



FAST-TEK
Engineering Support Services
drilling - excavating - in-situ technologies
389008, A, B, C-57, Haz, Asb

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November 25, 1997

Ms. Susan Hugo
Alameda County Department of Environmental Health
Environmental Protection Division
1131 Harbor Bay Parkway, Room 250
Alameda, CA 94502-6577

RE: Groundwater Monitoring Well Installation/ Third Quarter 1997 Monitoring Report
Former Standard Brands Paint Company Retail Store # 147
4343 San Pablo Avenue
Emeryville, California
FAST-TEK Job # 301-001-02F

Dear Ms Hugo:

This report presents third quarter 1997 groundwater monitoring results for the former Standard Brands Paint retail store # 147, located at 4343 San Pablo Avenue in Emeryville, California (site) Groundwater monitoring well MW-1A was installed on September 25, 1997. Well sampling was performed on September 29, 1997 by FAST-TEK Engineering Support Services (FAST-TEK) in accordance with the FAST-TEK's Revised Groundwater Monitoring Well Installation Workplan dated September 24, 1997. This report presents results of the first quarterly monitoring event in the monitoring program established in accordance with the September 24, 1997 workplan. ✓

SITE DESCRIPTION

The subject site is located in the southeast portion of Emeryville, California at the southwest corner of San Pablo Avenue and 45th Street approximately 1/2 mile east of Interstate Highway 80. The site is surrounded by a mixture of commercial and residential properties. The site is bounded by a public transit vehicle maintenance center and a dairy products processing and transfer center to the north, vacant apartment buildings and empty lots to the west and south, and commercial and/ or residential properties east of San Pablo Avenue. Figures 1 and 2, contained in Attachment A, are maps showing the location of the site within the City of Emeryville and the site shown in relation to major features surrounding the site, respectively.

SITE BACKGROUND

In 1995, Environ recorded a magnetic anomaly in the northeast corner of the site. McLaren/ Hart subsequently probed the area of the anomaly and determined that an underground storage tank (UST) was present at that location. In June 1997, McLaren/ Hart submitted a report describing investigations and risk assessment findings of the remainder of the site; the report recommended that the UST be removed. The ACDEH granted no further action status to the site, and indicated site closure would be appropriate after completion of tank closure in accordance with Title 23 requirements and one year of quarterly monitoring of groundwater monitoring well MW-3.

In July 1997, FAST-TEK began removal of the UST and it was determined that contaminated soils were present at the site that would require remediation. Soils were

excavated and later disposed at a class III landfill. During the excavation activities, three additional USTs were discovered and removed by FAST-TEK. As excavation activities progressed, it became necessary to destroy onsite groundwater monitoring well MW-1 so that excavation of contaminated soils could proceed where the well was located. It was determined by ACDEH that installation and monitoring of a replacement for groundwater monitoring well MW-1 would be necessary to achieve closure of the USTs.

The replacement well (MW-1A) was to be placed downgradient from the former UST #1 and monitored for two consecutive quarters. Assuming that these two sampling events demonstrated that Site groundwater had not been significantly impacted by the onsite release, ACDEH would provide Tank Closure at that time. Sampling results presented within this report represent the first of the two samplings required for tank closure.

This report also presents the results of sampling at the Site downgradient well (MW-3). This sampling event represents the first of four quarterly sampling events required for Site Closure.

GROUNDWATER MONITORING WELL INSTALLATION

On September 25, 1997, FAST-TEK drilled one boring to approximately 15 feet below ground surface (bgs) using 8 inch outside diameter hollow stem augers and completed the boring as groundwater monitoring well MW-1A. FAST-TEK installed groundwater monitoring well MW-1A slightly within the boundary of the excavated area and hydraulically down-gradient from the former location of UST #1.

Monitoring well MW-1A was installed within the former excavation backfill down-gradient from a groundwater barrier which was installed during backfill operations. Placement of the well within the backfilled area is designed to determine whether groundwater has been impacted by the onsite release. The groundwater barrier is designed to ensure that potentially contaminated groundwater resulting from a suspected off-site release is not attributed to the on-site release. Well placement as described herein would ensure that the well samples groundwater that has been in contact with a maximum surface area of soils within the remediation area. Figure 2 shows the location of groundwater monitoring well MW-1A and the two existing site monitoring wells (MW-2 and MW-3).

Groundwater monitoring well MW-1A was installed using 10 feet of factory slotted 2-inch inside diameter PVC screen, with 0.010 inch slots, placed from 15 feet to 5 feet below ground surface (BGS). Two inch PVC riser was placed from 5 feet BGS to within approximately 6 inches of the surface. The filter pack around the screen was placed from 15 feet to 4 feet BGS and composed of Lonestar # 2/12 washed sand. A bentonite seal was placed from 4 feet to 2 feet BGS (hydrated after placement). The well annulus was then sealed to within approximately 6 inches of the surface using neat cement grout. The well was completed with an 8 inch diameter flush mounted well box and provided with a locking well cap.

On September 26, 1997, MW-1A was developed by FAST-TEK. The well was first surged for approximately 5 minutes to loosen fine sediment in the filter pack. To remove sediment loosened during surging, FAST-TEK then bailed approximately 40 gallons of water from the well until the water was nearly clear using a new disposable bailer.

On October 1, 1997, the top of casing and ground surface elevation for each of the three site monitoring wells were surveyed Mr. David Contreras, licensed land surveyor # 5065, of Novato, California.

GROUNDWATER SAMPLING

On September 29, 1997, FAST-TEK personnel measured depth to water, purged, and sampled groundwater monitoring wells MW-1A and MW-3. FAST-TEK also measured depth to water in groundwater monitoring well MW-2 for calculation of hydraulic gradient at the site. Groundwater samples were collected according to FAST-TEK's standard operating procedures for groundwater sampling, described in Attachment B.

GROUNDWATER OCCURRENCE

A groundwater contour map for shallow groundwater based on depth-to-water measurements taken on September 29, 1997 is included as Figure 3. The calculated hydraulic gradient for the September 29, 1997 sampling event was 0.015 vertical foot per horizontal foot in a southwesterly direction. The calculated hydraulic gradient is consistent with a gradient of 0.013 foot per foot in a westerly to southwesterly direction as calculated by Environ in 1995. Measured groundwater depths and calculated groundwater elevation data are presented in Table 1.

ANALYTICAL RESULTS

For the initial sampling event, one groundwater sample each was collected from monitoring wells MW-1A and MW-3. Groundwater samples were shipped under chain of custody control to McCampbell Analytical Inc. (McCampbell), of Pacheco, California. McCampbell is certified by the State of California to perform the required analyses. A copy of the laboratory analytical report and chain of custody record is included in Attachment C.

TANK CLOSURE SAMPLING

In accordance with the ACDEH requests, the sample collected from MW-1A was analyzed for: Total Petroleum Hydrocarbons as gasoline (TPHg) by EPA Method 8015; Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) by EPA Method 8020; and for organic lead per CA Title 22, Chapter 11, Appendix XI. All analytes were below laboratory detection limits in the groundwater sample collected from monitoring well MW-1A.

SITE CLOSURE SAMPLING

Monitoring well MW-3 was sampled for Total Petroleum Hydrocarbons as mineral spirits (TPHms) by EPA modified method 8015, Naphthalene by EPA method 8270, and for Volatile Organic Compounds (VOCs) by EPA method 8010. All analytes but TPHms were below laboratory detection limits in the sample collected from monitoring well MW-3. TPHms was detected in the sample collected from monitoring well MW-3 at a concentration of 310 µg/L, significantly less than the 830 µg/L reported by McLaren/ Hart in Table 6 of their report (table attached).

CONCLUSIONS

The groundwater flow direction for the September, 1997 sampling event was in a southwesterly direction at a gradient of 0.015 foot per foot. TPHms was reported in the groundwater sample collected from monitoring well MW-3. No other analytes were detected in either sample.

TANK CLOSURE

FAST-TEK will conduct one additional quarterly groundwater monitoring event for MW-1A. If during the second event, concentrations of BTEX constituents are below their MCLs, organic lead is below 50 µg/L, and TPHg is below 50 µg/L in the sample collected from MW-1A, UST closure will be requested.

SITE CLOSURE


Three additional quarterly monitoring events will be conducted to evaluate TPHms concentrations in MW-3. Groundwater monitoring well MW-3 will be sampled for TPHms and Naphthalene, however, FAST-TEK requests that VOCs not be analyzed for the remainder of the sampling program due to the lack of occurrence of these chemicals at the site. If the monitoring program concludes that the concentration of TPHms in monitoring well MW-3 is stable or decreasing, Site Closure will be requested.

LIMITATIONS

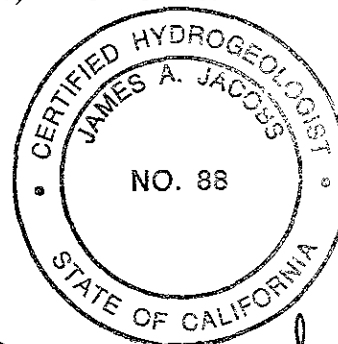
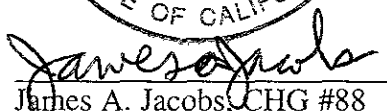
This report was prepared in accordance with generally accepted standards of environmental practice in Northern California at the time this work was performed. The conclusions of this report are based solely upon the groundwater sampling results collected. Sample results are valid only for the specific sample locations, dates collected, and under the site conditions present at the time of sampling. FAST-TEK and the authors assume no responsibility for site conditions out of the control of FAST-TEK or the potential affects of these site conditions. This report was prepared for the sole and exclusive benefit of the client and is intended only for the use of the client. Other parties should not rely on the information contained in this report without first consulting FAST-TEK.

If you have questions or comments, please call at (510) 232-2728-230.

Sincerely,
FAST-TEK



Paul E. Jones
Project Geologist

James A. Jacobs, CHG #88
Principal Hydrogeologist

attachments

TABLES

TABLE 1: GROUNDWATER ELEVATION DATA - SEPTEMBER 1997
Former Standard Brands Paint Company Retail Store #147
4343 San Pablo Avenue
Emeryville, California

Well Number	Date Sampled	TOC Elevation	Depth to Water (ft)	Static Water Elev. (MSL)
MW-1A	9/27/97	41.06	8.14	32.92
MW-2	9/27/97	42.31	10.27	32.04
MW-3	9/27/97	38.7	8.82	29.88

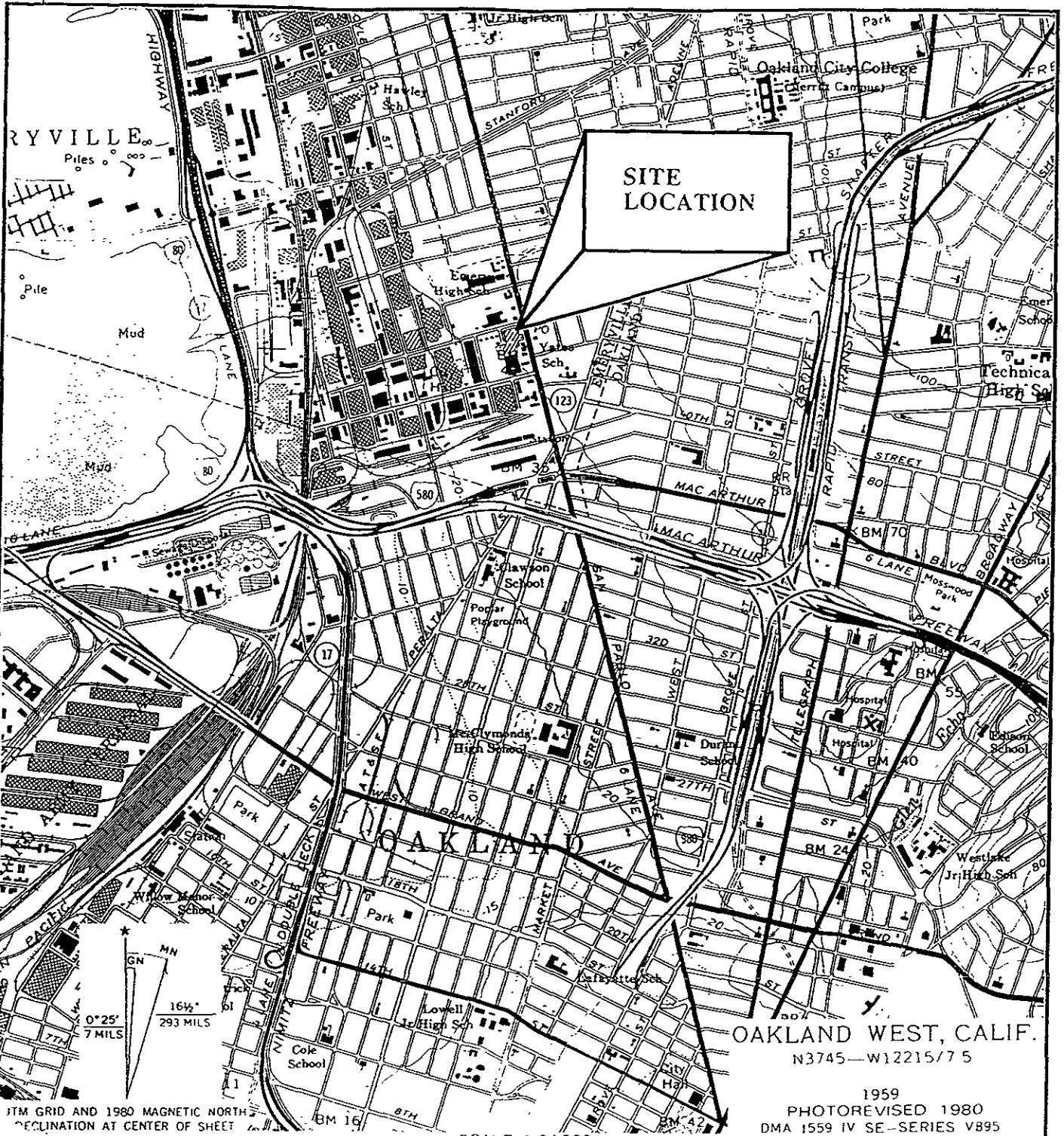
TABLE 2: GROUNDWATER SAMPLE RESULTS - SEPTEMBER 1997
Former Standard Brands Paint Company Retail Store #147
4343 San Pablo Avenue
Emeryville, California

Sample Location	Sample Date	TPH-g mg/L	BTEX µg/L	TPH-ms µg/L	VOC µg/L	Naphthalene µg/L	Organic Pb mg/L
MW-1A	9/27/97	ND	ND	NA	NA	NA	ND
MW-3	9/27/97	NA	NA	310	All ND	ND	NA

NOTES:

TPH-g	Total Petroleum Hydrocarbons as gasoline	mg/L	milligrams per liter (ppm)
TPH-ms	TPH as mineral spirits	µg/L	micrograms per liter (ppb)
VOC	Volatile Organic Compounds	ND	Not Detected (above method reporting limit)
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes	NA	Not Analyzed
		TOC	Top of Casing
		MSL	Feet Above Mean Sea Level

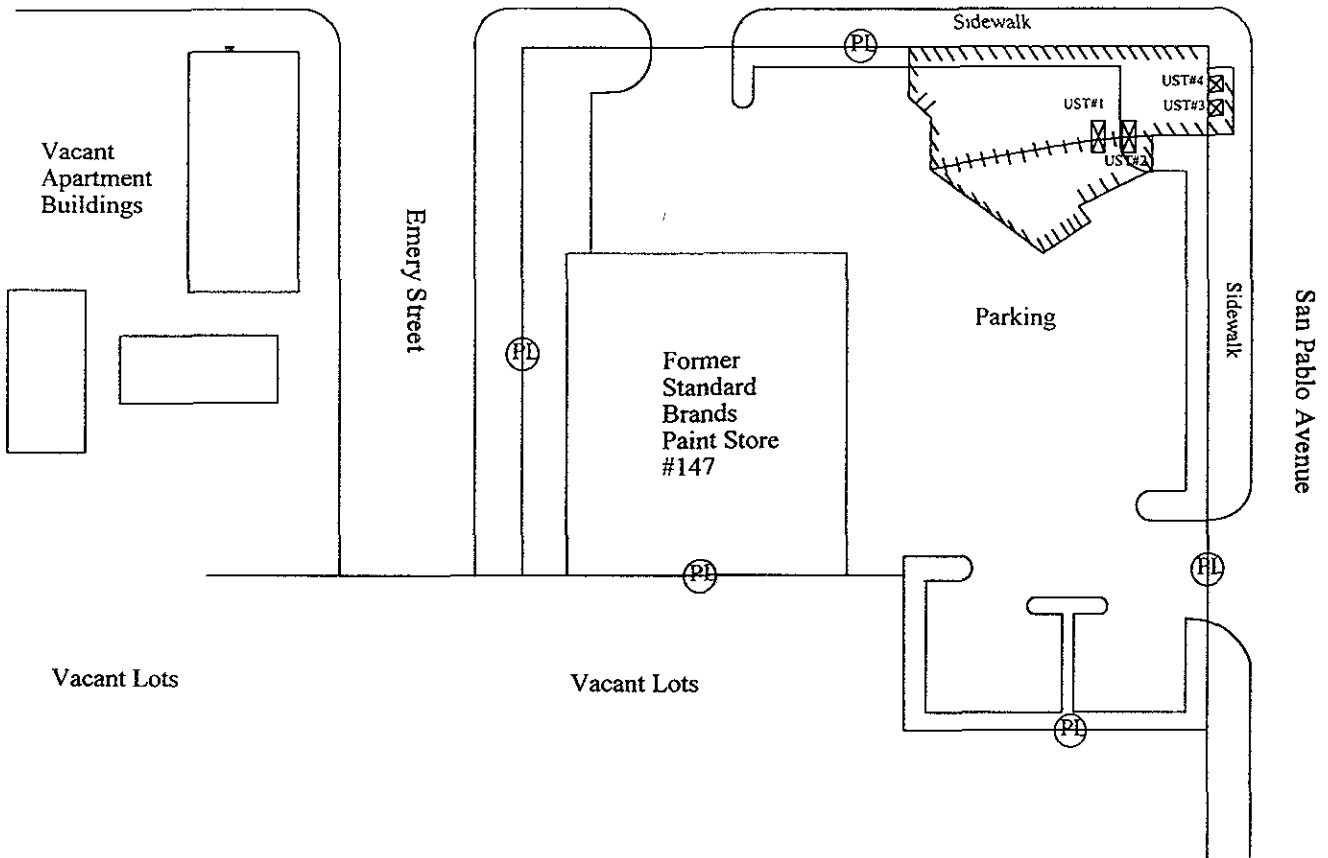
FIGURES



A.C. Transit

Berkeley Farms

45th Street



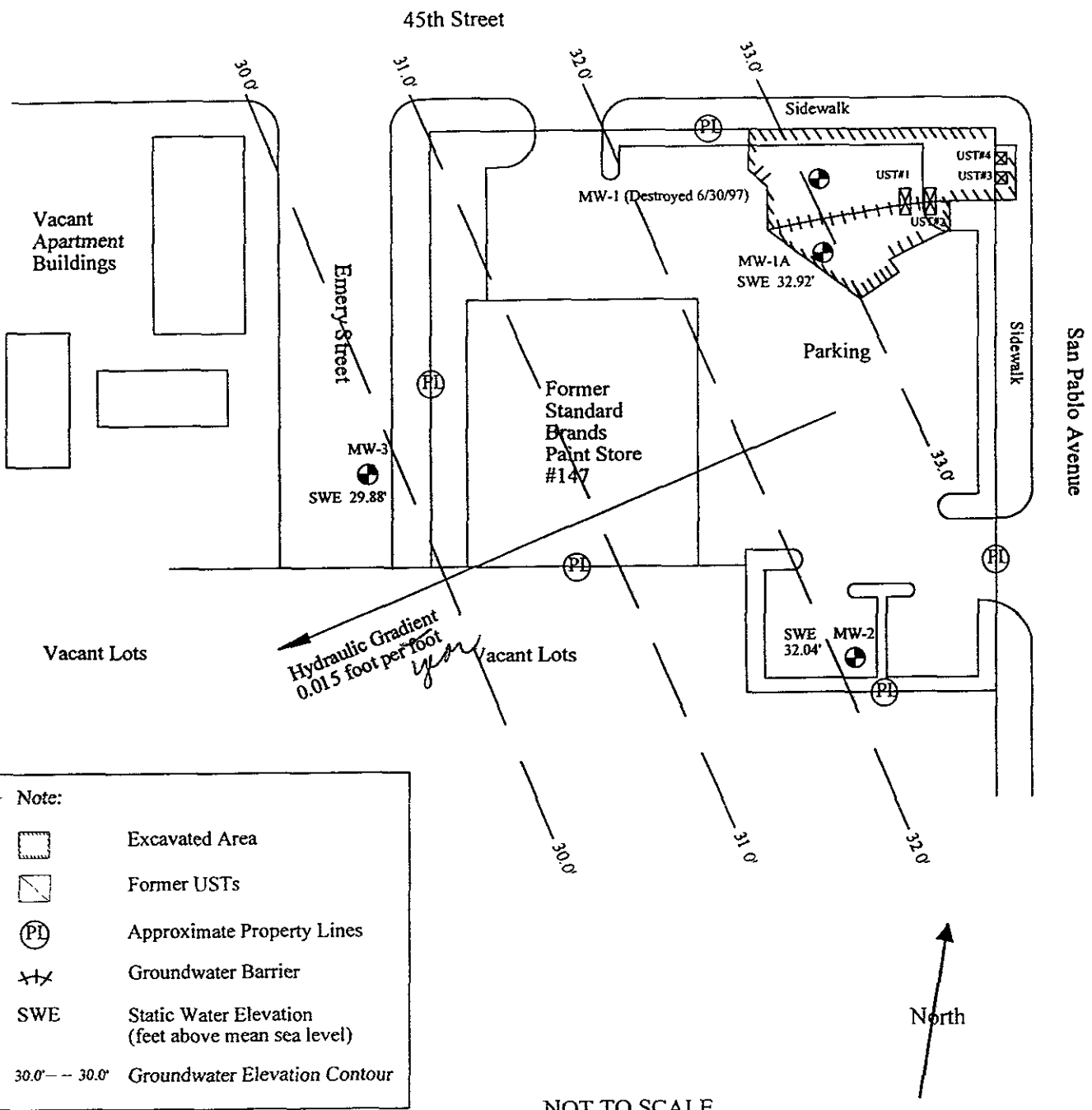
- Note:
- Excavated Area
 - Former USTs
 - Approximate Property Lines
 - Groundwater Barrier





NOT TO SCALE

FAST-TEK ENGINEERING SUPPORT SERVICES 247B Tewksbury Avenue Point Richmond, California 94801 Phone (510) 232-2728 Fax (510) 232-2823		Site Map Former Standard Brands Paint Company 4343 San Pablo Avenue Emeryville, California	
Project No.: 301-001-02F	Date: 9/24/97	Prepared by: E. Chan	Figure 2

A.C. Transit

Berkeley Farms



- Note:**
-  Excavated Area
 -  Former USTs
 -  Approximate Property Lines
 -  Groundwater Barrier
 - SWE** Static Water Elevation (feet above mean sea level)
 - 30.0' -- 30.0' Groundwater Elevation Contour

NOT TO SCALE

FAST-TEK ENGINEERING SUPPORT SERVICES
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Groundwater Contour Map
 Former Standard Brands Paint Company
 4343 San Pablo Avenue
 Emeryville, California

Project No.: 301-001-02F

Date: 10/30/97

Prepared by: E. Chan

Figure 3