamination in both soil and groundwater. These field activities included the advancement of fourteen soil borings (SB4 to SB17), the installation of five additional monitoring wells (MW-4, MW-4A, MW-5, MW-6 and MW-7), the abandonment of MW-4, the advancement of eight Geoprobe borings off-site in the northeast direction, and the excavation of contaminated soil in the vicinity of the former boiler fuel tank. The soil borings and the groundwater monitoring wells are located in the vicinity of the former gasoline and boiler fuel tanks. Recovery well (RW-1) is located along the northern property boundary near well MW-4 where the presence of free product was noted. Well MW-4 is upgradient of the former gasoline tanks. The Geoprobe borings are located off-site along the northeast section of the facility.

In February 1994, a soil vapor extraction pilot test (SVE) using well RW-1 was conducted in the northeast section of the site, and monitoring well MW-8 was installed within ten feet of the former boiler fuel tank in the downgradient direction. The result of the SVE pilot test suggested that channeling of airflow in the subsurface may be occurring and that the sandy layer encountered in the Geoprobe borings does not appear to be continuous throughout the northeast section of the site. The petroleum hydrocarbon contamination found in the northeast section of the property appeared to be from off site sources and not related to the former gasoline tanks. In addition, the free product found in MW-4 was not detected in the recovery well.

Leaking Underground Storage Fuel Tank Program

On February 3, 1995, additional subsurface investigation was conducted. Four shallow soil borings (SB-18 to SB-21) were drilled to investigate the presence of free product found in the northeast corner of the property. The current petroleum hydrocarbons in the soil near the former 7000 gallon gasoline tank was also evaluated by drilling three soil borings (SB-23 to SB-25) in areas where significant concentrations of TPH were previously identified. One soil boring (SB-22) was also drilled near the former boiler fuel tank. Free product was not identified in the soil samples collected from the borings SB-23 to SB-25 and low levels of residual petroleum hydrocarbon up to 46 ppm TPH gasoline, 6 ppm TPH diesel, and 70 ppm TPH motor oil were found in the northeast section of the site. With regards to the former gasoline tank and boiler fuel tank areas, no detectable concentration of TPH gasoline, TPH diesel, TPH motor oil and BTEX was found.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? **Undetermined**

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? **Undetermined**

Does corrective action protect public health for current land use? **YES**
Site management requirements: **NA**

Should corrective action be reviewed if land use changes? **YES**
Monitoring wells Decommissioned: **No, pending case closure**

Number Decommissioned: **None** Number Retained: **Eight (8)**
List enforcement actions taken: **NA**

List enforcement actions rescinded: **NA**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Susan L. Hugo Title: Sr. Hazardous Materials Specialist

Signature: *Susan L. Hugo* Date: *1/2/96*

Reviewed by

Name: Barney Chan Title: Hazardous Materials Specialist

Signature: *Barney Che* Date: *1-5-96*

Name: Thomas Peacock Title: Sup. Hazardous Materials Specialist

Signature: *Thomas Peacock* Date: *1-5-96*

Leaking Underground Storage Fuel Tank Program

VI. RWQCB NOTIFICATION

Date Submitted to RB: 1/5/96

RB Response: Approved

RWQCB Staff Name: Kevin Graves

Title: Water Resources Control Engineer

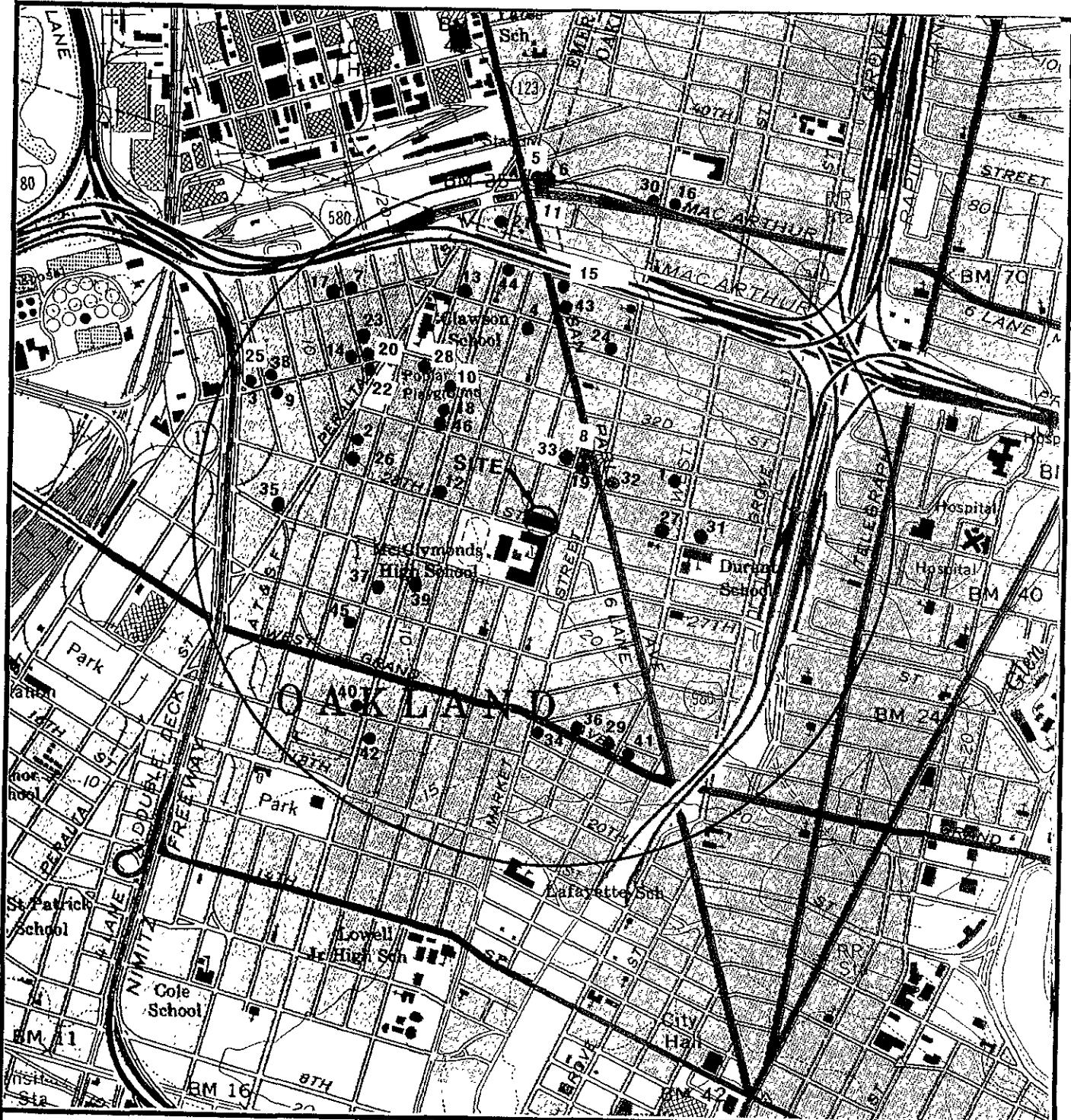
Date:

1/5/96



VII. ADDITIONAL COMMENTS, DATA, ETC.

Based on all the data submitted for the site, the concentrations of TPH in the unsaturated soil underlying the property have significantly decreased since the soil sampling activities in March 1990 and petroleum hydrocarbon contamination and the free product was not identified in the northeast corner of the property. The extent of the petroleum hydrocarbon contamination in the soil appears to be confined in the former tank areas. Aggressive source removal has occurred at this site. The residual levels of contaminants related to the former tanks do not appear to pose a threat to public health and the environment. The plume appears to be stable and the BTEX concentrations are decreasing. The site is currently capped with concrete and asphalt pavings. Therefore, no further work related to the former tanks at the subject site is recommended.



NOTE: BASE MAP TAKEN FROM OAKLAND WEST,
CALIFORNIA USGS 7.5 Min. QUADRANGLE

Legend:

- 1 Location of potential hazardous
material sites as detailed in Appendix A

NORTH
SCALE: 1" = 1,400'

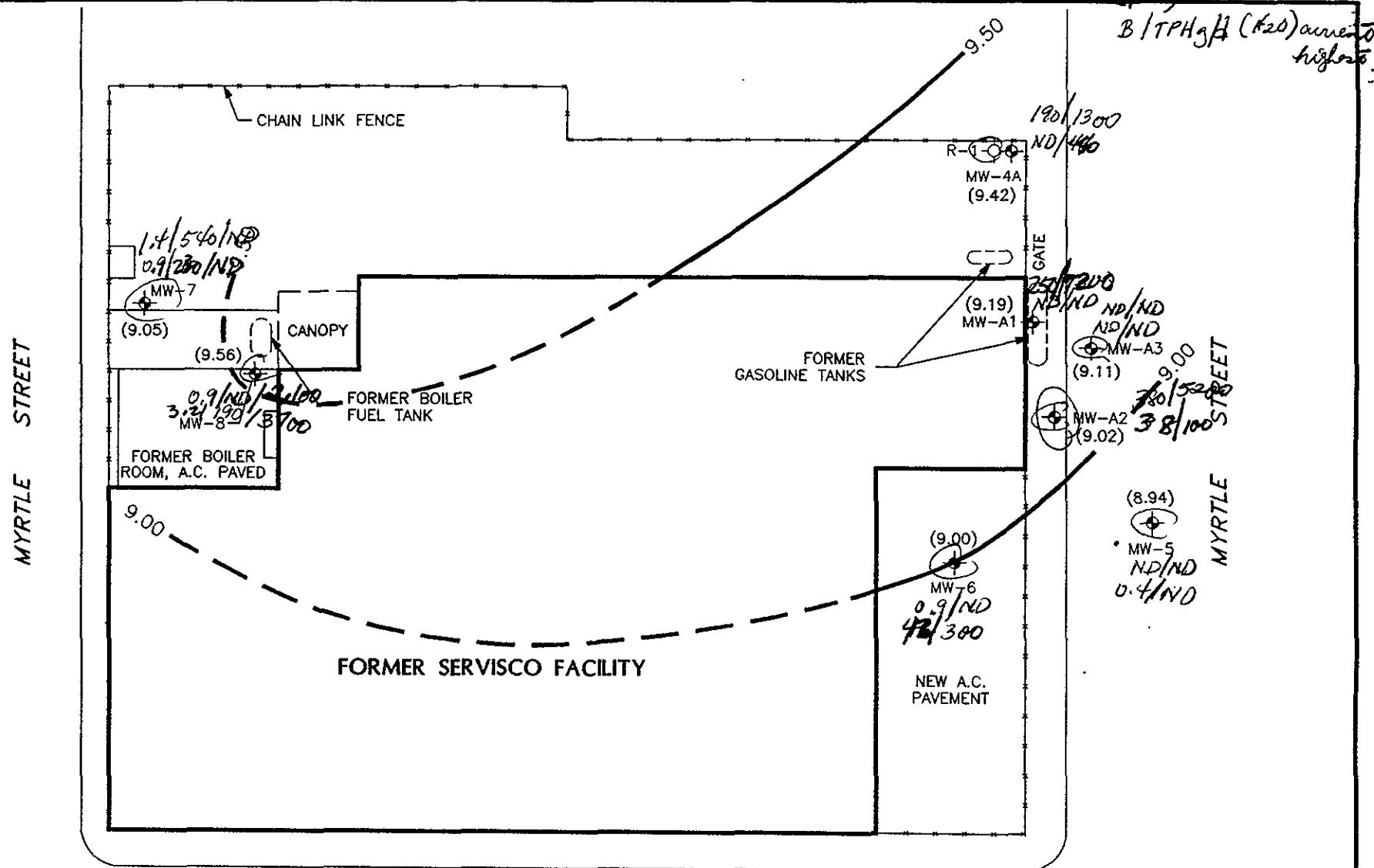
ARATEX - SERVISCO
Locations of Potential
Hazardous Material Sites
Within a 0.6 Mile Radius



DWN. BY: RAS
DATE: AUG., 1992
PROJ.# 12012.11
FILE # 12012118

FIGURE 4

(expt)
B / TPHgH (K20) current
highest



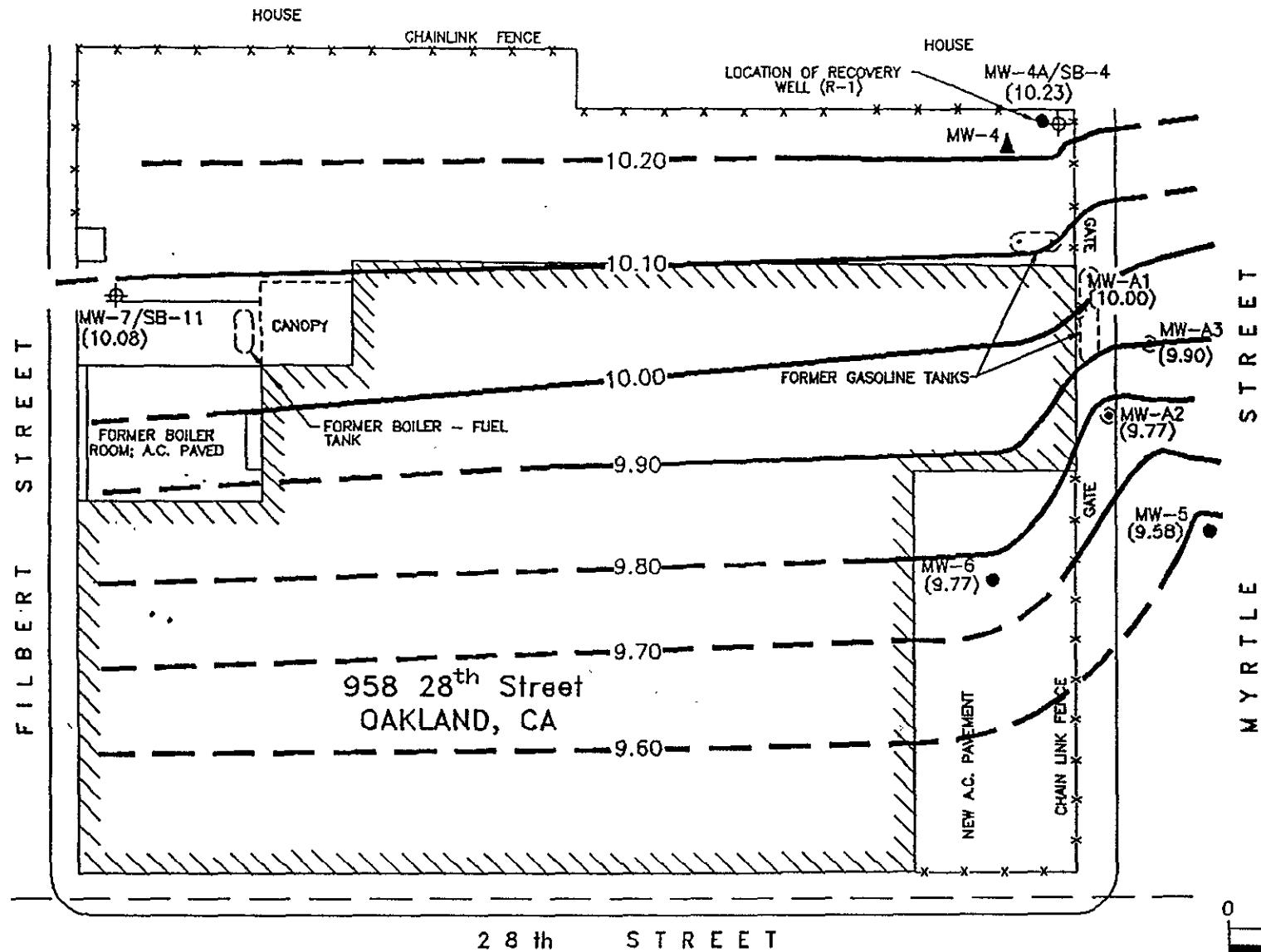
WATER TABLE

(NOVEMBER 1, 1995)

FORMER SERVISCO UNIFORM SERVICES INC.
958 28th STREET
OAKLAND, CALIFORNIA

DWN. BY: CRB
APPROVED BY:
DATE: MARCH, 1995
PROJ. # 12012.18
FILE # 1611

FIGURE 2



NOTES:

1. Top of casing elevations based on survey relative to mean sea level.
2. Groundwater elevations and interpretations based on measurements of December 12, 1991, by RMT, Inc.
3. Well MW-A3 monitors interval from 23.5'-31.0'; all others monitor groundwater above 25-foot depth.
4. Wells MW-A1 & MW-A2 may be influenced by proximity of former tank excavation which was back-filled with pea gravel that would act as a sink relative to in situ soils and geology.

Legend:

- (◎) Groundwater monitoring wells installed by IT corp. February 1989.
- (●) Groundwater monitoring wells installed by RMT, Inc. 3/90.
- (◆) Groundwater monitoring wells installed by RMT, Inc. 7/91.
- (▲) Abandoned groundwater monitoring well.



FIGURE 3

Table 2 (Continued)
Chemical Analyses of Groundwater

Monitoring Well Location	Sampling Date	Parameter ($\mu\text{g/L}$)				TPH-G (mg/L)	TPH-D (mg/L)
		Benzene	Toluene	Ethylbenzene	Total Xylenes		
MW-A4	12-11-91	2	<0.3	<0.3	<0.5	0.29	<0.01
	11-04-92	<0.3	0.5	0.5	1	0.59	<0.01
	05-12-93	190	8	6.9	42	1.30	-
	11-12-93	0.9	<0.5	2.6	1.4	0.590	-
	04-27-94	9.5	2.1	5.3	2.4	0.570	<0.05
	11-17-94	<0.5	<0.5	1.3	1.5	0.340	0.071
	02-02-95	90	1.5	<0.5	2.3	0.90	<0.05
	05-05-95	28	<0.5	28	10	0.980	<0.05
	08-17-95	10	<0.5	16	3.6	0.740	<0.05
	11-01-95	<0.5	<0.5	<0.5	<0.5	0.440	<0.05
MW-5	03-22-90	<0.2	<0.2	<0.2	<1.0	<0.5	<0.5
	11-13-90	<0.5	<0.5	<0.5	<0.5	<0.05	-
	07-19-91	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
	12-11-91	<0.3	<0.3	<0.3	<0.5	<0.01	<0.01
	11-05-92	<0.3	<0.3	<0.3	<0.5	<0.01	<0.01
	05-12-93	0.4	<0.3	<0.3	<0.5	<0.01	-
	11-12-93	<0.5	<0.5	<0.5	<0.5	<0.05	-
	04-27-94	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
	11-17-94	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
	02-02-95	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
MW-6	03-22-90	<0.2	<0.2	<0.2	<1.0	<0.5	<0.5
	11-13-90	7.9	<0.5	<0.5	1.8	0.07	-
	07-19-91	42	1.0	3.0	9.0	0.30	<0.05
	12-11-91	8	<0.3	<0.3	<0.5	0.18	<0.01
	11-04-92	8	<0.3	2	1	0.11	<0.01
	05-12-93	16	0.6	3	2	0.18	-
	11-12-93	9.8	<0.5	3.1	1.1	0.13	-
	04-27-94	6.8	<0.5	3.2	1.9	0.100	<0.05
	11-17-94	3.4	<0.5	<0.5	0.7	0.072	<0.05
	02-02-95	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
MW-7	05-05-95	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
	03-22-94	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
	12-11-91	<0.3	<0.3	<0.3	<0.5	0.18	<0.01
	11-04-92	1	<0.3	<0.3	<0.5	<0.01	<0.01
	05-12-93	2	<0.3	<0.3	<0.5	<0.01	<0.01
	11-12-93	0.7	<0.5	<0.5	<0.5	<0.05	-
	04-27-94	1.4	<0.5	<0.5	<0.5	0.540	0.090
	11-17-94	<0.5	<0.5	<0.5	<0.5	0.310	<0.05
	02-02-95	1.1	<0.5	<0.5	<0.5	0.350	<0.05
	05-05-95	1.3	<0.5	<0.5	0.5	0.280	<0.05
MW-8	08-17-95	0.6	<0.5	<0.5	<0.5	0.270	<0.05
	11-01-95	0.9	<0.5	<0.5	<0.5	0.230	<0.05
	02-22-94	3.2	<0.5	0.6	0.6	-	0.27
	04-27-94	1.7	0.5	<0.5	<0.5	0.120	2.1
	11-17-94	<0.5	<0.5	0.8	1.3	0.190	2.0
	02-02-95	1.2	<0.5	<0.5	<0.5	0.054	2.8
	05-05-95	1.1	<0.5	<0.5	<0.5	<0.05	2.2
Blank	08-17-95	1.0	<0.5	<0.5	<0.5	<0.05	3.7
	11-01-95	0.8	<0.5	<0.5	<0.5	<0.05	2.1

Table 2
Chemical Analyses of Groundwater

Monitoring Well Location	Sampling Date	Parameter (mg/L)				TPH-G (mg/L)	TPH-D (mg/L)
		Benzene	Toluene	Ethyl-benzene	Total Xylenes		
MW-A1	03-08-88	120	150	60	2100	7.2	12
	05-31-88	250	57	11	210	5.8	5.07
	09-13-88	18	12	8.8	37	2.7	1.0
	12-05-88	3.6	<0.2	4.7	24.3	0.5	<0.5
	03-21-90	3.6	<0.2	4.7	24.3	1.3	<0.5
	11-13-90	1.3	<0.5	<0.5	35.3	0.296	-
	07-18-91	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
	12-11-91	0.3	<0.3	<0.3	1	0.092	<0.01
	11-04-92	<0.3	<0.3	<0.3	<0.5	<0.01	<0.01
	05-12-93	1.0	<0.3	<0.3	0.8	<0.01	-
	11-12-93	<0.5	<0.5	<0.5	<0.5	<0.05	-
	04-27-94	1.5	<0.5	<0.5	<0.5	<0.05	<0.05
	11-17-94	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
	02-02-95	3.5	<0.5	<0.5	2.8	<0.05	<0.05
	05-05-95	1.9	1.7	0.9	61	0.410	<0.05
	08-17-95	26	<0.5	<0.5	0.8	0.072	<0.05
	11-01-95	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
MW-A2	03-08-88	380	200	<0.3	10	5.2	7.7
	05-31-88	150	4	<0.3	11	<0.5	<0.5
	09-13-88	56	4.4	4.8	11	1.9	0.6
	12-05-88	63	10	21	2.9	3.5	<0.5
	03-21-90	35	2.4	<0.2	18.9	1.1	<0.5
	11-13-90	32.5	2.4	<0.5	3.4	0.719	-
	07-18-91	28	<0.5	<0.5	<0.5	<0.05	<0.05
	12-11-91	90	3	2	2	0.44	<0.01
	11-04-92	150	6	10	9	0.41	<0.01
	05-12-93	140	5	8	8	0.480	-
	11-12-93	19	<0.5	0.7	<0.5	0.075	-
	04-27-94	51	1.8	3.3	1.9	0.210	<0.05
	11-17-94	<0.5	<0.5	<0.5	<0.5	0.058	0.15
	02-02-95	80	3.1	4.3	4.2	0.270	<0.05
	05-05-95	54	1.1	0.5	5.4	0.190	<0.05
	08-17-95	68	1.9	4.6	1.0	0.160	<0.05
	11-01-95	18	2.8	<0.5	0.100	<0.05	<0.05
MW-A3	03-08-88	<0.2	<0.3	<0.3	<0.3	<0.5	<0.5
	05-31-88	<0.3	<0.3	<0.3	<0.3	<0.5	<0.5
	09-13-88	<0.3	<0.3	<0.3	<0.3	<0.5	<0.5
	12-05-88	<0.3	<0.3	<0.3	<0.3	<0.5	<0.5
	03-21-90	<0.2	<0.2	<0.2	<1.0	<0.5	<0.5
	11-13-90	<0.5	<0.5	<0.5	<0.5	<0.05	-
	07-18-91	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
	12-11-91	<0.3	<0.3	<0.3	<0.5	<0.01	<0.01
	11-04-92	<0.3	<0.3	<0.3	<0.5	<0.01	<0.01
	05-12-93	<0.3	<0.3	<0.3	<0.5	<0.01	-
	11-12-93	<0.5	<0.5	<0.5	<0.5	<0.5	-
	04-27-94	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05
	11-17-94	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05

2-2-95

TABLE 1
TANK CLOSURES:
SUBGRADE SOIL SAMPLES HYDROCARBON ANALYSES

958 - 28TH Street
Oakland, California

SAMPLE NO.	Location and Description	Low Boiling Pt. Hydrocarbons	High Boiling Pt. Hydrocarbons	Benzene	Toluene	Ethyl benzene & Xylenes
SB-05-201-05	West End of 500 gallon Fuel Oil T	N.A.	N.D.	N.A.	N.A.	N.A.
SB-05-201-06	East End of 500 gallon Fuel Oil Ta	N.A.	98 ppm	N.A.	N.A.	N.A.
SB-05-201-01	West End of 1,000 gallon Tank	N.D.	N.A.	N.D.	N.D.	N.D.
SB-05-201-02	East End of 1,000 gallon Tank	N.D.	N.A.	N.D.	N.D.	N.D.
SB-05-201-03	South End of 7,000 gallon Tank	N.D.	N.A.	0.10 ppm	N.D.	N.D.
SB-05-201-04	North End of 7,000 gallon Tank	N.D.	N.A.	0.28 ppm	N.D.	N.D.
SB-05-274-01	South Wall of 7,000 gallon Tank	40 ppm	N.A.	0.76 ppm	4.1 ppm	120 ppm
SB-05-274-02	North Wall of 7,000 gallon Tank	N.D.	N.A.	N.D.	N.D.	N.D.
SB-05-274-03	West Wall of 7,000 gallon Tank	530 ppm	N.A.	4.8 ppm	21 ppm	53 ppm
SB-05-274-04	East Wall of 7,000 gallon Tank	5 ppm	N.A.	1.7 ppm	N.D.	N.D.

NOTES:

1. Excerpted from "Underground Storage Tan Permanent Closure Report"; IT Corp.; July 5, 1988.
2. See Figure 2 for approximate tank locations.
3. Sampling depths not indicated.

N.D. = Not detected

N.A. = Not analyzed

September 18, 1991

TABLE 2

SCI's FUEL OIL TANK AREA HYDROCARBONS ANALYSES

958 - 28th Street
Oakland, California

COMPOUND	UNITS	TEST METHOD	SAMPLE 1	SAMPLE 2
Total Extractable Hydrocarbons	mg/kg	EPA 8015M	1,600	ND
Total Oil & Grease	mg/kg	SWM 17:5520 E&F	4,900	370
Aromatics:		EPA 8020		
Benzene	µg/kg	"	300	ND
Toluene	µg/kg	"	89	ND
Ethylbenzene	µg/kg	"	910	5,300
Xylenes	µg/kg	"	3,400	15,000

NOTES:

1. Data from Subsurface Consultants, Inc.: letter report to Ms. Beatrice Slater/GSL Properties, dated May 23, 1991,
2. Approximate sampling locations indicated to be in area of former fuel oil tank at fifteen to twenty feet west of canopy's northwest corner.

TABLE 3
MONITORING WELL CONSTRUCTION SUMMARY

958 - 28th Street
Oakland, California

ITEM \ WELL	MW-A1	MW-A2	MW-A3	MW-4	MW-4A	MW-5	MW-6	MW-7
General Data:								
Constructed By	IT Corp.	IT Corp.	IT Corp.	WHMDC	WHMDC	WHMDC	WHMDC	WHMDC
Construction Date	2/17/89	2/17/89	2/17/89	3/5/90	7/16/91	3/6/90	3/5/90	7/17/91
Nominal Size	4-inch	4-inch	4-inch	2-inch	4-inch	4-inch	4-inch	4-inch
Material	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC
Schedule				40	40	40	40	40
Well Screen Data								
Slot Size	0.02-inch	0.02-inch	0.02-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch
From Depth (ft)	16.5	18	24.5	10	15	10	10	15
To Depth (ft)	26.5	28	34.5	25	25	30	30	30
Length (ft)	10.0	10.0	10.0	15.0	10.0	20.0	20.0	15.0
Filter Pack Data								
Sand	#3	#3	#3	#1C	#3	#1C	#1C	#3
From Depth (ft)	16	16.5	23.5	8	13.8	8	8	13.5
To Depth (ft)	28	28	34.5	25	25	30	30	30
Length	12.0	11.5	11.0	17.0	11.2	22.0	22.0	16.5
Well Location Data								
T.O.C. (MSL)	23.50	22.87	23.08	abandoned	24.13	22.89	23.37	21.37
Northing	485,433.3	485,406.8	485,420.5	7/15/91	485,474.5	485,372.0	485,376.6	485,506.1
Easting	1,486,767.0	1,486,766.5	1,486,771.9		1,486,771.9	1,486,782.8	1,486,726.8	1,486,538.8

NOTES:

1. Details for wells installed by International Technology Corporation (IT Corp.) obtained from boring logs include in their report title: "Ground Water Monitoring Well Installation; 958-28 Street; Oakland, California", dated March 29, 1989 .
2. Well MW-4 through MW-7 installed by West Hazmat Drilling Corp. (WHDC) as part of investigations performed by RMT, Inc.
3. Well locations survey to California State Coordinate System 1927, Grid North; Survey performed by Kier & Wright, Civil Engineers & Surveyors, Inc. of Pleasanton, California. Original data on file; ref City of Oakland Bench Mark No. 2578 at 26.70 MSL].
4. Well MW-4 abandoned on July 15, 1991 by RMT, Inc./WHDC.

TABLE 4
WELL FILTER PACK AND SCREEN SIZING SUMMARY

958 - 28th Street
Oakland, California

Boring No.	Sample Depth (ft.-ft.)	U.S.C.S.	D85,base (mm)	D15,base (mm)	Piping Ratio	Piping Ratio	Permeability Ratio	Permeability Ratio	Comments
MW-4	15.0 - 15.5	CL	< 0.074	<< 0.074	n.a.	n.a.	n.a.	n.a.	See note #4
MW-5	16.0 - 16.5	SW-GW	10.84	0.17	0.05	0.09	3.24	5.68	Acceptable
MW-5	26.0 - 26.5	SW	7.59	0.19	0.07	0.13	2.89	5.08	Acceptable
MW-6	20.5 - 26.0	SC-CL	7.08	< 0.074	0.08	0.14	> 7.4	> 13	Acceptable

U.S. Standard Sieve Size	Percent Passing #1C		Percent Passing #3	
	MAX	MIN.	MAX	MIN.
# 6	-	-	100	-
# 8	-	-	97	91
#12	100	-	68	52
#16	99	94	15	9
#20	70	50	2	0
#30	25	10	1	-
#40	5	-	-	-
D85 size (mm)		0.9 mm		2.03
D15 size (mm)		0.55 mm		0.97

NOTES:

1. Individual particle size distributions presented in "Supplementary Subsurface Investigations" report dated July 1990, by RMT, Inc.
2. D_{nn,base} = particle size for percent "nn" finer; where "base" is the in situ soil and "filter" is the sand pack.
3. Gradations of "#1C" and "#3" sands obtained from supplier; Diversified Well Products, Inc.
4. Design criteria [below] not directly applicable for predominantly fine-grained and cohesive materials.

Design Criteria:

Piping Ratio = D_{15,filter}/D_{85,base} < ~5; to guard against migration of base into filter pack.
 Permeability Ratio = D_{15,filter}/D_{15,base} > ~5; to guard against filter pack retarding flow from the in situ material.

TABLE 7a
SOIL SAMPLES ANALYSES SUMMARY

Storage Yard Area

958 - 28th Street
Oakland, California

TEST METHOD	Sample Location		SB-4	SB-4	SB-4	SB-4	SB-5	SB-5	SB-5	SB-6	SB-6	SB-6	SB-7	SB-7	SB-7	MAX Value Detected
	Sample Depth (ft)		9.0	12.0	15.0	17.5	5.5	8.0	12.5	9.0	10.5	12.0	7.5	9.5	12.5	
	Date Sampled:		7/16/91	7/16/91	7/16/91	7/16/91	7/15/91	7/15/91	7/15	7/15/91	7/15/91	7/15/91	7/15/91	7/15/91	7/15/91	
	Date Injected:	7/24/91	7/24/91	7/24/91	7/24/91	7/23/91	7/23/91	7/23	7/23/91	7/23/91	7/23/91	7/23/91	7/23/91	7/23/91	7/23/91	
	FUEL RANGE	MDL														
8015M	Gasoline [C5-C12]	1 mg/kg	ND	ND	1.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
	Jet Fuel [C10-C16]	3 mg/kg	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	150
	Diesel [C9-C22]	1 mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
	Hydraulic	5 mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	0
8020	Date Injected:		7/23/91	7/22/91	7/27/91	7/22/91	7/22/91	7/22/91	7/22/91	7/22/91	7/22/91	7/22/91	7/22/91	7/22/91	7/22/91	
	AROMATIC COMPOUNDS		[Dil=50]	[Dil=50]	[Dil=5]	[Dil=5]	[Dil=50]	[Dil=5]								
	Benzene	2.5 µg/kg	ND	130	.85	ND	ND	500	5	ND	ND	ND	ND	ND	ND	500
	Toluene	2.5 µg/kg	ND	ND	5	ND	5	100	4	5	8	ND	5	10	13	100
	Ethylbenzene	2.5 µg/kg	ND	ND	30	ND	ND	450	ND	450						
	Xylenes	2.5 µg/kg	ND	ND	55	ND	ND	750	ND	750						

NOTES:

1. Laboratory analyses by Thermo Analytical Inc. (TMA/Norcal) of Richmond, California.
2. Complete Laboratory reports presented in Appendix E.

TABLE 7b
SOIL SAMPLES ANALYSES SUMMARY

Loading Dock Area

958 - 28th Street
Oakland, California

TEST METHOD	Sample Location		SB-8	SB-8	SB-8	SB-9	SB-9	SB-9	SB-10	SB-10	SB-10	SB-11	SB-11	SB-12	SB-12	SB-12	
	Sample Depth (ft)		2.5	9.0	10.0	2.0	6.0	9.5	12.0	6.0	9.5	14.0	2.0	9.0	2.0	8.0	9.5
	Date Sampled:		7/17/91	7/17/91	7/17/91	7/16/91	7/16/91	7/16/91	7/16/91	7/16/91	7/16/91	7/17/91	7/17/91	7/16/91	7/16/91	7/16/91	7/16/91
	Date Injected:		7/31/91	7/31/91	7/31/91	7/24/91	7/24/91	7/24/91	7/24/91	7/24/91	7/24/91	7/31/91	7/31/91	7/24/91	7/24/91	7/24/91	7/25/91
FUEL RANGE		MDL															
8015M	Gasoline [C5-C12]	1 mg/kg	ND	ND	ND	ND	ND										
	Jet Fuel [C10-C16]	3 mg/kg	ND	ND	ND	ND	ND	ND	344	ND	ND	ND	ND	ND	ND	ND	
	Diesel [C9-C22]	1 mg/kg	24	2,110	310	ND	ND	ND	ND	ND	77	120	ND	ND	ND	ND	
	Hydraulic	5 mg/kg	98	-	-	-	-	-	-	-	-23	-	-	-	-	-	
8020	Date Injected:		7/31/91	7/30/91	7/31/91	7/22/91	7/22/91	7/22/91	7/22/91	7/23/91	7/23/91	7/31/91	7/31/91	7/23/91	7/23/91	7/23/91	
	AROMATIC COMPOUNDS		[Dil=5]	[Dil=50]	[Dil=50]	[Dil=5]	[Dil=5]	[Dil=5]									
	Benzene	2.5 µg/kg	ND	5	40	10	ND	ND	25	ND	23	ND	ND	ND	ND	ND	
	Toluene	2.5 µg/kg	ND	ND	10	ND	ND	4	ND	5							
	Ethylbenzene	2.5 µg/kg	ND	ND	ND	ND	ND										
	Xylenes	2.5 µg/kg	65	ND	ND	ND	ND	ND									

NOTES:

1. Laboratory analyses by Thermo Analytical Inc. (TMA/Norcal) of Richmond, California.
2. Complete Laboratory reports presented in Appendix E.

TABLE 7b (Cont.)

SOIL SAMPLES ANALYSES SUMMARY

Unloading Dock Area

958 - 28th Street
Oakland, California

TEST METHOD	Sample Location		SB-12	SB-13	SB-13	SB-13	SB-14	SB-14	SB-14	SB-15	SB-15	SB-16	SB-16	SB-17	SB-17	SB-17	Max. Value
	Sample Depth (ft)		14.0	2.0	7.0	9.0	2.0	7.0	11.0	4.0	8.5	9.0	11.0	3.5	5.0	10.5	Detected
	Date Sampled:		7/16/91	7/17/91	7/17/91	7/17/91	7/17/91	7/17/91	7/17/91	7/17/91	7/17/91	7/17/91	7/17/91	7/17/91	7/17/91	7/17/91	
	Date Injected:		7/25/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	
FUEL RANGE	MDL																
8015M	Gasoline [C5-C12]	1 mg/kg	ND	ND	ND	ND											
	Jet Fuel [C10-C16]	3 mg/kg	ND	ND	ND	344											
	Diesel [C9-C22]	1 mg/kg	ND	+20	110	ND	2110										
	Hydraulic	5 mg/kg	-	-	-	-	-	-	-	-	-	-	120	500	-	500	
	Date Injected:	7/23/91	7/30/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91	7/31/91		
8020	AROMATIC COMPOUNDS	[Dil=5]	[Dil=5]	[Dil=5]	[Dil=5]	[Dil=5]	[Dil=5]	[Dil=5]	[Dil=5]	[Dil=5]	[Dil=5]	[Dil=5]	[Dil=50]	[Dil=50]	[Dil=50]		
	Benzene	2.5 µg/kg	ND	ND	ND	40											
	Toluene	2.5 µg/kg	10	ND	ND	ND	ND	ND	45	20	330	70	100	80	40	330	
	Ethylbenzene	2.5 µg/kg	ND	ND	ND	ND											
	Xylenes	2.5 µg/kg	ND	410	ND	450	380	ND									

NOTES:

1. Laboratory analyses by Thermo Analytical Inc. (TMA/Norcal) of Richmond, California.
2. Complete Laboratory reports presented in Appendix E.

Laborato
Completo

TABLE 8

MONITORING WELLS ANALYSES SUMMARY
ADDITIONAL SUBSURFACE INVESTIGATION

958 - 28th Street
 Oakland, California

METHOD	Ground Water Well								Max. Value	Blind
		MW-A1	MW-A2	MW-A3	MW-4A	MW-5	MW-6	MW-7		
	Date Sampled:	7/18/91	7/18/91	7/18/91	7/19/91	7/18/91	7/18/91	7/19/91		7/19/91
	Date Injected:	8/1/91	8/1/91	8/1/91	8/1/91	8/1/91	8/1/91	8/1/91	Detected	8/1/91
8015M	FUEL RANGE MDL									
[5030]	Gasoline [C5-C12]	0.05 mg/L	ND	ND	ND	2.60	ND	0.30	ND	2.60
	Jet Fuel [C10-C16]	0.05 mg/L	ND	ND						
[3520]	Diesel [C9-C22]	0.05 mg/L	ND	ND						
	Date Injected:	7/30/91	7/30/91	7/30/91	7/30/91	7/30/91	7/30/91	7/30/91		7/30/91
8020	AROMATIC COMPOUNDS									
[5030]	Benzene	0.5 µg/L	ND	28	ND	68	ND	42	ND	68
"	Toluene	0.5 µg/L	ND	ND	ND	3	ND	1	ND	3
"	Ethylbenzene	0.5 µg/L	ND	ND	ND	8	ND	3	ND	8
"	Xylenes	0.5 µg/L	ND	ND	ND	31	ND	9	ND	31

NOTES:

1. Laboratory Analyses by Thermo Analytical Inc. (TMA/Norcal) of Richmond, California.
2. All ground water monitoring wells were sampled after purging at least 3 well casing volumes of water from each well and physical properties had stabilized. in area of former fuel oil tank area.
3. All sample analyses were performed on undiluted samples, i.e. dilution=1.00.
4. Blind sample was a duplicate of well MW-4A.
5. Complete laboratory analyses report contained in Appendix F.

TABLE 9
MONITORING WELLS ANALYSES SUMMARY

958 - 28th Street
 Oakland, California

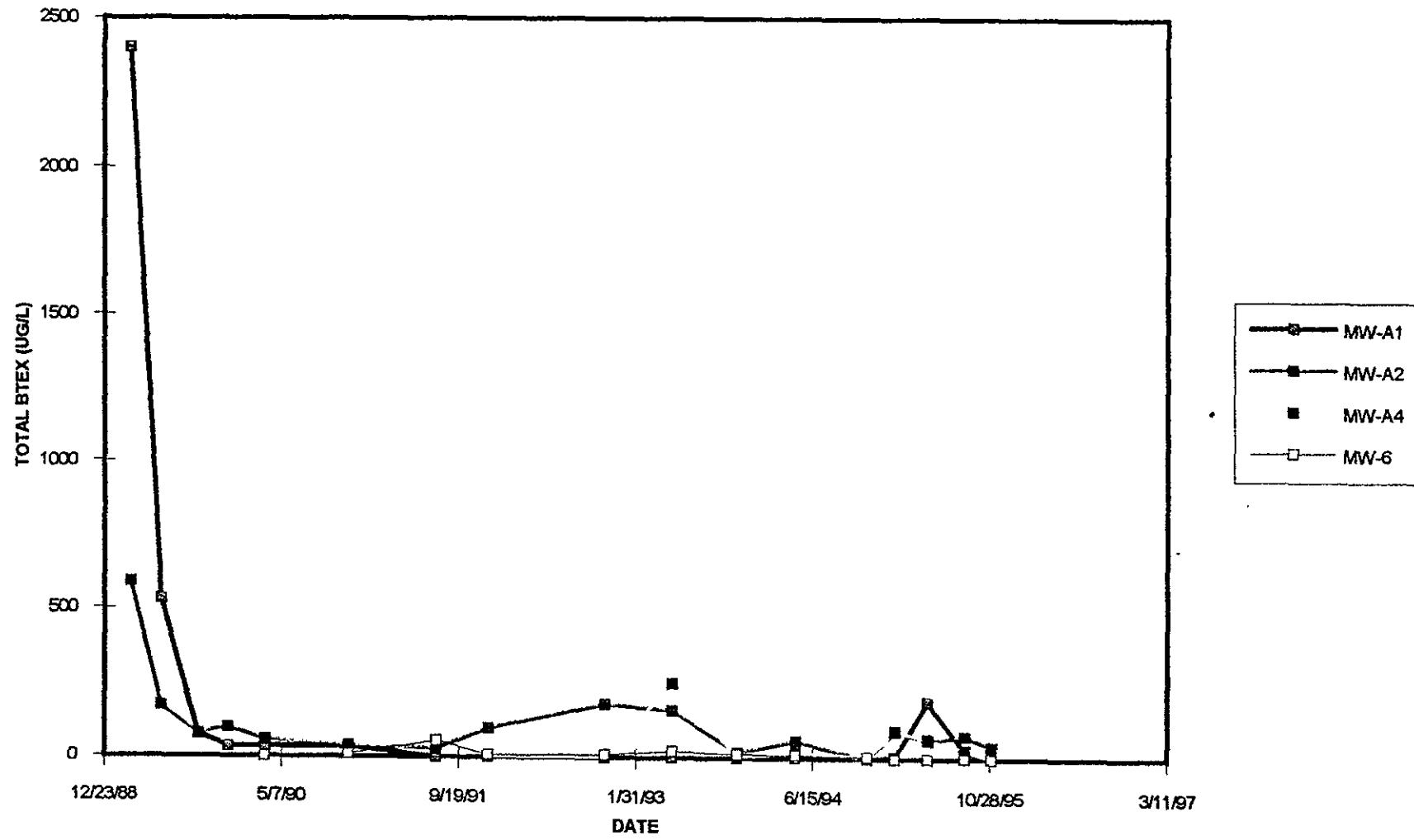
METHOD	Ground Water Well			MW-A1	MW-A1	MW-A1	MW-A2	MW-A2	MW-A2	MW-A3	MW-A3	MW-A3
	Date Sampled:			Mar-90	Nov-90	7/18/91	Mar-90	Nov-90	7/18/91	Mar-90	Nov-90	7/18/91
8015M [5030]	FUEL RANGE	MDL	MCL									
	Gasoline [C5-C12]	50 µg/L	NA	1.3E+06	ND	ND	1.1E+06	719.	ND	ND	ND	ND
	Jet Fuel [C10-C16]	50 µg/L	NA	-	-	ND	-	-	ND	-	-	ND
	Diesel [C9-C22]	50 µg/L	NA	ND	-	ND	ND	-	ND	ND	-	ND
8020 [5030] " " "	AROMATIC COMPOUNDS											
	Benzene	0.5 µg/L	1 µg/L	3.6	1.3	ND	35	32.5	28	ND	ND	ND
	Toluene	0.5 µg/L	NA	ND	ND	ND	2.4	2.4	ND	ND	ND	ND
	Ethylbenzene	0.5 µg/L	680 µg/L	4.7	ND	ND	ND	ND	ND	ND	ND	ND
	Xylenes	0.5 µg/L	1750 µg/L	24.3	35.3	ND	18.9	3.4	ND	ND	ND	ND

METHOD	Ground Water Well			MW-4	MW-4A	MW-5	MW-5	MW-5	MW-6	MW-6	MW-6	MW-7
	Date Sampled:			Nov-90	7/19/91	Mar-90	Nov-90	7/18/91	Mar-90	Nov-90	7/18/91	7/19/91
8015M [5030]	FUEL RANGE	MDL	MCL									
	Gasoline [C5-C12]	50 µg/L	NA	NA	2.60	ND	ND	ND	ND	70.	0.30	ND
	Jet Fuel [C10-C16]	50 µg/L	NA	NA	ND	-	-	ND	-	-	ND	ND
	Diesel [C9-C22]	50 µg/L	NA	NA	ND	ND	-	ND	ND	-	ND	ND
8020 [5030] " " "	AROMATIC COMPOUNDS											
	Benzene	0.5 µg/L	1 µg/L	NA	68	ND	ND	ND	ND	7.9	42.	ND
	Toluene	0.5 µg/L	NA	NA	3	ND	ND	ND	ND	ND	1.	ND
	Ethylbenzene	0.5 µg/L	680 µg/L	NA	8	ND	ND	ND	ND	ND	3.	ND
	Xylenes	0.5 µg/L	1750 µg/L	NA	31	ND	ND	ND	ND	1.8	9.	ND

NOTES:

1. Laboratory Analyses by Thermo Analytical Inc. (TMA/Norcal) of Richmond, California.
2. All ground water monitoring wells were sampled after purging at least 3 well casing volumes of water from each well and physical properties had stabilized. in area of former fuel oil tank area.
3. All sample analyses, excepting MW-4 on March 1990, were performed on undiluted samples. Dilution for MW-4 was 5 x.
4. Quality Control testing not included.
5. Post-November 1990 sampling excluded MW-4, which contained free product and subsequent abandonment.

TOTAL BTEX VS. TIME



LEGEND:

TOTAL BTEX vs. TIME

FIGURE 3

RMT Inc. ~ Los Angeles
Phone: 310/578-1241
4640 Admiralty Way
Suite 301
Marina Del Rey, CA 90292



RMT**LOG OF TEST BORING**

F-203 (R 01-87)

PROJECT NAME Aratex Servisco - SSI
 LOCATION Oakland, CA
 CONTRACTOR W. Hazmat Drilling
 DRILLING METHOD HSA

BORING NO. MW-4
 SHEET NO. 1 OF 2
 PROJECT NO. 1660.05
 INSTALLATION 03/05/90
 SURFACE ELEV. _____
 BOREHOLE DIA. 8.5 IN.

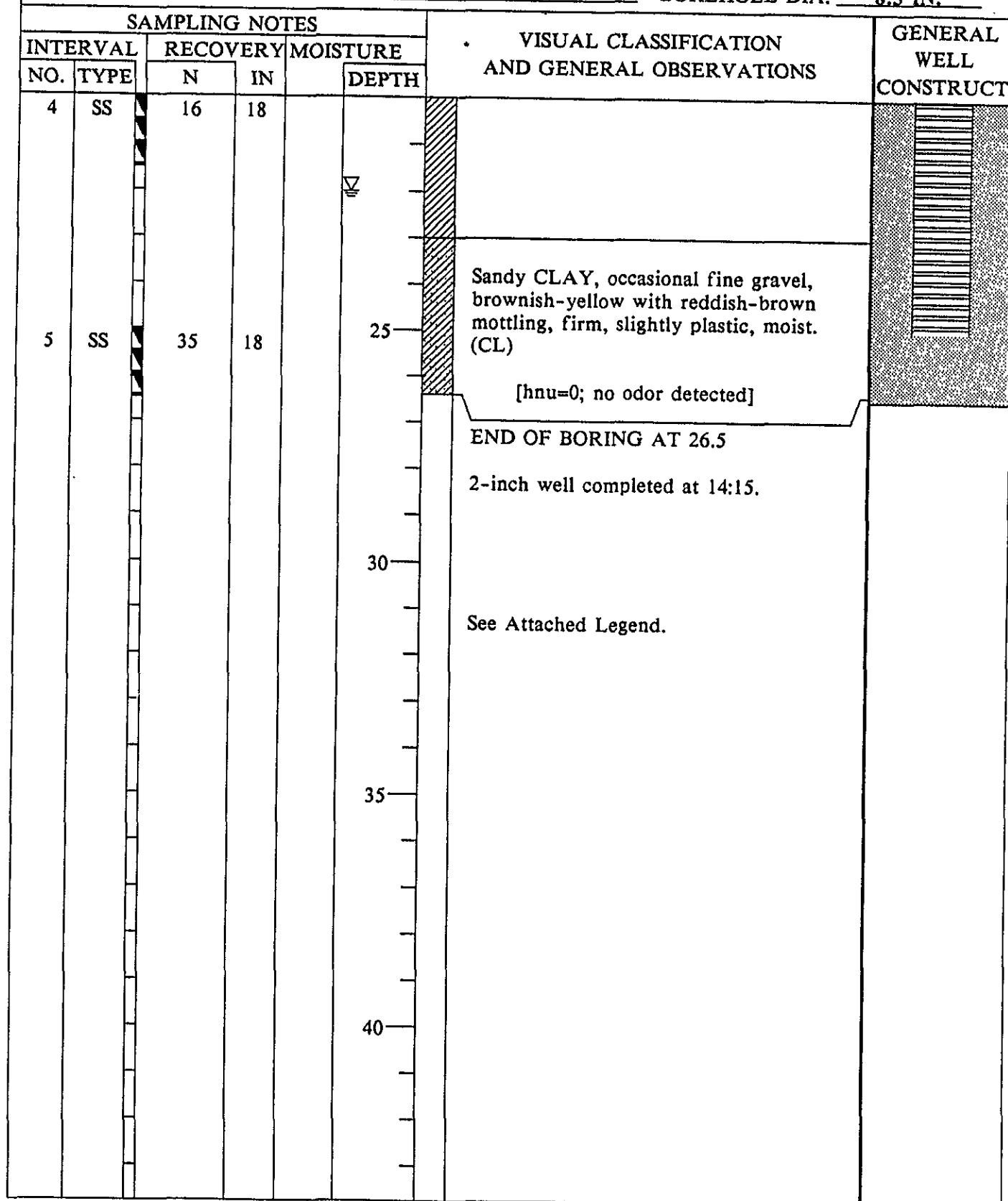
SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL NO.	RECOVERY TYPE	N	IN	MOISTURE DEPTH			
1	SS	40	18	5		2" a.c. over 3" gravel base. Clayey SILT, dark brown with occasional reddish brown sand pockets, plastic, moist. (FILL)	
2*	CS	40	18	10		Silty CLAY, occasional fine gravel, brownish yellow, very stiff, plastic, moist. (CH) [hnu=7 ppm; no odor] With 1mm O roots at 5.5'. With dense fine SAND seam at 6'.	
3*	CS	26	18	15		SAND, trace fine to medium gravel, subangular, some silt and clay, brownish yellow-olive gray, medium dense, wet (no free water). (SP-SM) [hnu=170 ppm; gasoline-like odor]	
						Silty CLAY, trace fine sand, brownish yellow, stiff (T.V.=0.65tsf), wet (no free water), plastic, with occasional reddish-brown silty-fine sand pockets. (CH) [hnu=4 ppm; slight gasoline odor]	
						Grading more silty at 20' with green gray clay pockets, stiff (T.V.=0.55tsf), wet (trace free water), plastic. (CH) [hnu=4; no odor detected]	
GENERAL NOTES				WATER LEVEL OBSERVATIONS			
DATE STARTED	<u>5 MAR 90</u>			WHILE DRILLING	<u>22.0</u>		
DATE COMPLETED	<u>5 MAR 90</u>			AT COMPLETION	<u>15.0</u>		
RIG	<u>CME 55</u>			AFTER DRILLING			
CREW CHIEF	<u>B. Keevey</u>			CAVE-IN: DATE/TIME			
LOGGED Z.	<u>Batchko</u>			WATER: DATE/TIME	<u>3/5 16:15</u>		
CHECKED	<u>Davis</u>			DEPTH	<u>13.1'</u>		

RMT**LOG OF TEST BORING**

F-203 (R 01-87)

PROJECT NAME Aratex Servisco - SSI
 LOCATION Oakland, CA
 CONTRACTOR W. Hazmat Drilling
 DRILLING METHOD HSA

BORING NO. MW-4
 SHEET NO. 2 OF 2
 PROJECT NO. 1660.05
 INSTALLATION 03/05/90
 SURFACE ELEV.
 BOREHOLE DIA. 8.5 IN.

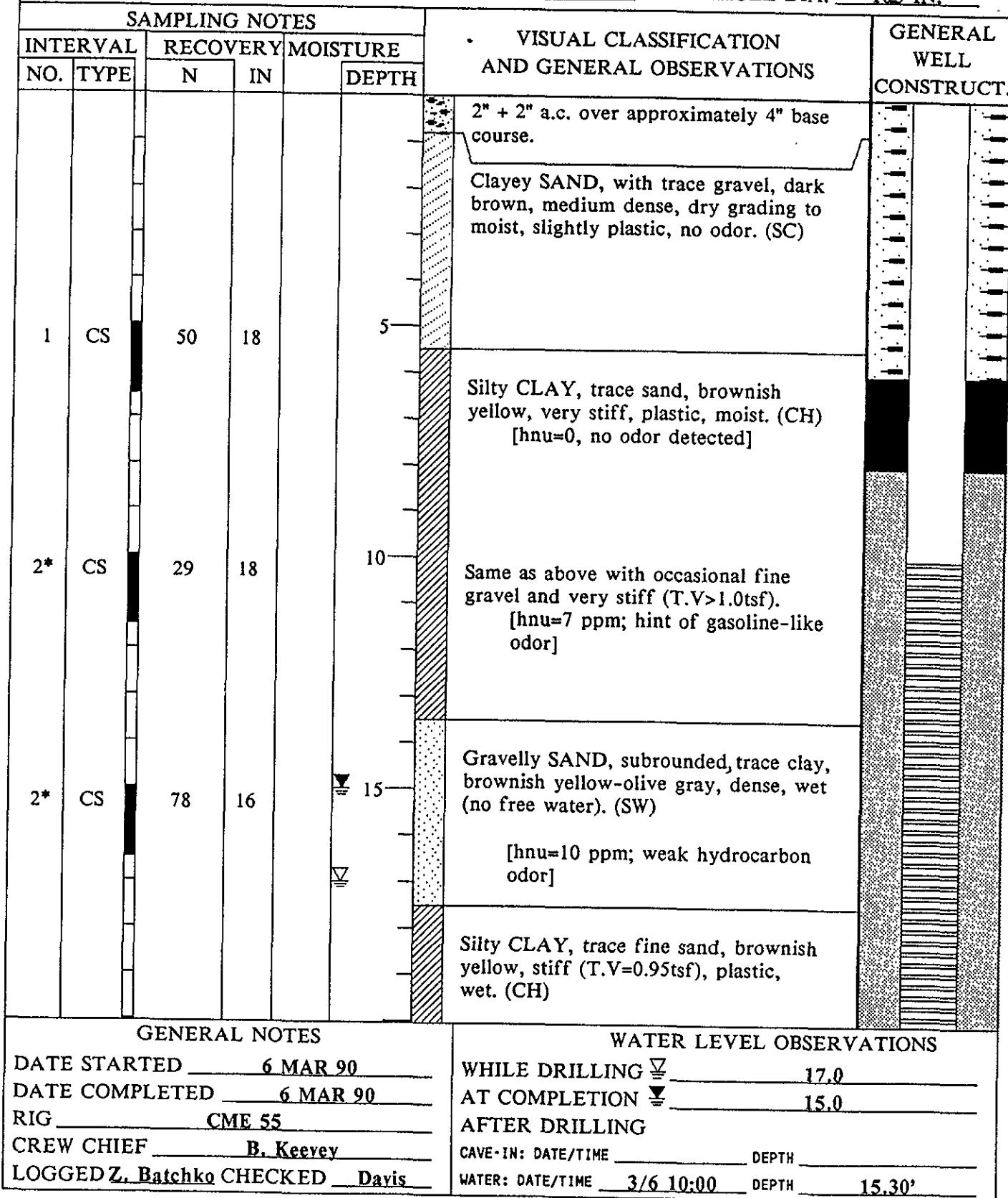


RMT**LOG OF TEST BORING**

F-203 (R 01-87)

PROJECT NAME Aratex Servisco - SSI
 LOCATION Oakland, CA
 CONTRACTOR W. Hazmat Drilling
 DRILLING METHOD HSA

BORING NO. MW-5
 SHEET NO. 1 OF 2
 PROJECT NO. 1660.05
 INSTALLATION 03/06/90
 SURFACE ELEV. _____
 BOREHOLE DIA. 105 IN.





LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME Aratex Servisco - SSI
 LOCATION Oakland, CA
 CONTRACTOR W. Hazmat Drilling
 DRILLING METHOD HSA

BORING NO. MW-5
 SHEET NO. 2 OF 2
 PROJECT NO. 1660.05
 INSTALLATION 03/06/90
 SURFACE ELEV.
 BOREHOLE DIA. 105 IN.

SAMPLING NOTES				VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL NO.	TYPE	RECOVERY N	MOISTURE IN		
4	CS	35	6	[hnu=10 ppm; slight hydrocarbon-like odor]	
5	CS	70	18	25 Gravelly SAND, subrounded, trace silt and clay, brownish yellow, dense, wet with some free water, (SW). [hnu=6 ppm; no odor distinguished]	
6	CS	32	4	30 SILT, trace fine sand and clay, brownish yellow, medium dense, wet with trace free water, slightly dilatant, slightly plastic. (ML) [no odor detected]	
				END OF BORING AT 31.5 FT. 4-inch well completed at 9:45.	
				35 See Attached Legend.	
				40	

RMT**LOG OF TEST BORING**

F-203 (R 01-87)

PROJECT NAME Aratex Servisco - SSI
 LOCATION Oakland, CA
 CONTRACTOR W. Hazmat Drilling
 DRILLING METHOD HSA

BORING NO. MW-6
 SHEET NO. 1 OF 2
 PROJECT NO. 1660.05
 INSTALLATION 03/05/90
 SURFACE ELEV. _____
 BOREHOLE DIA. 105 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.	
INTERVAL	RECOVERY	MOISTURE		DEPTH				
NO.	TYPE	N	IN	DEPTH				
1	CS	12	18	5		SAND, some medium to fine gravel, subangular, trace clay, well graded, dark brown to brown, loose, dry, no odor. (SW) [hnu=2; no distinguishable odor]		
2*	CS	21	18	10		CLAY, some silt, light olive gray, very stiff (T.V.=1.0 tsf), plastic, moist, flocculated. (CH) [hnu=15 ppm; slight organic odor]		
3*	CS	34	15	15	▽	SAND and CLAY, some medium to fine angular gravels, light olive gray, with greenish gray clay pockets, trace free water, nonplastic-slightly plastic, wet. (SC-CL) [hnu=200 ppm; slight stale organic odor]		
GENERAL NOTES						WATER LEVEL OBSERVATIONS		
DATE STARTED	<u>5 MAR 90</u>					WHILE DRILLING	▽	<u>18.0</u>
DATE COMPLETED	<u>5 MAR 90</u>					AT COMPLETION	▽	<u>14.2</u>
RIG	<u>CME 55</u>					AFTER DRILLING		
CREW CHIEF	<u>B. Keevey</u>					CAVE-IN: DATE/TIME	DEPTH	
LOGGED Z. Batchko	CHECKED	<u>Davis</u>				WATER: DATE/TIME	DEPTH	

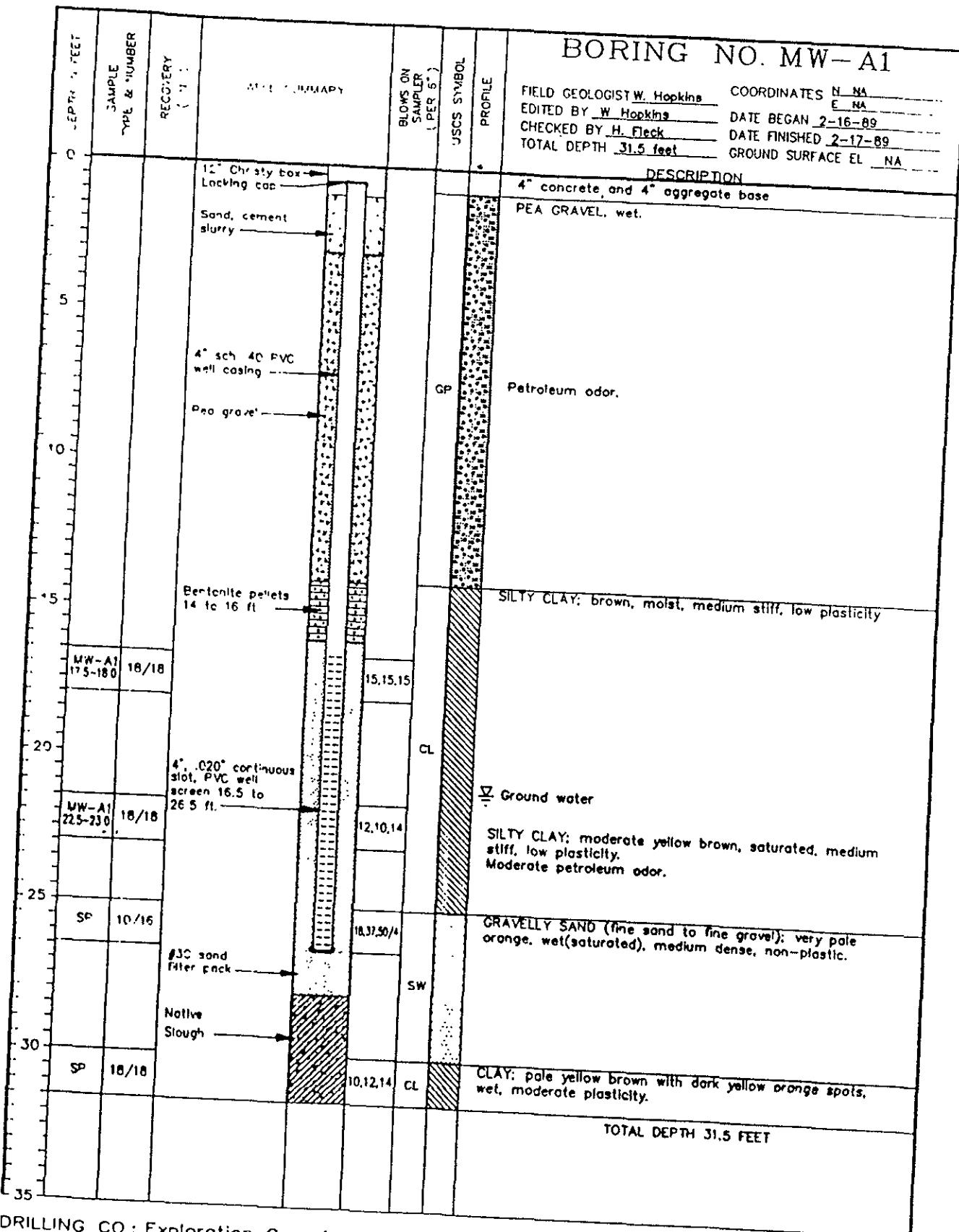
RMT**LOG OF TEST BORING**

F-203 (R 01-87)

PROJECT NAME Aratex Servisco - SSI
 LOCATION Oakland, CA
 CONTRACTOR W. Hazmat Drilling
 DRILLING METHOD HSA

BORING NO. MW-6
 SHEET NO. 2 OF 2
 PROJECT NO. 1660.05
 INSTALLATION 03/05/90
 SURFACE ELEV. _____
 BOREHOLE DIA. IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.		
INTERVAL NO.	TYPE	RECOVERY		MOISTURE DEPTH					
		N	IN						
4	CS	18	18			Silty CLAY, trace fine sand, with occasional fine sand pockets and fine gravel, brownish yellow, firm (T.V.=0.27 tsf), wet (no free water), plastic. (CH) [hnu=15 ppm; slight organic odor].			
5	CS	56	18	25		T.V. at 25'=0.5 tsf. SAND, well, some medium to fine gravels, subrounded, yellowish red, medium dense, wet with free water. (SW) [hnu=10 ppm; no odor detected]			
6	SS		18	30		SILT, trace fine sand, some clay, brownish yellow, stiff (T.V.=0.65tsf), wet with trace free water, slightly dilatant, slightly plastic. (ML) [no odor detected] END OF BORING AT 31.5 FT.			
				35		4-inch well completed at 12:00. See Attached Legend.			
				40					



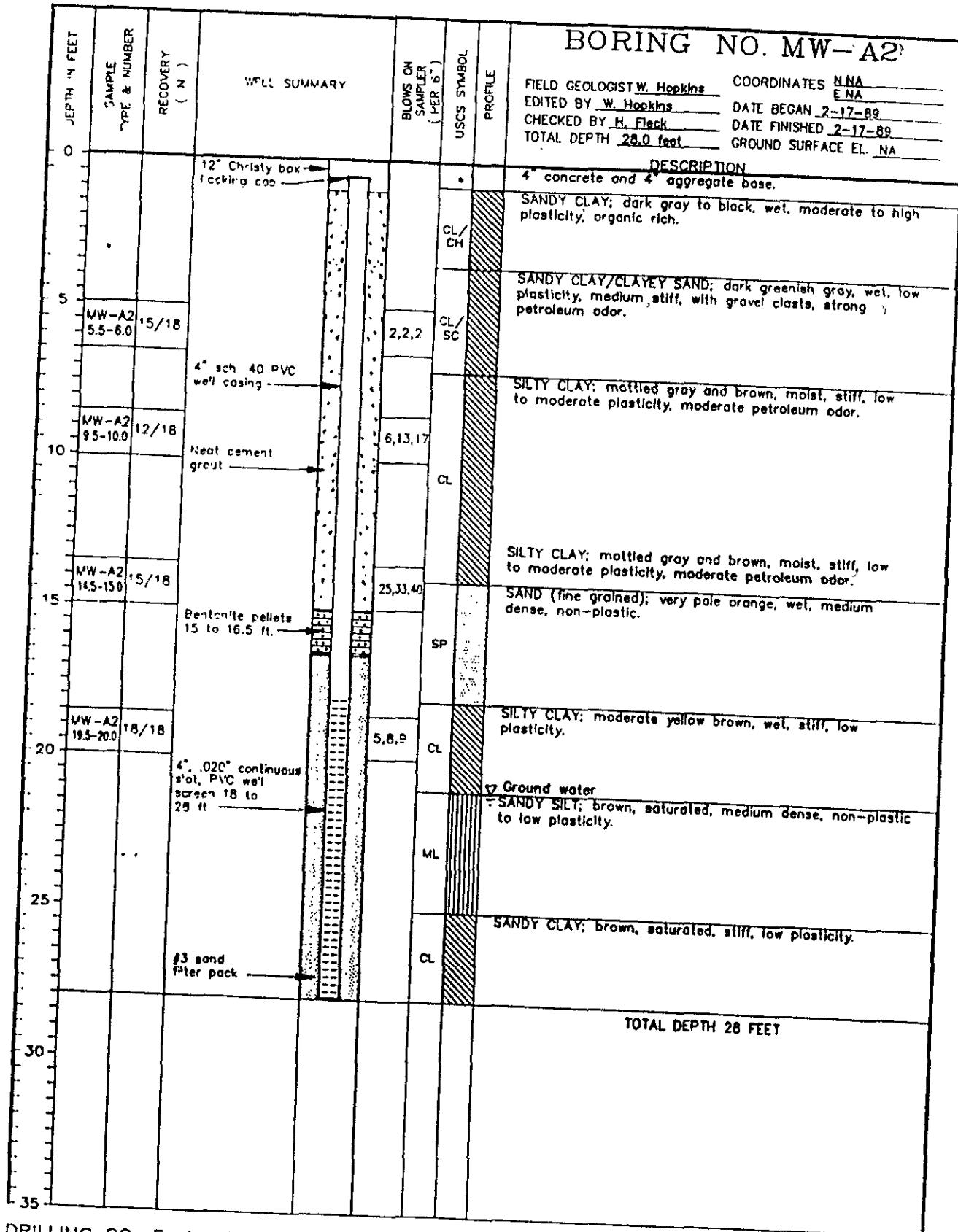
DRILLING CO.: Exploration Geosciences
 DRILLING METHOD: Hollow Stem Auger
 SAMPLING METHODS: California Modified
 Split Barrel Sampler
 PROJECT NO.: 190452
 CLIENT: Aratex Services
 Oakland, California

PAGE 1 OF 1



...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
 FOR EXPLANATION OF SYMBOLS AND TERMS



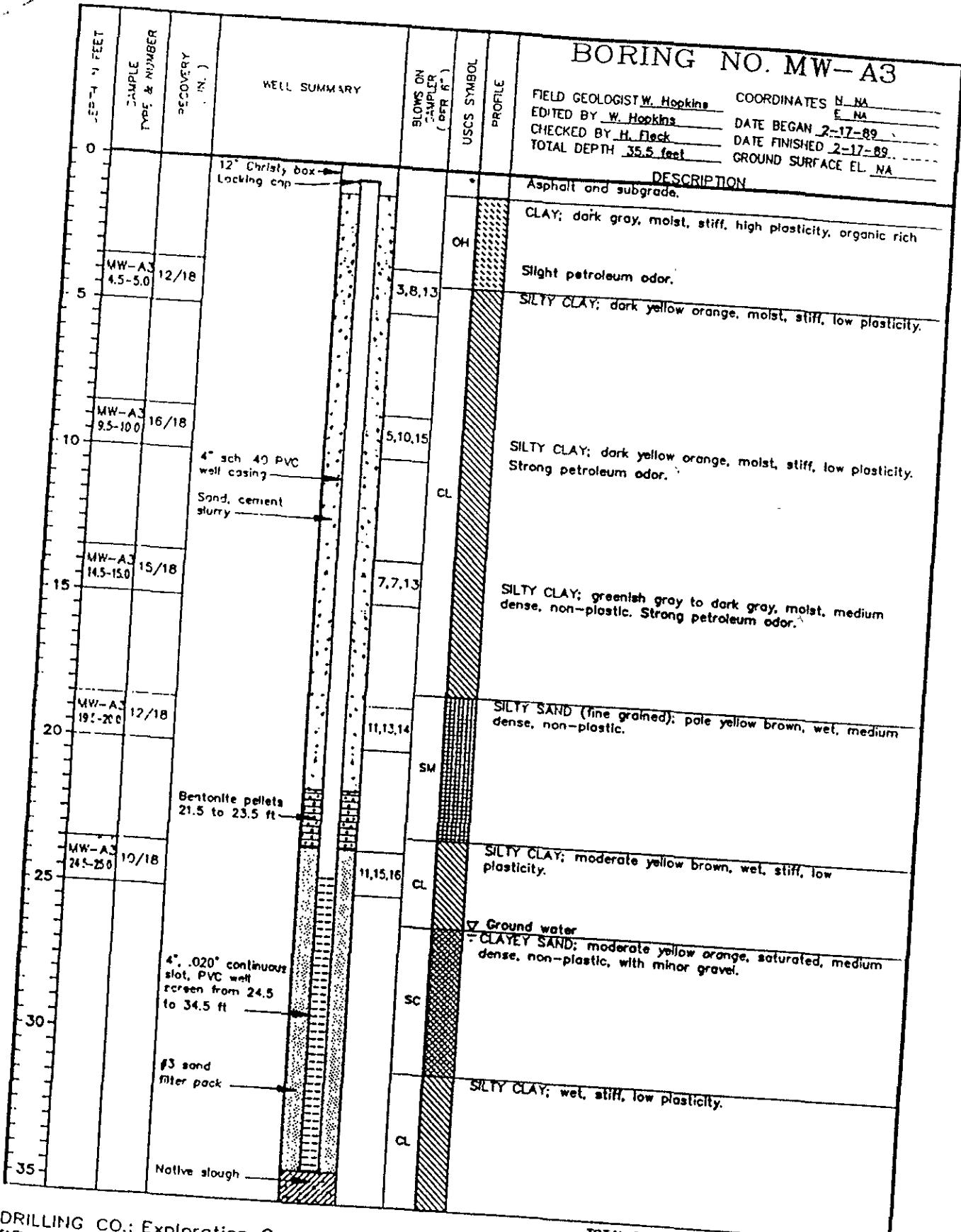
DRILLING CO.: Exploration Geosciences
 DRILLING METHOD: Hollow Stem Auger
 SAMPLING METHODS: California Modified Split Barrel Sampler
 PROJECT NO.: 190452
 CLIENT: Aratex Services
 Oakland, California
 MW-A2(=AX-1)

PAGE 1 OF 1



...Creating a Safer Tomorrow

SEE LEGEND FOR LOGS AND TEST PITS
 FOR EXPLANATION OF SYMBOLS AND TERMS



DRILLING CO.: Exploration Geosciences
 DRILLING METHOD: Hollow Stem Auger
 SAMPLING METHODS: California Modified
 Split Barrel Sampler
 PROJECT NO.: 190452
 CLIENT: Aratex Services
 Oakland, California



...Creating a Safer Tomorrow
 SEE LEGEND FOR LOGS AND TEST PITS
 FOR EXPLANATION OF SYMBOLS AND

PAGE 1 OF 1

DRAWN BY	T.R.S.	CHECKED BY	S. M.	DRAWING
	3-14-89	APPROVED BY		NUMBER

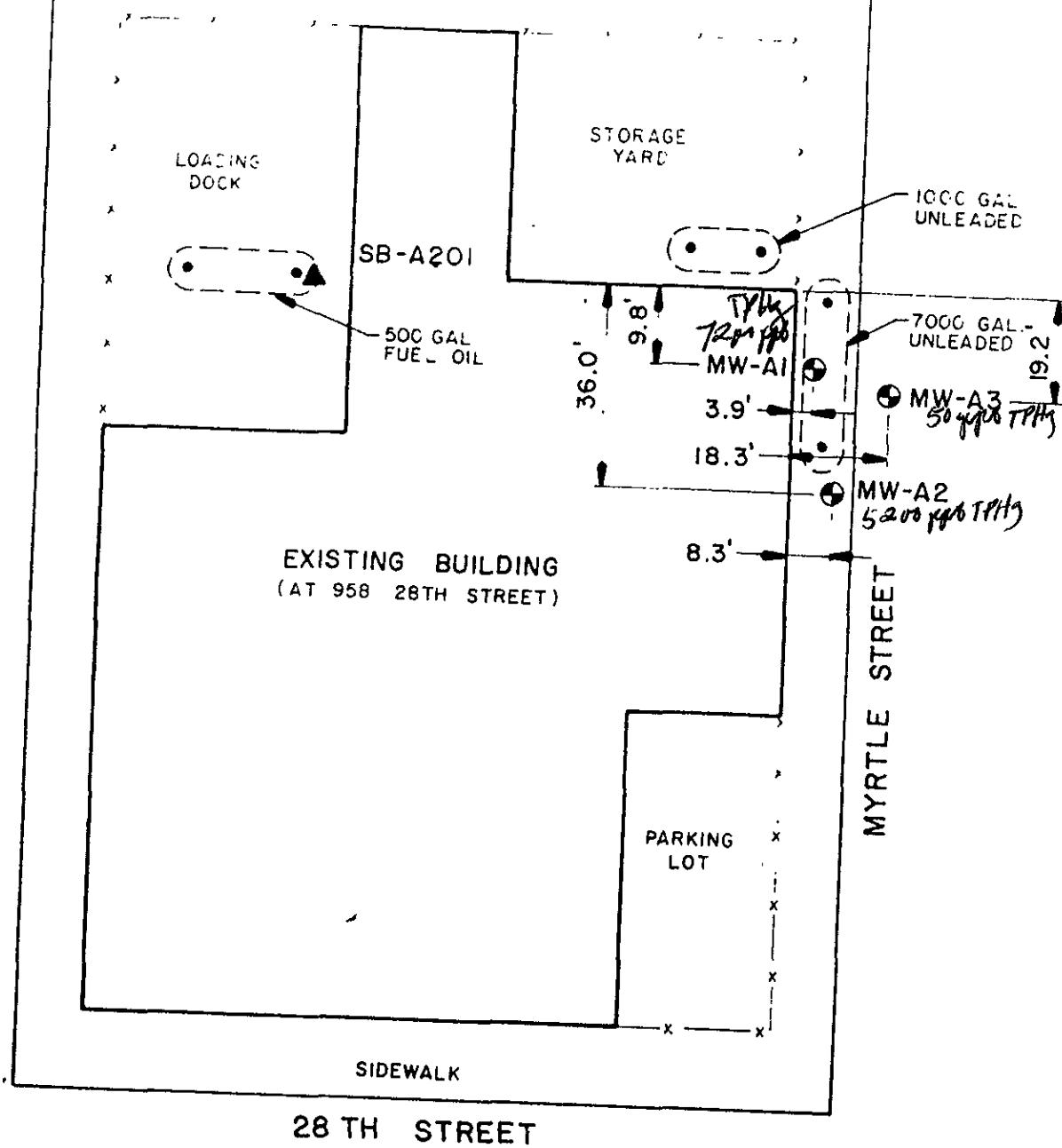


FIGURE 1

NOT TO SCALE

LEGEND

- MONITOR WELL LOCATION
- ▲ SOIL BORING LOCATION

SOIL BORING AND
MONITORING WELL LOCATIONS

PREPARED FOR

ARATEX SERVICES, INC.
OAKLAND, CA.



LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME ARATEX - SERVISCO
 LOCATION OAKLAND, CA
 CONTRACTOR WEST HAZMAT DRILLING
 DRILLING METHOD HOLLOW STEM AUGER

BORING NO. R-1
 SHEET NO. 1 OF 2
 PROJECT NO. 12012.13
 INSTALLATION
 SURFACE ELEV.
 BOREHOLE DIA. 10 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		MOISTURE			
NO.	TYPE	N	%	DEPTH			
						ASPHALT 4 - 6 IN.	
1	SS	23	100	W		SILTY CLAY (CL) Some silt, very stiff, mod. plasticity, dusky brown, roots.	
2	SS	20	100	SM		CLAY (CL-CH) Trace silt, very stiff, mod. plastic, pale yellowish brown to dark yellowish brown.	
3	SS	50	100	SM	5	SANDY SILTY CLAY (CL) Some sand and silt, trace gravel, hard, mod. yellowish brown.	
4	SS	50	100	SM		increasing silt and sand.	
5	SS	50	100	M		SILTY SAND (SM) Some silt, little clay and gravel, gradational upper contact, very dense, mod. yellowish brown, stained lt. olive gray lower 6 in., mottling and oxidation lower 6 in.	
6	SS	30	100	M	10	GRAVELLY SAND (SW) Fine - coarse sand, fine gravel, trace silt, well graded, dense, angular, stained olive gray, strong petroleum odor.	
7	SS	50	100	M			

GENERAL NOTES				WATER LEVEL OBSERVATIONS		
DATE STARTED <u>22 MAR 93</u>				WHILE DRILLING <u>▽</u> <u>12.5</u>		
DATE COMPLETED <u>22 MAR 93</u>				AT COMPLETION <u>▽</u>		
RIG <u>CME-53</u>				AFTER DRILLING		
CREW CHIEF				CAVE-IN: DATE/TIME _____ DEPTH _____		
LOGGED <u>T. DAVIS</u> CHECKED <u>J. Davis</u>				WATER: DATE/TIME _____ DEPTH _____		



LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME ARATEX - SERVISCO
 LOCATION OAKLAND, CA
 CONTRACTOR WEST HAZMAT DRILLING
 DRILLING METHOD HOLLOW STEM AUGER

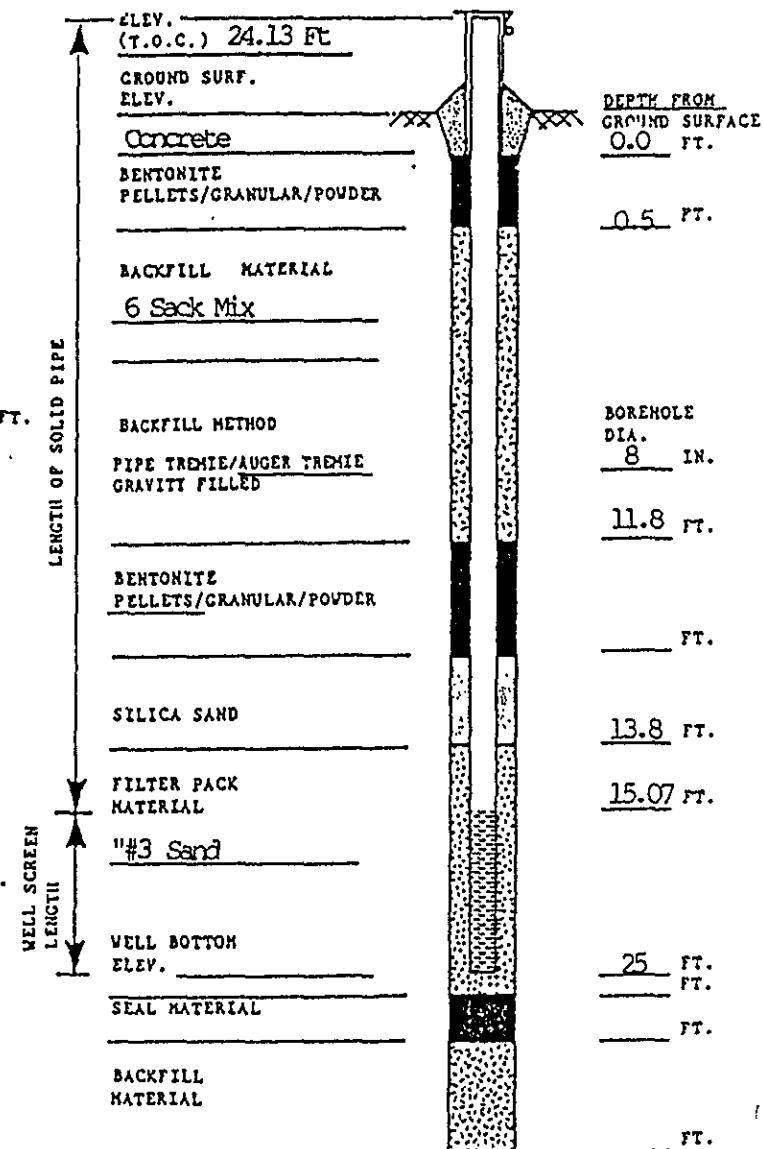
BORING NO. R-1
 SHEET NO. 2 OF 2
 PROJECT NO. 12012.13
 INSTALLATION _____
 SURFACE ELEV. _____
 BOREHOLE DIA. 10 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		MOISTURE			
NO.	TYPE	N	%	DEPTH			
8	SS	48	100	M		CLAYEY SANDY GRAVEL (GP) Fine - coarse, angular sand and gravel, little clay (decreasing w/ depth), very dense, lt. to mod. brown with variegated gravel, sl. mottled; tr. petroleum odor.	
9	SS	12	66	M		SANDY CLAY (CL) clay with little fine Sand, hard, lt. brown. GRAVELLY SAND (SW) Sand, fine - coarse, some gravel, fine - coarse, angular, well graded, tr. clay, medium dense, lt. olive gray.	
10	SS	13	66	M	15	SILTY SANDY CLAY (CL) Little silt and very fine sand, tr. gravel, medium dense to dense, low plasticity, alternating lt. brown and pale olive.	
11	SS	38	100				
12	SS	38	100				
13	SS	18	100		20	Total depth = 20.5 ft.	

WT

Diagram
(R 11-85)

PROJECT NAME: SERVISCO NO. 12012.10
WELL NO. MW-4A
DATE INSTALLED 07-16-91



1) CASING DETAILS

A) TYPE OF PIPE:

PVC, STAINLESS, TEFLO, OTHER

PIPE SCHEDULE 40

B) TYPE OF PIPE JOINTS:

COUPLINGS, THREADED (W/TAPE?), OTHER

C) WAS SOLVENT USED? YES OR NO

D) TYPE OF WELL SCREEN:

PVC, STAINLESS, TEFLO, OTHER

E) WELL SCREEN SLOT SIZE 0.01

F) PIPE DIA: ID IN. 4 OD IN.

G) INSTALLED PROTECTOR PIPE W/LOCK? YES OR NO
PROTECTOR PIPE DIA. IN.

2) WELL DEVELOPMENT

A) METHOD

BAILING, PUMPING, SURGING, COMPRESSED AIR

OTHER

(NOTE ADDITIONAL COMMENTS BELOW)

B) TIME SPENT FOR DEVELOPMENT? 4 HOURS

C) APPROXIMATE WATER VOLUME: REMOVED 25-Gallon
ADDED

D) WATER CLARITY BEFORE DEVELOPMENT?

CLEAR, TURBID, OPAQUE

E) WATER CLARITY AFTER DEVELOPMENT?

CLEAR, SLIGHTLY TURBID, TURBID, OPAQUE

F) ODOR? YES OR NO

3) WATER LEVEL SUMMARY

A) DEPTH FROM TOP OF CASING AFTER DEVELOPMENT?

39.2 FT. OR DRY

B) OTHER MEASUREMENTS (T.O.C.):

DATE/TIME 07-15-91/Initial 45.43

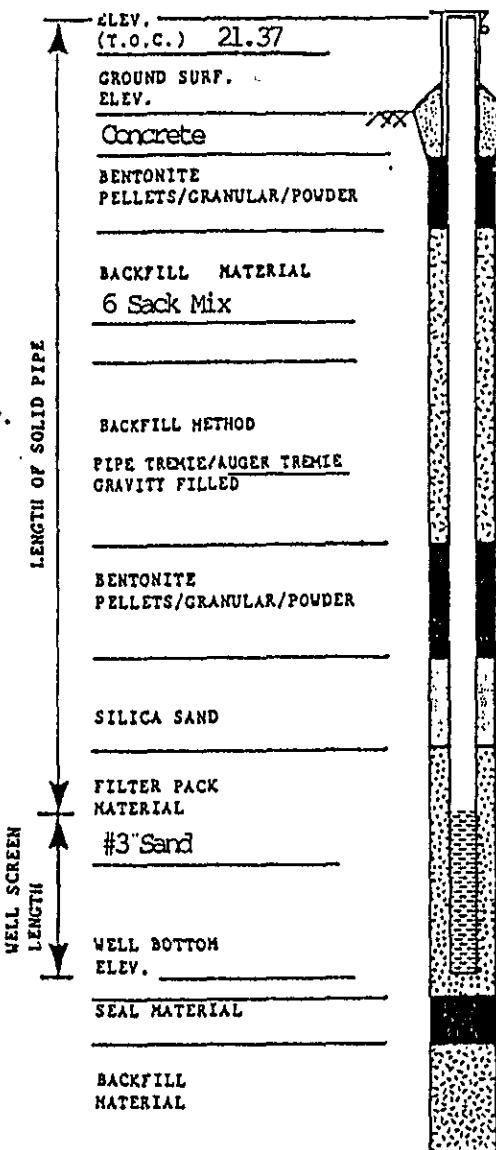
DATE/TIME 07-18-91/Fre Sampling 39.2

DATE/TIME 08-27-91/39.26

ADDITIONAL COMMENTS: Developed 07-19-91, the well was swabbed for 15 minutes, 55 gallons bailed.

Water was very turbid. Completed with flush mounted cristy-box type cover. T.O.C. Elevation surveyed reactive to mean sea Level.

PROJECT NAME: SERVISCC NO. 12012.10
 WELL NO. MW-7
 DATE INSTALLED 06-17-91



DEPTH FROM GROUND SURFACE FT.

0.5 FT.

BOREHOLE DIA. 8 IN.

12.5 FT.

FT.

14.5 FT.

12.49 FT.

30.0 FT.

FT.

FT.

FT.

1) CASING DETAILS

A) TYPE OF PIPE:

PVC, STAINLESS, TEFLO, OTHER

PIPE SCHEDULE 40

B) TYPE OF PIPE JOINTS:

COUPLINGS, THREADED (W/TAPE?), OTHER

C) WAS SOLVENT USED? YES OR NO

D) TYPE OF WELL SCREEN:

PVC, STAINLESS, TEFLO, OTHER

E) WELL SCREEN SLOT SIZE 0.01

F) PIPE DIA: ID IN. OD IN.

G) INSTALLED PROTECTOR PIPE W/LOCK? YES OR NO
PROTECTOR PIPE DIA. IN.

2) WELL DEVELOPMENT

A) METHOD

BAILING, PUMPING, SURGING, COMPRESSED AIR

OTHER BK Hand Pump

(NOTE ADDITIONAL COMMENTS BELOW)

B) TIME SPENT FOR DEVELOPMENT? 3 Hours

C) APPROXIMATE WATER VOLUME: REMOVED 110-Gallon
ADDED

D) WATER CLARITY BEFORE DEVELOPMENT?

CLEAR, TURBID, OPAQUE

E) WATER CLARITY AFTER DEVELOPMENT?

CLEAR, SLIGHTLY TURBID, TURBID, OPAQUE

F) ODOR? YES OR NO

3) WATER LEVEL SUMMARY

A) DEPTH FROM TOP OF CASING AFTER DEVELOPMENT?

33.45 FT. OR DRY

B) OTHER MEASUREMENTS (T.O.C.):

DATE/TIME 07-17-91/Initial 30.87

DATE/TIME 07-18-91/Pre Sampling 33.86

DATE/TIME 08-27-91/ 34.37

ADDITIONAL COMMENTS: Developed 09-19-91, the well was surveyed for 15 minutes, 110 gallons bailed, water was very turbid. Completed with flush mounted cristy-box type cover. T.O.C. elevation surveyed relative to mean sea level.

RMT**LOG OF TEST BORING**

F-203 (R 01-87)

PROJECT NAME ARATEX SERVICES
 LOCATION SERVISCO
 CONTRACTOR WEST HAZMAT DRILLING
 DRILLING METHOD HOLLOW STEM AUGER

BORING NO. MW-8
 SHEET NO. 1 OF 1
 PROJECT NO. 12012.16
 INSTALLATION _____
 SURFACE ELEV. _____
 BOREHOLE DIA. 8 IN.

SAMPLING NOTES**VISUAL CLASSIFICATION
AND GENERAL OBSERVATIONS**

INTERVAL NO.	TYPE	RECOVERY		MOISTURE DEPTH	VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
		N	%		
1	SS	19 20 23			SILTY Clay (CL), slight W
2	SS	5 7 8		5	SILTY CLAY (CL), no odor.
3	SS	15 20 26		10	SILTY Clay (CL), no odor.
4	SS	12 15 24		15	SILTY CLAY (CL), no odor.
5	SS	20 37 45		20	SILTY CLAY (CL), no odor, wet.
				25	SILTY CLAY (CL), no odor, wet.

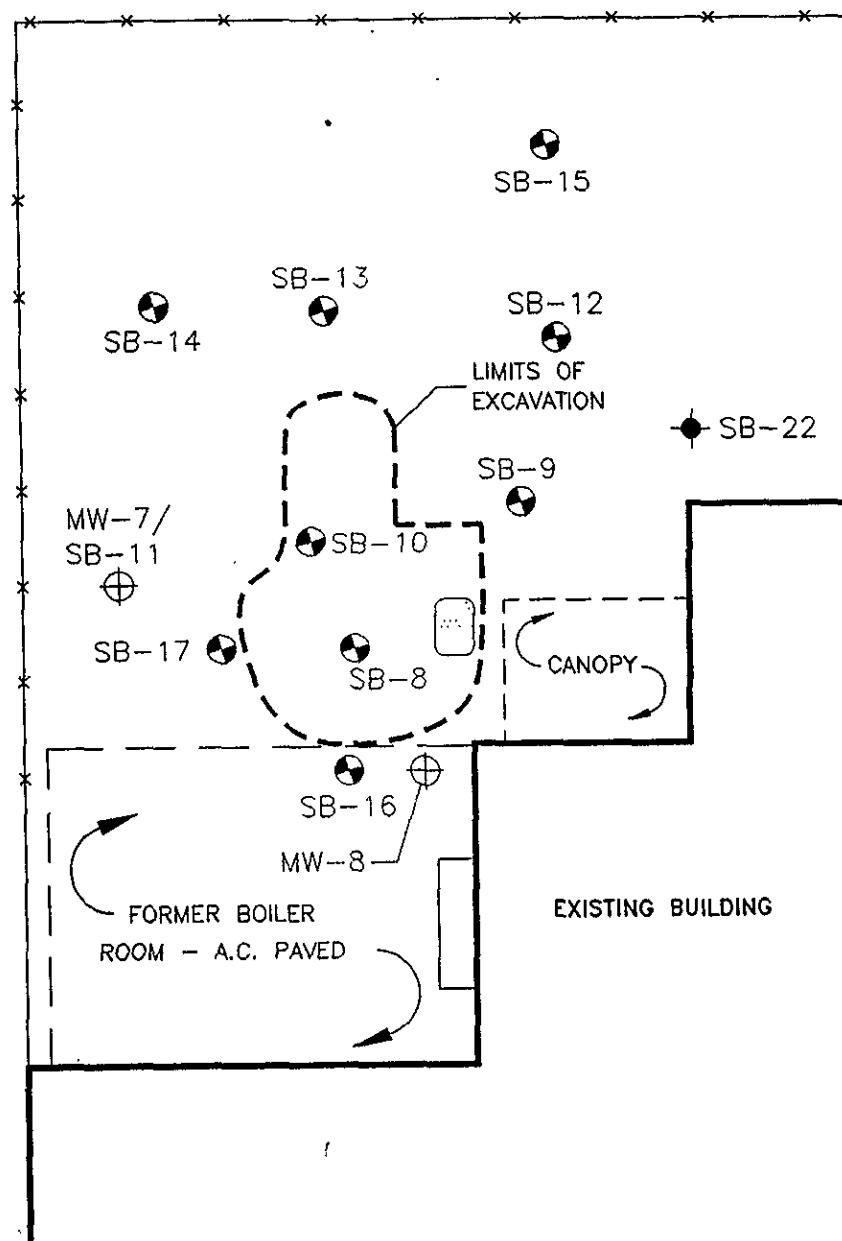
GENERAL NOTES

DATE STARTED 21 FEB 94
 DATE COMPLETED 21 FEB 94
 RIG CME-75
 CREW CHIEF JOHN M.
 LOGGED K. BATE CHECKED _____

WATER LEVEL OBSERVATIONS

WHILE DRILLING 17.0
 AT COMPLETION _____
 AFTER DRILLING _____
 CAVE-IN: DATE/TIME _____ DEPTH _____
 WATER: DATE/TIME _____ DEPTH _____

FILTER STREETS



LEGEND:

- SOIL BORING LOCATION
- ⊕ GROUNDWATER MONITORING WELL
- FORMER 500-GALLON BOILER-FUEL TANK LOCATION
- ◆ SOIL BORING LOCATION (FEBRUARY, 1995)

EXCAVATION DETAIL
FORMER BOILER-FUEL TANK AREA
FORMER SERVISCO FACILITY

0 20 40

APPROXIMATE SCALE IN FEET

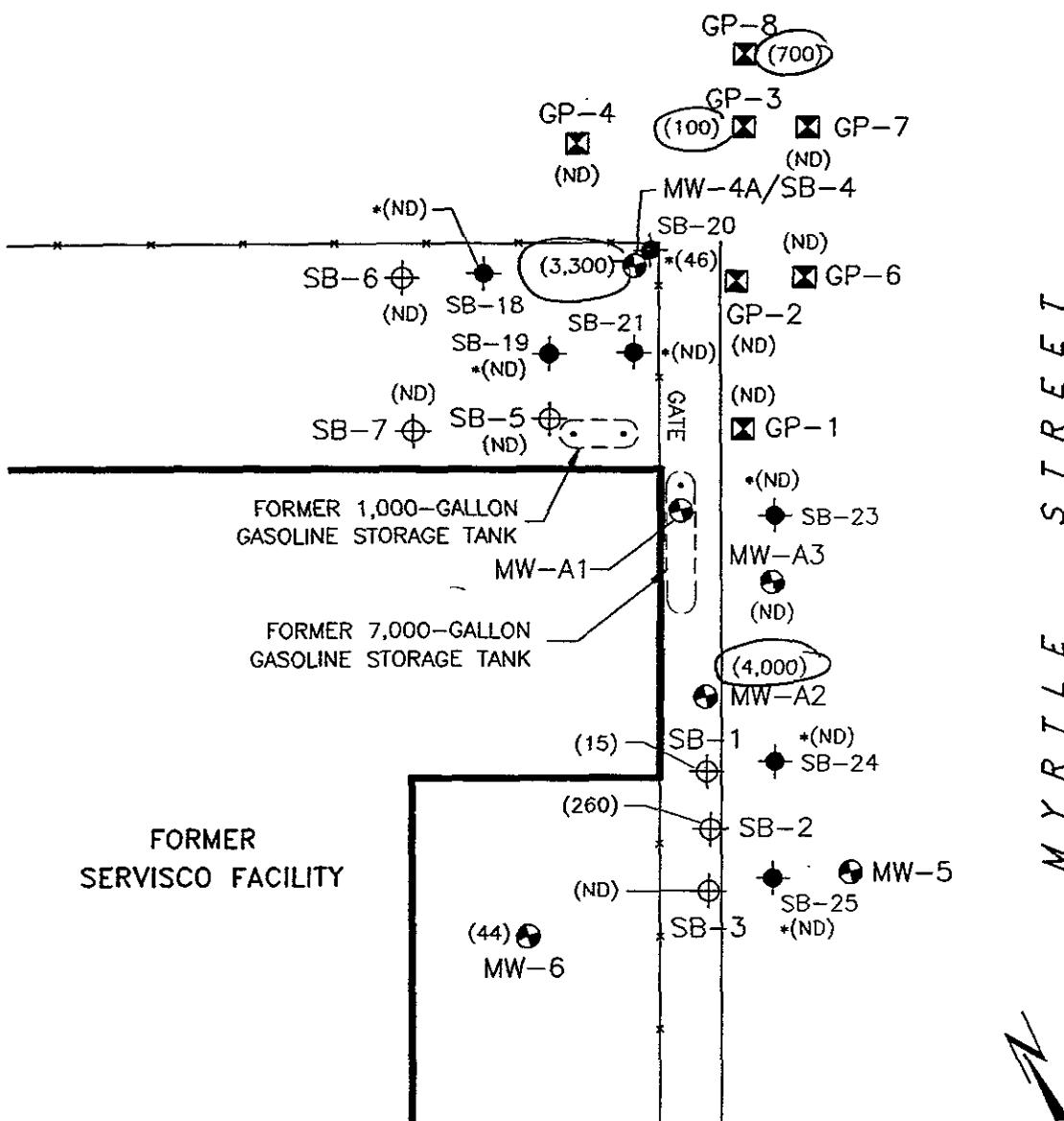


DWN. BY: CRB
APPROVED BY:
DATE: MARCH, 1995
PROJ. # 12012.11
FILE # 12012116

FIGURE 5

LEGEND:

- GROUNDWATER MONITORING WELLS
- GP-1 "GEOPROBE" LOCATION
- SOIL BORING LOCATIONS
- SOIL BORING LOCATIONS (FEBRUARY, 1995)
- (ND) TPH-G (mg/kg) (MARCH, 1990)
- *(ND) TPH-G (mg/kg) (FEBRUARY, 1995)



TPH-G SOIL CONCENTRATIONS
FORMER SERVISCO FACILITY

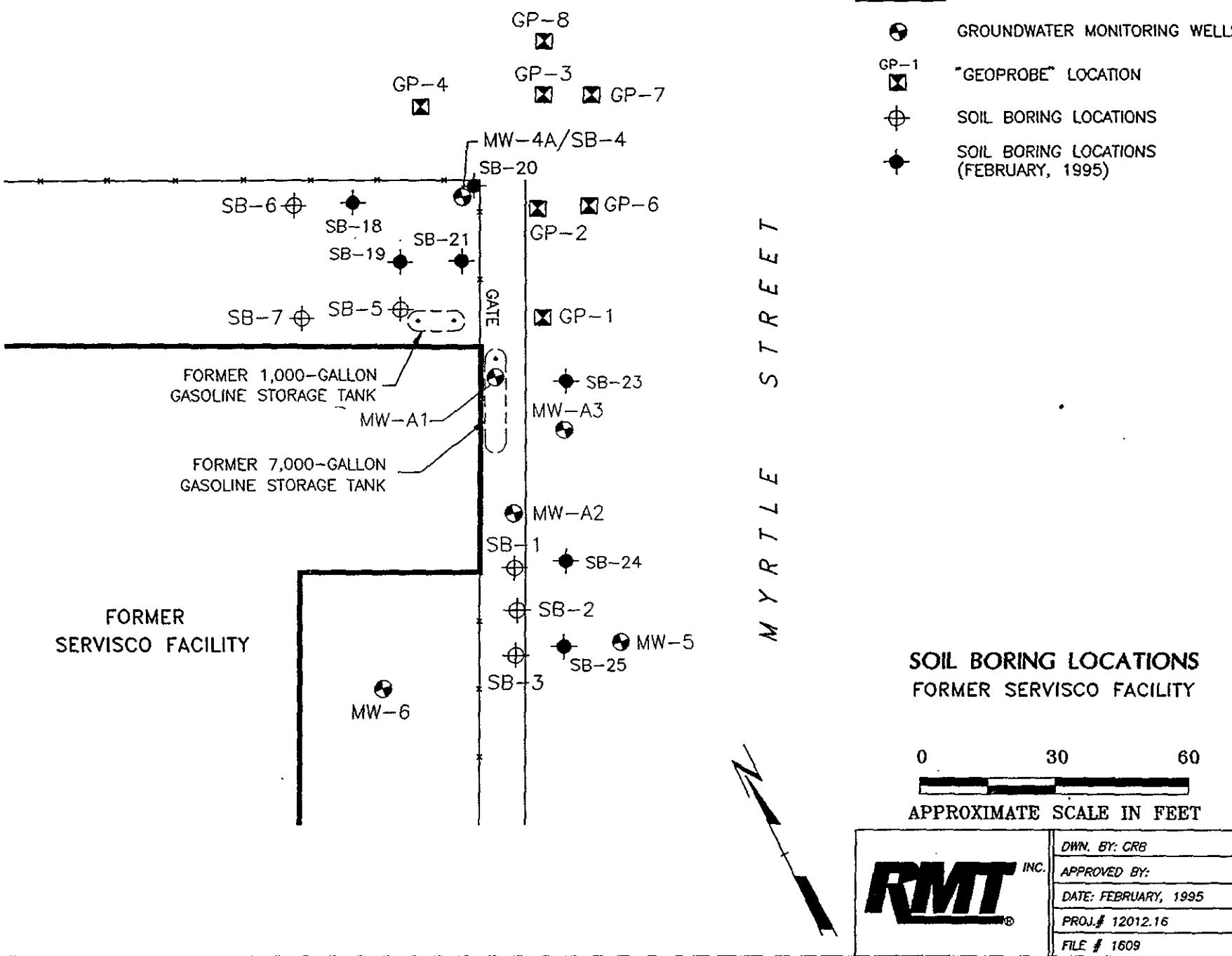
0 30 60

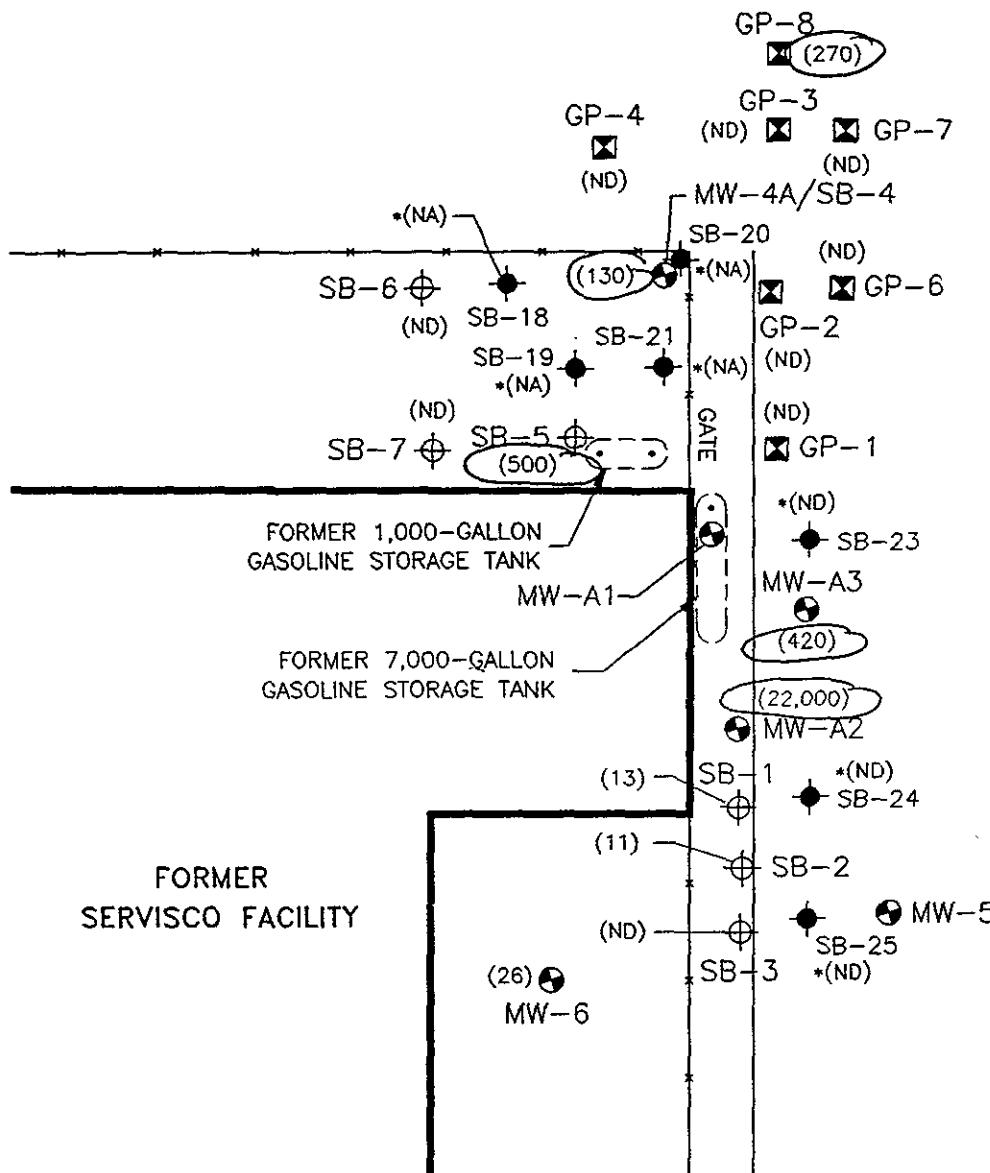
APPROXIMATE SCALE IN FEET

		DWN. BY: CRB
		APPROVED BY:
		DATE: FEBRUARY, 1995
RMT INC.		PROJ. # 12012.16
		FILE # 1609

LEGEND:

- GROUNDWATER MONITORING WELLS
- "GEOPROBE" LOCATION
- SOIL BORING LOCATIONS
- SOIL BORING LOCATIONS (FEBRUARY, 1995)

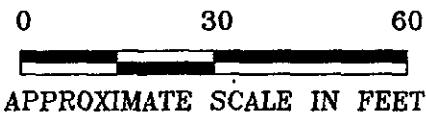




LEGEND:

- GROUNDWATER MONITORING WELLS
- "GEOPROBE" LOCATION
- SOIL BORING LOCATIONS
- SOIL BORING LOCATIONS (FEBRUARY, 1995)
- (ND) BENZENE (mg/kg) (1990 & 1991)
- *(ND) BENZENE (mg/kg) (FEBRUARY, 1995)
- *(NA) NOT ANALYZED

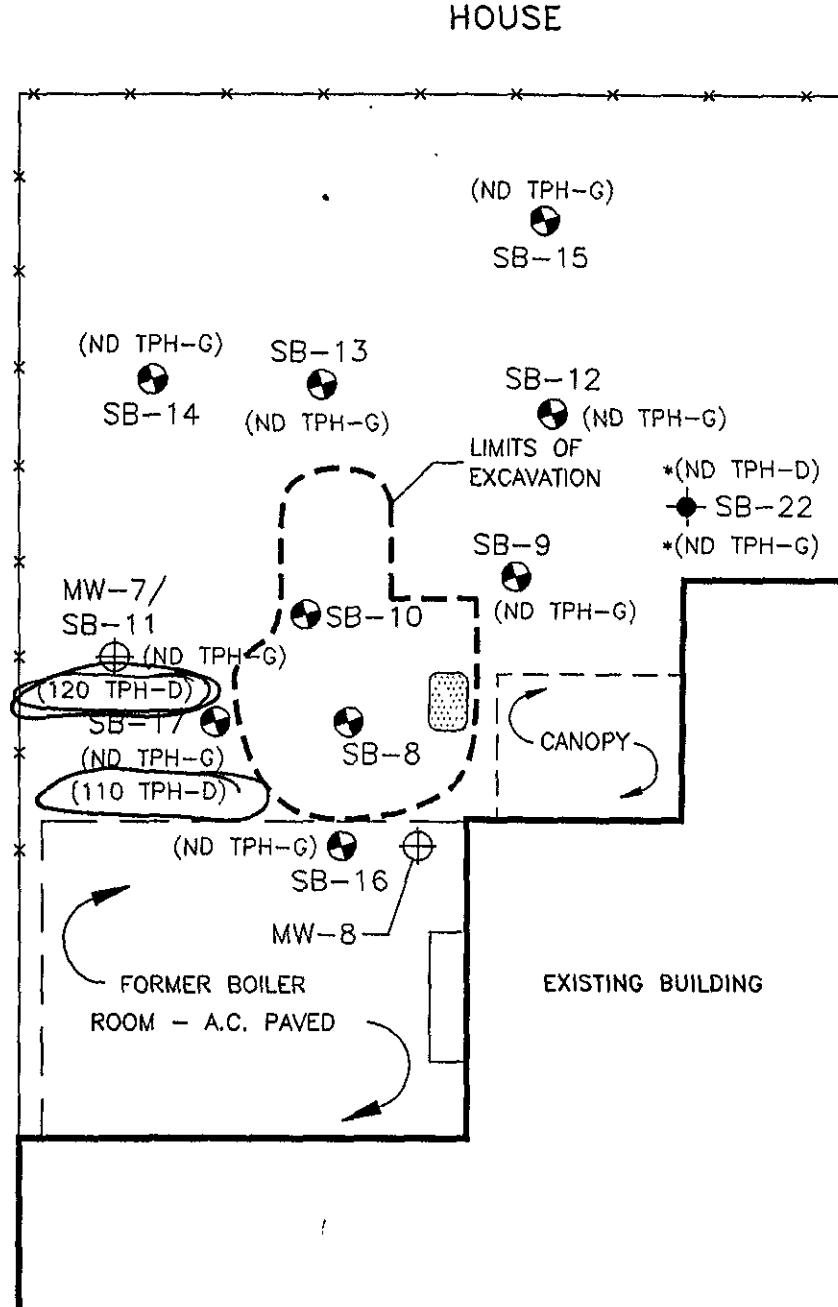
BENZENE SOIL CONCENTRATIONS FORMER SERVISCO FACILITY



DWN. BY: CRB	APPROVED BY:
RMT INC.	DATE: FEBRUARY, 1995
	PROJ. # 12012.16
	FILE # 1609

FIGURE 7

FILBERT STREET



LEGEND:

- SOIL BORING LOCATION
- ⊕ GROUNDWATER MONITORING WELL
- ▨ FORMER 500-GALLON BOILER-FUEL TANK LOCATION
- SOIL BORING LOCATION (FEBRUARY, 1995)
- (ND) TPH-G (mg/kg) (1991)
- *(ND) TPH-G (mg/kg) (FEBRUARY, 1995)

TPH-D/G SOIL CONCENTRATIONS

FORMER SERVISCO FACILITY

0 20 40

APPROXIMATE SCALE IN FEET

DWN. BY: CRB
APPROVED BY:
DATE: MARCH, 1995
PROJ.# 12012.11
FILE # 12012.11

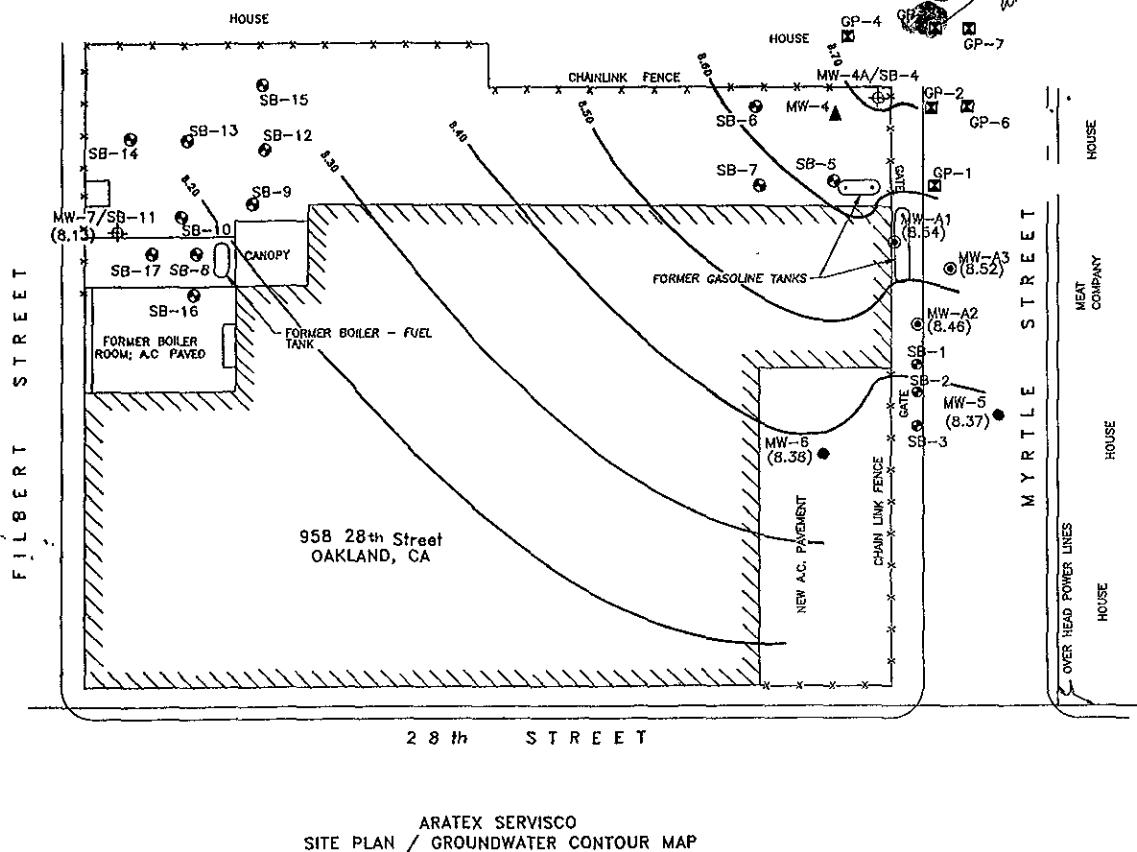
RMT INC.

NOTES:

- Top of casing elevations based on survey relative to mean sea level.
- Groundwater elevations and interpretations based on measurements on December 12, 1991 by RMT, Inc.
- Well MW-A1 monitors Interval from 23.5'-31.0'; all others monitor groundwater above 25-foot depth.
- Wells MW-A1 & MW-A2 may be influenced by proximity of former tank excavation which was back filled with pea gravel that would act as a sink relative to In situ soils and geology.

Legend:

- (◎) Groundwater monitoring wells installed by RMT corp. February 1989.
- (●) Groundwater monitoring wells installed by RMT, Inc: 3/90.
- (◆) Groundwater monitoring wells installed by RMT, Inc: 7/91
- (▲) Abandoned groundwater monitoring well.
- (8.25') Groundwater elevation in feet MSL as of December 12, 1991 by RMT, Inc.
- 8.30' Top of first groundwater based on groundwater elevations and interpreted subsurface conditions.
- GP-1 "Geoprobe" investigation location



ARATEX SERVISCO
SITE PLAN / GROUNDWATER CONTOUR MAP

RMT INC.
OWN BY RAS
DATE: AUGUST, 1991
PROJ: 12012-11
FILE #: 12012115

FIGURE 2

Table 6.
Summary of Sample Analyses, January 10, 1992

Boring Number	Sample Type	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes
GP-1	Vapor	<0.3 µg/l	<0.06 µg/l	<0.1 µg/l	<0.2 µg/l	<0.3 µg/l
	Soil	<1 mg/kg	<0.005 mg/kg	<0.009 mg/kg	<0.005 mg/kg	<0.015 mg/kg
GP-2	Vapor	<0.3 µg/l	<0.06 µg/l	<0.1 µg/l	<0.2 µg/l	<0.3 µg/l
	Soil	<1 mg/kg	<0.005 mg/kg	<0.005 mg/kg	<0.005 mg/kg	<0.015 mg/kg
GP-3	vapor	75,000 µg/l	<180 µg/l	<1,300 µg/l	130 µg/l	<580 µg/l
	Soil	100 mg/kg	<0.005 mg/kg	0.13 mg/kg	<0.005 mg/kg	1.43 mg/kg
GP-4	Vapor	<0.3 µg/l	<0.06 µg/l	<0.1 µg/l	<0.2 µg/l	<0.3 µg/l
	Soil	<1 mg/kg	<0.005 mg/kg	<0.005 mg/kg	<0.005 mg/kg	<0.015 mg/kg
GP-6	Vapor	0.1 µg/l	0.1 µg/l	<0.1 µg/l	<0.2 µg/l	<0.3 µg/l
	Soil	<1 mg/kg	<0.005 mg/kg	<0.005 mg/kg	<0.005 mg/kg	<0.015 mg/kg
GP-7	Vapor	4 µg/l	<0.2 µg/l	<0.1 µg/l	<0.2 µg/l	<0.3 µg/l
	Soil	<1 mg/kg	<0.005 mg/kg	<0.005 mg/kg	<0.005 mg/kg	<0.015 mg/kg
GP-8	Vapor	64,000 µg/l	<350 µg/l	<1,100 µg/l	89 µg/l	<290 µg/l
	Soil	700 mg/kg	0.27 mg/kg	0.36 mg/kg	<0.005 mg/kg	9.2 mg/kg
	Water	120,000 µg/l	1,600 µg/l	<30 µg/l	1,700 µg/l	1,500 µg/l

TABLE 1.
SUMMARY OF SOIL AND GROUNDWATER SAMPLE ANALYSES

Boring	Date	Depth (feet)	8020				TPH-g	TPH-d	TPH- other
			Benzene	Toluene	Ethylbenzene	Xylenes			
SB-2	3-5-90	10	<5.0 µg/kg	8.5 µg/kg	<5.0 µg/kg	47 µg/kg	18 mg/kg	<10 mg/kg	--
	3-6-90	15	11 µg/kg	290 µg/kg	<5.0 µg/kg	510 µg/kg	260 mg/kg	<10 mg/kg	--
SB-3	3-5-90	9.5	<5.0 µg/kg	<5.0 µg/kg	<5.0 µg/kg	<10 µg/kg	<10 mg/kg	<10 mg/kg	--
	3-5-90	13	<5.0 µg/kg	<5.0 µg/kg	<5.0 µg/kg	<10 µg/kg	<10 mg/kg	<10 mg/kg	--
SB-4	7-16-91	9	<25 µg/kg	<25 µg/kg	<25 µg/kg	<25 µg/kg	<1.0 mg/kg	<1.0 mg/kg	150 mg/kg ¹
	7-16-91	12	130 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-16-91	15	85 µg/kg	5 µg/kg	30 µg/kg	55 µg/kg	1.07 mg/kg	<1.0 mg/kg	ND
	7-16-91	17.5	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
SB-5	7-15-91	5.5	<2.5 µg/kg	5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-15-91	8	500 µg/kg	100 µg/kg	450 µg/kg	750 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-15-91	12.5	5 µg/kg	4 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
SB-6	7-15-91	9	<2.5 µg/kg	5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-15-91	10.5	<2.5 µg/kg	8 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-15-91	12	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
SB-7	7-15-91	7.5	<2.5 µg/kg	5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-15-91	9.5	<2.5 µg/kg	10 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-15-91	12.5	<2.5 µg/kg	13 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
SB-8	7-17-91	2.5	<2.5 µg/kg	<2.5 µg/kg	65 µg/kg	<1.0 mg/kg	24 mg/kg	98 mg/kg ²	
	7-17-91	9	5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	2110 mg/kg	ND
	7-17-91	10	40 µg/kg	10 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	310 mg/kg	ND
SB-9	7-16-91	2	10 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-16-91	6	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-16-91	9.5	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-16-91	12	25 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
SB-10	7-16-91	6	<5.0 µg/kg	<5.0 µg/kg	<5.0 µg/kg	<5.0 µg/kg	<1.0 mg/kg	<1.0 mg/kg	344 mg/kg ¹
	7-16-91	9.5	23 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-16-91	14	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	77 mg/kg	ND
SB-11	7-17-91	2	<25 µg/kg	<25 µg/kg	<25 µg/kg	<25 µg/kg	<1.0 mg/kg	120 mg/kg	23 mg/kg ²
	7-17-91	9	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
SB-12	7-16-91	2	<2.5 µg/kg	4 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-16-91	8	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-16-91	9.5	<2.5 µg/kg	5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-16-91	14	<2.5 µg/kg	10 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
SB-13	7-17-91	2	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-17-91	7	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-17-91	9	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
SB-14	7-17-91	2	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-17-91	7	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-17-91	11	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
SB-15	7-17-91	4	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-17-91	8.5	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
SB-16	7-17-91	9	<2.5 µg/kg	330 µg/kg	<2.5 µg/kg	410 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
	7-17-92	11	<2.5 µg/kg	70 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND
SB-17	7-17-91	3.5	<25 µg/kg	100 µg/kg	<25 µg/kg	450 µg/kg	<1.0 mg/kg	20 mg/kg	120 mg/kg ²
	7-17-91	5	<25 µg/kg	80 µg/kg	<25 µg/kg	380 µg/kg	<1.0 mg/kg	110 mg/kg	500 mg/kg ²
	7-17-91	10.5	<2.5 µg/kg	40 µg/kg	<2.5 µg/kg	<2.5 µg/kg	<1.0 mg/kg	<1.0 mg/kg	ND

Note: -- - Not analyzed for this constituent
* - Free product present

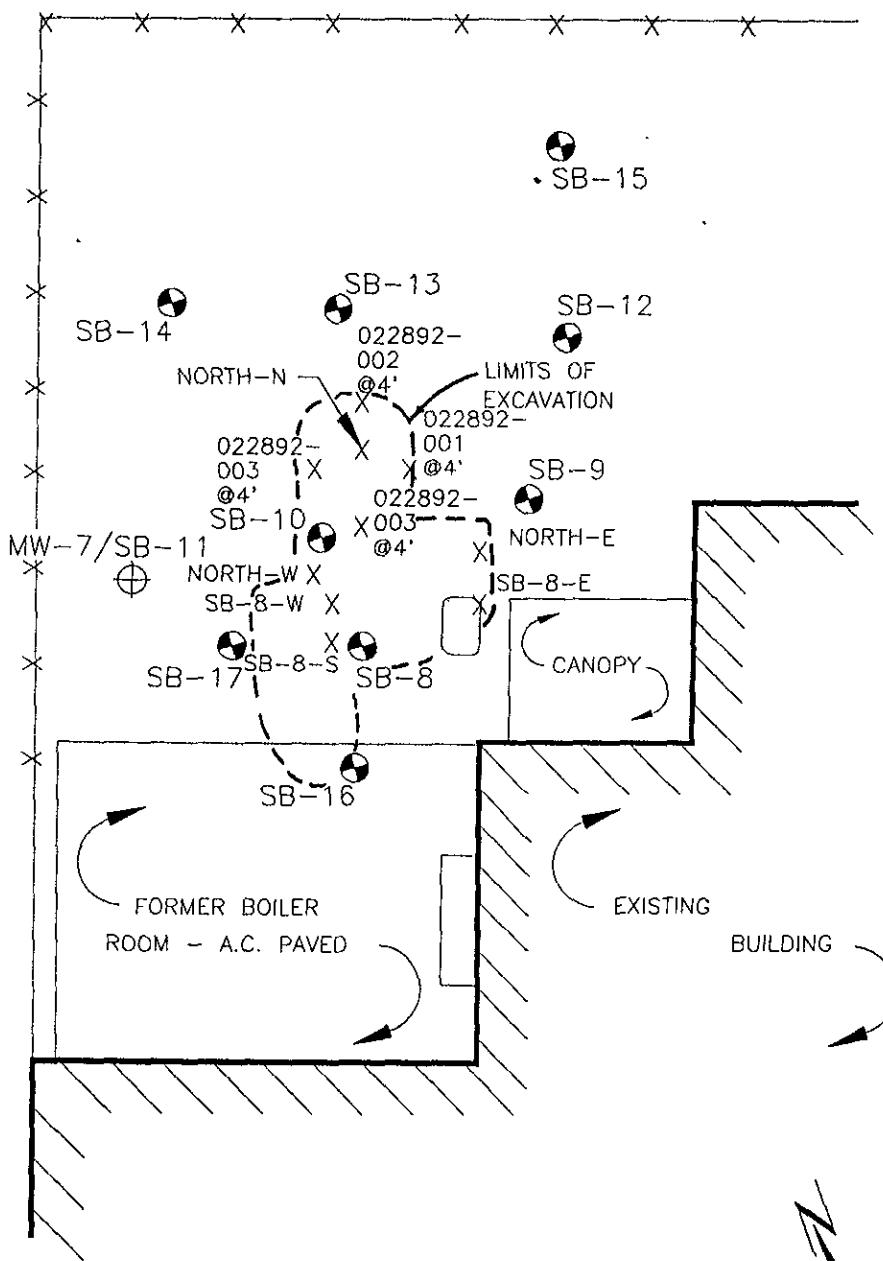
1. TPH as jet fuel
2. TPH as hydraulic oil
GW - Groundwater Sample

TABLE 1.
SUMMARY OF SOIL AND GROUNDWATER SAMPLE ANALYSES

Boring	Date	Depth (feet)	8020				TPH-g	TPH-d	TPH- other
			Benzene	Toluene	Ethylbenzene	Xylenes			
MW-A1	2-16-89	17.5	<50 µg/kg	<100 µg/kg	<100 µg/kg	300 µg/kg	<5 mg/kg	<10 mg/kg	-
	3-8-89	GW	120 µg/l	150 µg/l	60 µg/l	2100 µg/l	7.2 mg/l	12 mg/l	-
	5-31-89	GW	250 µg/l	57 µg/l	11 µg/l	210 µg/l	5.8 mg/l	5.07 mg/l	-
	9-13-89	GW	16 µg/l	12 µg/l	8.9 µg/l	37 µg/l	2.7 mg/l	1.0 mg/l	-
	12-5-89	GW	3.6 µg/l	<0.2 µg/l	4.7 µg/l	24.3 µg/l	0.5 mg/l	<0.5 mg/l	-
	3-21-90	GW	3.6 µg/l	<0.2 µg/l	4.7 µg/l	24.3 µg/l	1.3 mg/l	<0.5 mg/l	-
	11-13-90	GW	1.3 µg/l	<0.5 µg/l	<0.5 µg/l	35.3 µg/l	0.296 mg/l	-	-
	7-18-91	GW	<0.5 µg/l	<0.5 µg/l	<0.5 µg/l	<0.5 µg/l	<0.05 mg/l	<0.05 mg/l	ND
	12-11-91	GW	0.3 µg/l	<0.3 µg/l	<0.3 µg/l	1 µg/l	0.092 mg/l	<0.01 mg/l	-
MW-A2	2-17-89	5.5	50 µg/kg	100 µg/kg	<100 µg/kg	300 µg/kg	33 mg/kg	180 mg/kg	-
	2-17-89	9.5	1400 µg/kg	6000 µg/kg	11000 µg/kg	58000 µg/kg	390 mg/kg	310 mg/kg	-
	2-17-89	14.5	22000 µg/kg	190000 µg/kg	67000 µg/kg	420000 µg/kg	4000 mg/kg	4100 mg/kg	-
	2-17-89	19.5	1000 µg/kg	600 µg/kg	200 µg/kg	1000 µg/kg	8 mg/kg	<10 mg/kg	-
	3-8-89	GW	380 µg/l	200 µg/l	<0.3 µg/l	10 µg/l	5.2 mg/l	7.7 mg/l	-
	5-31-89	GW	150 µg/l	4 µg/l	<0.3 µg/l	11 µg/l	<0.5 mg/l	<0.5 mg/l	-
	9-13-89	GW	56 µg/l	4.4 µg/l	4.8 µg/l	11 µg/l	1.9 mg/l	0.6 mg/l	-
	12-5-89	GW	63 µg/l	10 µg/l	21 µg/l	2.9 µg/l	3.5 mg/l	<0.5 mg/l	-
	3-21-90	GW	35 µg/l	2.4 µg/l	<0.2 µg/l	18.9 µg/l	1.1 mg/l	<0.5 mg/l	-
	11-13-90	GW	32.5 µg/l	2.4 µg/l	<0.5 µg/l	3.4 µg/l	0.719 mg/l	-	-
	7-18-91	GW	28 µg/l	<0.5 µg/l	<0.5 µg/l	<0.5 µg/l	<0.05 mg/l	<0.05 mg/l	-
	12-11-91	GW	90 µg/l	3 µg/l	2 µg/l	2 µg/l	0.44 mg/l	<0.01 mg/l	-
MW-A3	2-17-89	4.5	<50 µg/kg	<100 µg/kg	<100 µg/kg	<300 µg/kg	<5 mg/kg	<10 mg/kg	-
	2-17-89	9.5	420 µg/kg	<100 µg/kg	<100 µg/kg	<300 µg/kg	<5 mg/kg	<10 mg/kg	-
	2-17-89	14.5	<50 µg/kg	<100 µg/kg	<100 µg/kg	<300 µg/kg	<5 mg/kg	<10 mg/kg	-
	3-8-89	GW	<0.3 µg/l	<0.3 µg/l	<0.3 µg/l	<0.3 µg/l	<0.5 mg/l	<0.5 mg/l	-
	5-31-89	GW	<0.3 µg/l	<0.3 µg/l	<0.3 µg/l	<0.3 µg/l	<0.5 mg/l	<0.5 mg/l	-
	9-13-89	GW	<0.3 µg/l	<0.3 µg/l	<0.3 µg/l	<0.3 µg/l	<0.5 mg/l	<0.5 mg/l	-
	12-5-89	GW	<0.3 µg/l	<0.3 µg/l	<0.3 µg/l	<0.3 µg/l	<0.5 mg/l	<0.5 mg/l	-
	3-21-90	GW	<0.2 µg/l	<0.2 µg/l	<0.2 µg/l	<1.0 µg/l	<0.5 mg/l	<0.5 mg/l	-
	11-13-90	GW	<0.5 µg/l	<0.5 µg/l	<0.5 µg/l	<0.5 µg/l	<0.05 mg/l	-	-
	7-18-91	GW	<0.5 µg/l	<0.5 µg/l	<0.5 µg/l	<0.5 µg/l	<0.05 mg/l	<0.05 mg/l	ND
	12-11-91	GW	<0.3 µg/l	<0.3 µg/l	<0.3 µg/l	<0.5 µg/l	<0.01 mg/l	<0.01 mg/l	-
MW-4	3-5-90	10	350 µg/kg	570 µg/kg	1500 µg/kg	4600 µg/kg	3300 mg/kg	145 mg/kg	-
	3-5-90	15	29 µg/kg	22 µg/kg	66 µg/kg	239 µg/kg	12 mg/kg	<10 mg/kg	-
	3-22-90	GW*	1500 µg/l	17 µg/l	<10 µg/l	2020 µg/l	20 mg/l	<0.5 mg/l	-
MW-4A	7-19-91	GW	68 µg/l	3.0 µg/l	8.0 µg/l	31 µg/l	2.60 mg/l	<0.05 mg/l	ND
	12-11-91	GW	2 µg/l	<0.3 µg/l	<0.3 µg/l	<0.5 µg/l	0.29 mg/l	<0.01 mg/l	-
MW-5	3-5-90	10	<5.0 µg/kg	8.2 µg/kg	<5.0 µg/kg	<10 µg/kg	<10 mg/kg	<10 mg/kg	-
	3-5-90	15	<5.0 µg/kg	6.2 µg/kg	<5.0 µg/kg	<10 µg/kg	<10 mg/kg	<10 mg/kg	-
	3-22-90	GW	<0.2 µg/l	<0.2 µg/l	<0.2 µg/l	<1.0 µg/l	<0.5 mg/l	<0.5 mg/l	-
	11-13-90	GW	<0.5 µg/l	<0.5 µg/l	<0.5 µg/l	<0.5 µg/l	<0.05 mg/l	-	-
	7-19-91	GW	<0.5 µg/l	<0.5 µg/l	<0.5 µg/l	<0.5 µg/l	<0.05 mg/l	<0.05 mg/l	ND
	12-11-91	GW	<0.3 µg/l	<0.3 µg/l	<0.3 µg/l	<0.5 µg/l	<0.01 mg/l	<0.01 mg/l	-
MW-6	3-5-90	10	5.5 µg/kg	74 µg/kg	<5.0 µg/kg	130 µg/kg	38 mg/kg	<10 mg/kg	-
	3-5-90	15	26 µg/kg	80 µg/kg	<5.0 µg/kg	95 µg/kg	44 mg/kg	<10 mg/kg	-
	3-22-90	GW	<0.2 µg/l	<0.2 µg/l	<0.2 µg/l	<1.0 µg/l	<0.5 mg/l	<0.5 mg/l	-
	11-13-90	GW	7.9 µg/l	<0.5 µg/l	<0.5 µg/l	1.8 µg/l	0.07 mg/l	-	-
	7-19-91	GW	42 µg/l	1.0 µg/l	3.0 µg/l	9.0 µg/l	0.30 mg/l	<0.05 mg/l	ND
	12-11-91	GW	8 µg/l	<0.3 µg/l	<0.3 µg/l	<0.5 µg/l	0.16 mg/l	<0.01 mg/l	-
MW-7	7-19-91	GW	<0.5 µg/l	<0.5 µg/l	<0.5 µg/l	<0.5 µg/l	<0.05 mg/l	<0.05 mg/l	ND
	12-11-91	GW	<0.3 µg/l	<0.3 µg/l	<0.3 µg/l	<0.5 µg/l	0.18 mg/l	<0.01 mg/l	-
SB-1	3-5-90	10	13 µg/kg	10 µg/kg	<5.0 µg/kg	35 µg/kg	15 mg/kg	<10 mg/kg	-
	3-5-90	15	10 µg/kg	6.2 µg/kg	37 µg/kg	68 µg/kg	<10 mg/kg	<10 mg/kg	-

FIBBERT STREET

HOUSE



LEGEND:

- Soil boring
- ⊕ Groundwater monitoring well
- Former 500-gallon boiler-fuel tank location
- X Soil sample location



ARATEX - SERVISCO
EXCAVATION DETAIL
FORMER BOILER-FUEL TANK AREA



DWN. BY: RAS
DATE: AUGUST, 1992
PROJ.# 12012.11
FILE # 12012116

FIGURE 3