Technology, Engineering & Construction, Inc.

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RO2516

March 27, 2006

Mr. Amir K. Gholami, REHS
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Division of Environmental Protection
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502-6577

Alameda County
APR 05 2006
Environmental Health

2006 APR -4 PM 2:30

SUBJECT: **SITE CHARACTERIZATION WORKPLAN**

SITE: **Olympian Service Station**
8515 San Leandro Street,
Oakland, California
Fuel Leak Case #RO0002516

Dear Mr. Gholami:

On behalf of Olympian, TEC Accutite is pleased to submit this workplan to conduct additional site assessment at the above listed property. In January 2004, TEC Accutite reviewed the site status and recommended further investigation to fully assess the environmental conditions of the site. The site background and proposed scope of work are presented below.

SITE DESCRIPTION

The site is located near the corner of San Leandro Street and 85th Avenue in Oakland, CA (Figure 1). Since 1995, the site has been occupied by a cardlock gasoline service station. Station facilities consisted of one 12,000-gallon gasoline underground storage tank (UST), one 5,000-gallon gasoline UST, one 8,000-gallon gasoline UST, one 15,000-gallon diesel UST and four dispenser islands (Figure 2). The USTs and dispensing facilities are in compliance with 1998 upgrade requirements (City of Oakland, EHS upgrade compliance certificate # 11815) (GHH, 2002).

The topography of the subject site is flat with an elevation of approximately 5 to 10 feet above mean sea level. The site is situated in a heavy industrial area. The site is currently owned by Nella Oil Company and operated as a fuel service station.

SITE HISTORY

June 1994, Phase I ESA and Phase II Soil Analysis: Artesian Environmental Consultants conducted a Phase I Environmental Site Assessment (ESA) and performed soil analysis at the subject site. Phase II sample results showed that the site was free of any petroleum hydrocarbons.

June 2002, Environmental Baseline Report: In May 2002, as part of a business transaction between Olympian and Nella Oil Companies, GHH Engineering, Inc. (GHH) conducted a baseline environmental review of the subject site. GHH staff inspected the property and stated that the subject property appeared clean and free of any notable petroleum hydrocarbon staining that

could be indicative of surface spills. The oil/water separator appeared to be in good condition, with no evidence of cracks or significant staining.

GHH advanced a total of seven soil borings, collected seven soil samples and one grab groundwater sample from the area of the underground storage tanks (USTs) and dispenser islands. Baseline sampling showed the presence of 238 milligram per kilogram (mg/kg) total petroleum hydrocarbons as motor oil (TPH-mo) in a soil sample taken near the dispenser area, 80 mg/kg total recoverable petroleum hydrocarbons in a soil sample taken at the oil/water separator area, and 7.0 microgram per liter (µg/L) methyl-tert-butyl ether (MTBE) in a groundwater sample taken in the UST area.

March 2003, Notice of Responsibility: On March 14, 2003, Olympian received a letter from ACEH of notice of the site has been placed in the Local Oversight Program and has identified Olympian Oil as the primary or active responsible party.

January 2004, Site Status: On January 22, 2004, TEC Accutite prepared a letter report to summarize the site status. TEC Accutite recommended drilling and collecting additional soil and groundwater samples from this site to complete the site characterization. The Alameda County Environmental Health (ACEH) concurred with TEC Accutite's recommendations in a regulatory letter dated March 6, 2006.

SCOPE OF WORK

To evaluate the extent of soil and groundwater impact beneath the subject site, TEC Accutite proposes to advance six soil borings (SB1 through SB6) on the subject site (Figure 3). Four of the borings will be converted into temporary piezometers. These piezometers will be surveyed and the groundwater flow direction and gradient will be calculated. The analytical results from the soil and groundwater samples collected from the borings, and the calculated groundwater flow direction and gradient determined from the surveyed piezometers, will allow TEC Accutite to better characterize the extent of hydrocarbon impact to site soils and groundwater, and to direct any future site characterization activities. To complete this scope of work, TEC Accutite proposes to complete the following tasks:

TASK #1 PERMITTING

Once this workplan is approved, Accutite will obtain drilling permits from the ACEH to drill six soil borings.

TASK #2 HEALTH AND SAFETY PLAN

Prior to conducting field activities, a Health and Safety Plan will be prepared that outlines the procedures and associated hazards related to the implementation of the activities. A copy of the Health and Safety Plan will be available on-site at all times during the drilling activities.

TASK #3 CLEARING UTILITIES

Underground Service Alert (USA) will be contacted at least 48 hours prior to conducting fieldwork to identify underground utilities. In addition, a private utility locator will be contracted to identify any buried utilities located near the proposed boring locations prior to commencing drilling activities. TEC Accutite will also hand auger to 5 fbg at the proposed boring locations to ensure underground utilities or other obstructions are not encountered.

TASK #4 INSTALLATION OF SIX SOIL BORINGS AND FOUR PIEZOMETERS

TEC Accutite will drill six soil borings (SB1 through SB6), using a direct-push geoprobe drilling rig at selected locations onsite (Figure 3). Soil borings will be drilled to a depth of approximately 15

feet below grade (fbg). Borings SB1 and SB2 will be advanced to assess soil and groundwater conditions in the projected up-gradient direction of the UST and dispenser island area. Borings SB3 to SB6 will be advanced in the projected down-gradient direction of the UST and dispenser island area.

Drilling will proceed by advancing direct push (Geoprobe) rods lined with 4-foot clear acetate tubes into undisturbed sediments at the bottom of the boring. Samples will be logged according to the Unified Soil Classification System (USCS). Soil samples will be screened onsite with the use of a Photo-Ionization Detector (PID) to determine the presence of volatile organic compounds (VOCs). A portion of each soil sample will be placed into a Ziploc bag and left in a warm location where VOCs within the soil can accumulate within the headspace of the Ziploc bag. The PID probe will then be inserted into the Ziploc bag to measure the concentration of VOCs. Prior to field use, the PID will be calibrated according to the manufacturer's specifications.

TEC Accutite will collect two soil samples from each boring. One soil sample will be collected approximately 2 fbg and another sample will be collected from the capillary fringe (approximately 7 to 9 fbg) of each boring. Additional samples will be collected if contamination (stained soil and odor of petroleum hydrocarbons or solvents) at different depths is suspected. In addition, one grab groundwater sample will be collected from each soil boring.

Soil samples will be covered with Teflon liners and capped. Grab groundwater samples will be collected from all borings using a disposable bailer and transferred into three 40-ml HCL preserved VOAs and two unpreserved 1L Amber. The soil and groundwater samples will be logged in a chain of custody and transported to a California State Certified Laboratory, in a cooler at approximately 4°C. Soil and groundwater samples will be analyzed for total petroleum hydrocarbons as gasoline (TPH-g), total petroleum hydrocarbons as diesel (TPH-d), TPH-mo, and total recoverable hydrocarbons (TRPH) by EPA Method 8015M; benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl-t-butyl ether (MTBE) by EPA Method 8260B.

Fuel oxygenates have not been detected in previous sampling events, TEC Accutite proposes no further analysis for fuel oxygenates.

Borings SB1, SB2, SB3, and SB5 will be converted to temporary piezometers by installing 1-inch diameter PVC casing with a 0.010-inch slotted PVC well screen. The temporary piezometers will be surveyed and the top of casing elevation determined so TEC Accutite can determine the relative groundwater elevation and overall groundwater flow direction and gradient beneath the site. Once the sampling and surveying area completed, all borings and piezometers will be closed by being filled with grout.

TASK #5 REPORT PREPARATION AND REGULATORY LIAISON

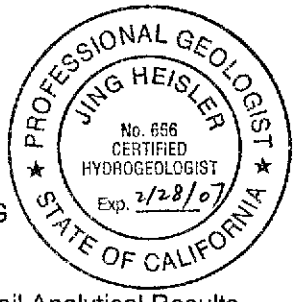
TEC Accutite will prepare a detailed report summarizing all field activities and analytical findings. TEC Accutite will submit this report to SMCHSA and the client.

SCHEDULE OF ACTIVITIES

Accutite will begin permitting after receiving written approval of this workplan from the ACEH and the budget approval from the client. Upon receiving the permit from the ACEH, TEC Accutite will implement the workplan within 90 days and prepare a subsurface investigation report documenting the activities within 60 days.

TEC Accutite would like to thank you in advance for your assistance and prompt attention to this matter. Please feel free to call Jing Heisler at (650) 616-1208 if you have any questions or comments.

Sincerely,
TEC ACCUTITE



Jing Heisler, PG. CHG
Project Manager

Tables: 1 – Soil Analytical Results
2 – Groundwater Analytical Results

Figures: 1 - Vicinity Map
2 – Site Map
3 – Proposed Soil Boring Locations

References:

Artesian, 1994. Artesian Environmental Consultants, Inc., "*Phase I Environmental Site Assessment Phase II Soil Analysis*", June 9 1994.

GHH, 2002. GHH Engineering, Inc., "*Environmental Baseline Report*", June 2002.

TEC, 2004. TEC Accutite, "*Site Status*", January 22, 2004.

cc: Ms. Janet Heikel, Olympian
Mr. and Mrs. Ruben Hausauer
Mr. Dan Koch, Nella Oil Company

TABLE 1
Soil Sampling Results
8515 San Leandro Street
Oakland, California

Sample ID	Sample Depth (fbg)	Date Collected	TPH as					Volatile Organic Compounds (EPA 8260B)												Methanol
			Gasoline (mg/kg)	Diesel (mg/kg)	TRPH (mg/kg)	Motor Oil (mg/kg)	Oil & Grease (mg/kg)	Benzene (ug/kg)	Toulene (ug/kg)	Ethyl-benzene (ug/kg)	Xylenes (ug/kg)	EDB (ug/kg)	1,2-DCA (ug/kg)	DIPE (ug/kg)	ETBE (ug/kg)	MTBE (ug/kg)	TAME (ug/kg)	TBA (ug/kg)	Ethanol (ug/kg)	(ug/kg)
Borings by Artesian Environmental																				
B5/B6	5	5/26/1994	NA	NA	NA	NA	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B1/B2/B3/B4/B7	5	5/25/1994	<1.0	NA	NA	NA	NA	<5.0	<5.0	<5.0	<5.0	NA	<5.0	NA	NA	NA	NA	NA	NA	NA
Borings by GHH Engineering																				
GP1@5'	5	5/15/2002	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP2@5'	5	5/15/2002	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP3@5'	5	5/15/2002	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP4@5'	5	5/15/2002	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP5@5'	5	5/15/2002	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	ND	ND	ND
GP6@5'	5	5/15/2002	ND	ND	NA	238	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
GP7@5'	5	5/14/2002	NA	NA	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ESLs For Soil Assuming Groundwater as Non-Drinking Water Resource:																				
	Residential Land Use		100	100	100	500	500	180	9,300	32000	11000	NA	25	NA	NA	2,000	NA	57,000	45,000	NA
	Commercial Land Use		400	500	500	1,000	1,000	380	9,300	32000	11000	NA	70	NA	NA	5,600	NA	110,000	45,000	NA

Abbreviations:

fbg	feet below grade
TPH	Total Petroleum Hydrocarbons
mg/kg	Milligrams per Kilogram
ug/kg	Micrograms per Kilogram
ND	Non-Detect, below the method detection limit
NA	Not analyzed or not available
1,2-DCA	1,2-dichloroethane
DIPE	Di-isopropyl ether
EDB	Ethyldibromide
ETBE	Ethyl tertiary butyl ether
MTBE	Methyl tert butyl ether
TAME	Tertiary amyl methyl ether
TBA	Tertiary butyl alcohol
TRPH	Total recoverable petroleum hydrocarbons
ESL	Environmental Screening Limit established by California Regional Water Quality Control Board – San Francisco Bay Region, Screening For Environmental Concerns At Sites With Contaminated Soil And Groundwater; Februay 2005.

Notes:

Data of samples collected by Artesian Environmental obtained from Phase I Environmental Site Assessment Phase II Soil Analysis report, dated June 9, 1994.
Data of samples collected by GHH Engineering obtained from Environmental Baseline Report, dated June 2002.

TABLE 2
Groundwater Sampling Results
8515 San Leandro Street
Oakland, California

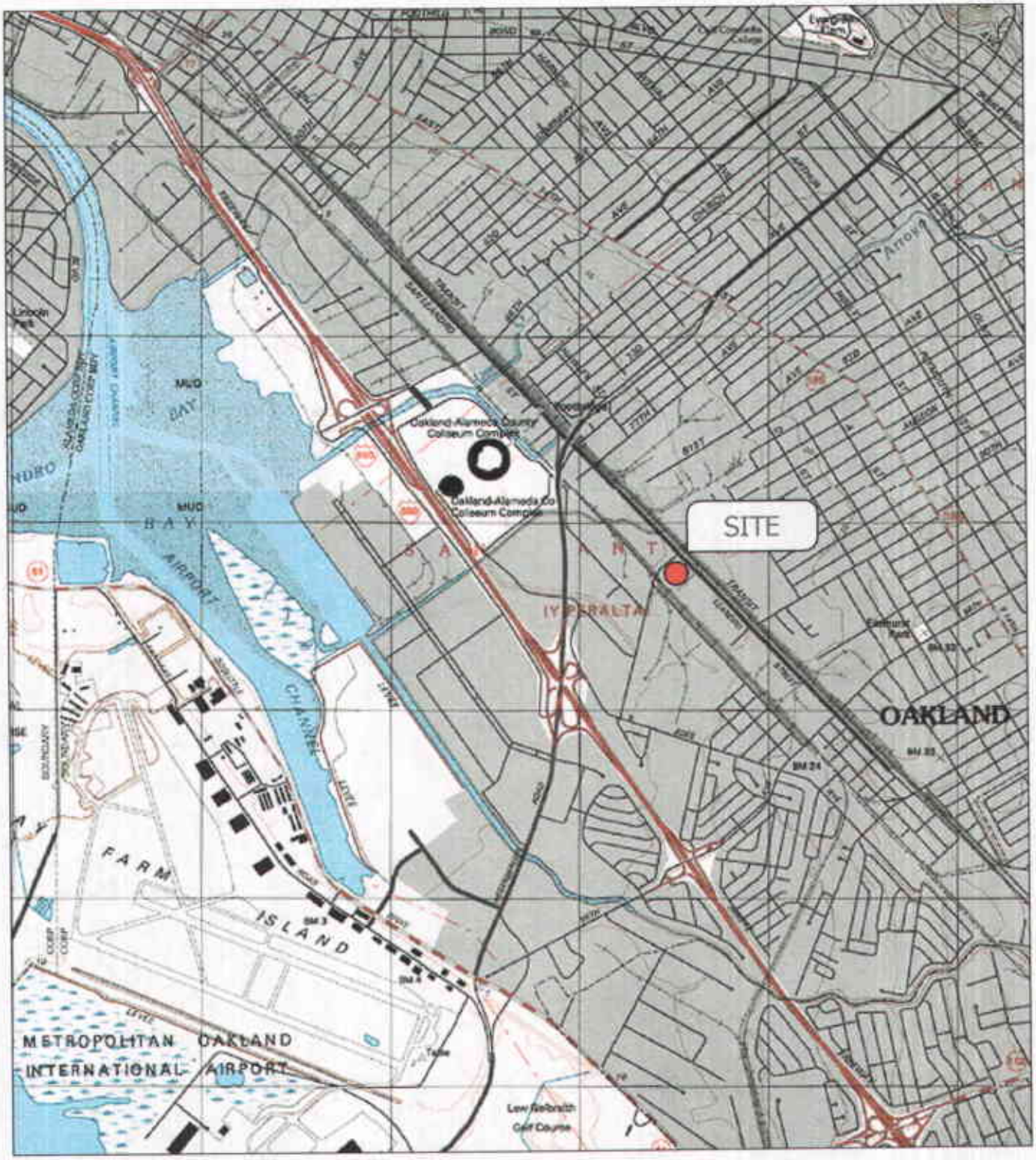
Sample ID	Sample Depth (fbg)	Date Collected	TPH as Gasoline (ug/L)	TPH as Diesel (ug/L)	Volatile Organic Compounds (EPA 8260B) Benzene (ug/L)	Toulene (ug/L)	Ethyl-benzene (ug/L)	Xylenes (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)	DIPE (ug/L)	ETBE (ug/L)	MTBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	Methanol (ug/L)
Grab groundwater sample collected by Artesian Environmental																	
WB1	9.5	5/25/1994	<70	<50	<0.5	<0.5	<0.5	<0.8	NA	NA	NA	NA	NA	NA	NA	NA	NA
WB7	9.5	5/26/1994	<70	<50	<0.5	<0.5	<0.5	<0.8	NA	<2	NA	NA	NA	NA	NA	NA	NA
Grab groundwater sample collected by GHH Engineering																	
GP-1	7	5/15/2002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	ND	ND	ND	ND
ESLs For Groundwater Assuming Groundwater as Non-Drinking Water Resource:																	
			500	640	46	130	290	100	NA	200	NA	NA	1,800	NA	18,000	50,000	NA

Abbreviations:

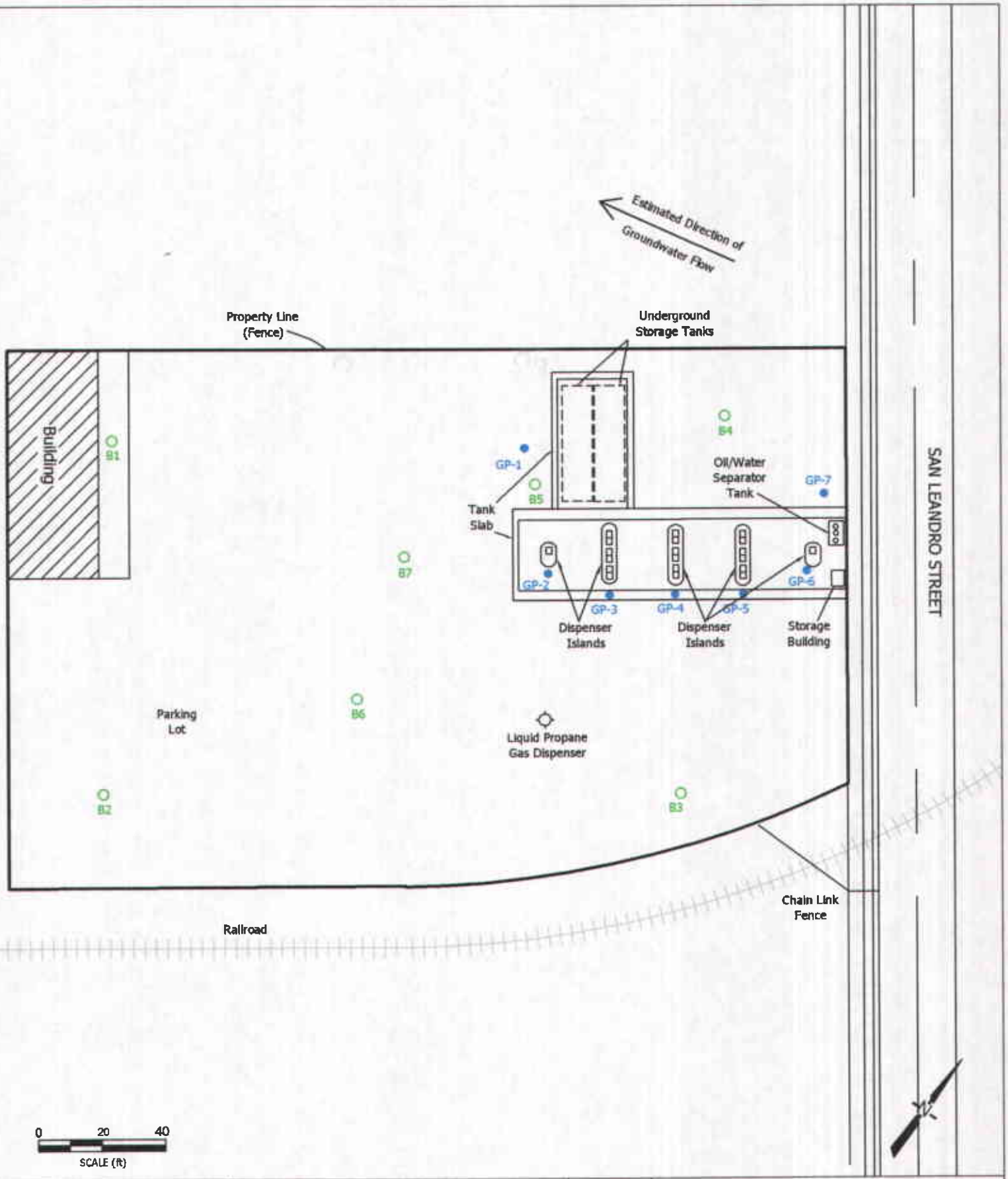
fbg	feet below grade
TPH	Total Petroleum Hydrocarbons
mg/kg	Milligrams per Kilogram
ug/kg	Micrograms per Kilogram
ug/L	Micrograms per Liter
ND	Non-Detect, below the method detection limit
NA	Not analyzed or not avaliable
1,2-DCA	1,2-dichloroethane
DIPE	Di-isopropyl ether
EDB	Ethyldibromide
ETBE	Ethyl tertiary butyl ether
MTBE	Methyl tert butyl ether
TAME	Tertiary amyl methyl ether
TBA	Tertiary butyl alcohol
TRPH	Total recoverable petroleum hydrocarbons
ESL	Environmental Screening Limit established by California Regional Water Quality Control Board – San Francisco Bay Region, Screening For Environmental Concerns At Sites With Contaminated Soil And Groundwater; Februay 2005.

Notes:

Data of samples collected by Artesian Environmental obtained from Phase I Environmental Site Assessment Phase II Soil Analysis report, dated June 9, 1994.
Data of samples collected by GHH Engineering obtained from Environmental Baseline Report, dated June 2002.



TEC ACCUTITE 262 Michelle Court So. San Francisco, CA 94080 Main: (650) 616-1200 Fax: (650) 616-1244	DATE: 03/23/2006 MAP SOURCE: TOPO! BID NO: DRAWN BY: LC	N	FIGURE: 1	Vicinity Map SITE: 8515 San Leandro Street Oakland, California



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DATE: 03/23/2006

BID NO:

DRAWN BY: LC

Locations are estimated.

Map source:
Artesian, 1994
GHH, 2002

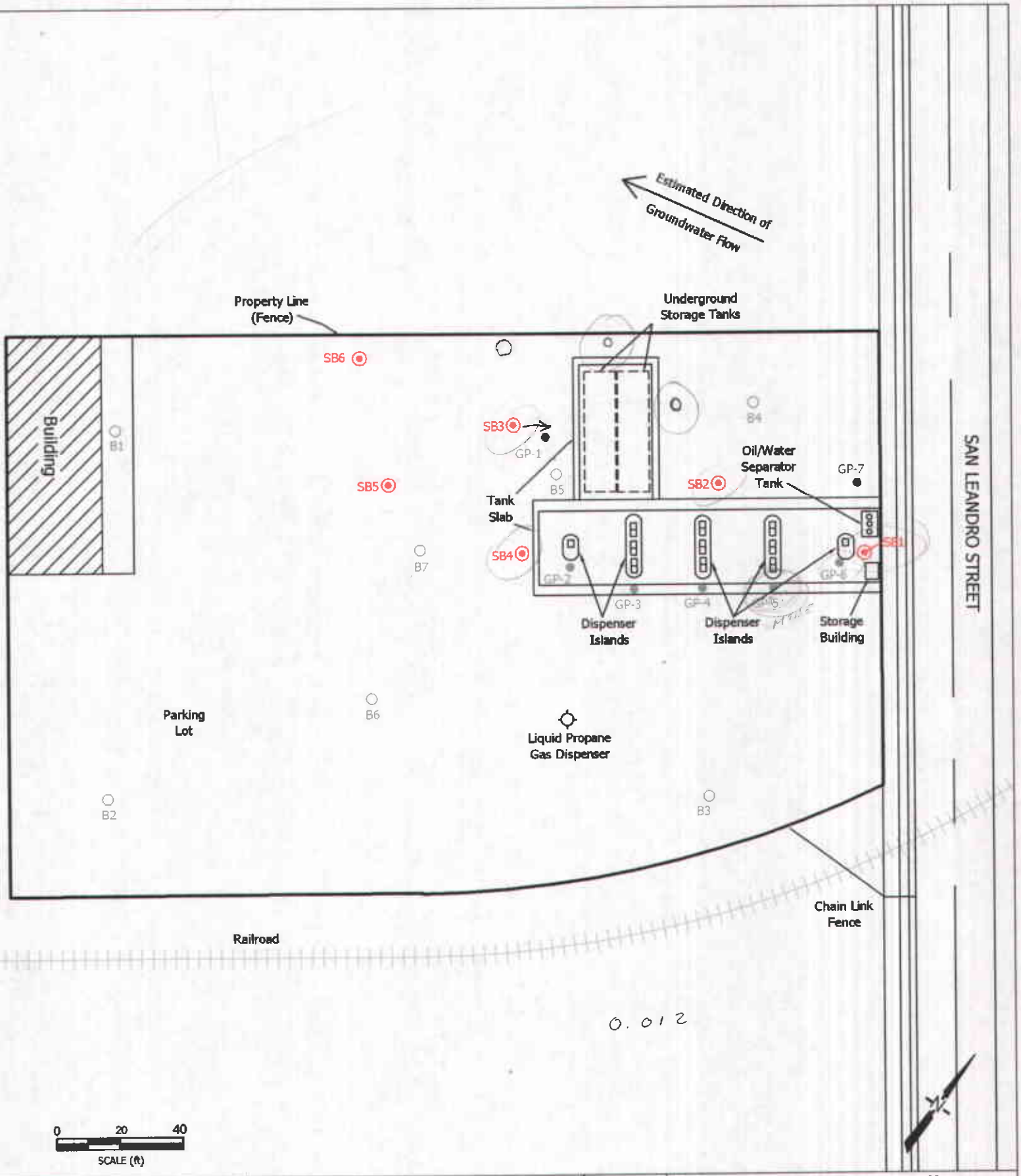
B1 ○ 1994 Borings (B-series) by Artesian Environmental

GP-1 ● 2002 Borings (GP-series) by GHH Engineering

FIGURE: 2

Site Map With Sampling Location

SITE: 8415 San Leandro Street
Oakland, California



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- ○ B1 1994 Borings (B-series) by Artesian Environmental
- ◆ GP-1 2002 Borings (GP-series) by GHH Engineering
- ◉ SB5 Proposed Boring Locations (SB - series)

DATE: 03/23/2006
JOB NO:
DRAWN BY: LC

FIGURE: 3

Proposed Sampling Locations

SITE: 8415 San Leandro Street
Oakland, California