Technology, Engineering & Construction, Inc.
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120193

August 27, 2001

AUG 31 2001

Ms. Eva Chu
Hazardous Materials Specialist
Alameda County Health Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

SUBJECT: SUBSURFACE INVESTIGATION REPORT

SITE: FORMER OLYMPIAN STATION
1435 Webster Street
Alameda, California.

Dear Ms. Chu:

On behalf of Olympian, TEC Accutite is pleased to submit this subsurface investigation report for the above referenced site.

Thank you for your cooperation and assistance on this project. If you have any questions, please call the undersigned at (650) 952-5551, Ext. 208.

Sincerely,
TEC Accutite

David Gregory
Project Manager

cc: Mr. Rusty Firenze, Olympian, 260 Michelle Court, South San Francisco, CA 94080
Mr. David Harris, Trump-Alioto-Trump & Prescott, LLP, 2280 Union Street, San Francisco, CA 94123
Mr. Jeff Farrar, P.O. Box 1701, Chico, CA 95927
Mr. Thomas Ballard, GHH Engineering Inc., 8084 Old Auburn Rd., Citrus Heights, CA 95610

9/9/01

- ~~values~~ COCs exceed RWQCB's RBSLs Consider doing a site specific RBCA w/ site specific organic carbon content & other soil parameters, etc.
Use last 4 qtrs to calc. 95% UCL
Include TPH in RBCA (use MA Cdn - fractionation)
- submit report soil gas in 1998

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SUBSURFACE INVESTIGATION REPORT

FORMER OLYMPIAN STATION
1435 WEBSTER STREET
ALAMEDA, CA

PREPARED FOR:

OLYMPIAN
AND
ALAMEDA COUNTY HEALTH SERVICES AGENCY

AUGUST 27, 2001

ACCUTITE

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A BORING LOGS AND PERMITS

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1.0 INTRODUCTION

On behalf of Olympian, TEC Accutite performed a subsurface investigation at the former Olympian Station located at 1435 Webster Street, Alameda, California. TEC Accutite conducted soil borings and quarterly groundwater sampling simultaneously to evaluate the extent of dissolved phase hydrocarbons beneath the site and downgradient of the site. Presented below are the site background and results of the investigation. A site vicinity map and site map are presented as Figures 1 & 2, respectively.

2.0 SITE DESCRIPITION

The site is located on the corner of Webster Street and Taylor Avenue in Alameda, CA. Prior to 1989, the site was occupied by an Olympian Service Station. Former station facilities consisted of two 10,000 gallon gasoline and one 7,500 gallon diesel underground storage tanks (USTs), two dispenser islands and a 500 gallon waste oil UST (Figure 2).

The surrounding topography is flat and the site is approximately 20 feet above mean sea level. The site is situated in a mixed commercial and residential area and is currently leased by the City of Alameda and operated as a metered parking lot.

SITE GEOLOGY

The site is located on the bay plain deposits of the San Francisco Bay consisting of shallow marine and continental deposits known as the "Bay Mud". Sediments beneath the site consist of fine-medium grained, poorly sorted, brown sand to a maximum explored depth of 20 fbg.

Groundwater elevation at the site varies from 8 to 11 fbg. Groundwater flow direction has consistently been toward the south-southeast at an average gradient of 0.002. Groundwater beneath the site has been designated as potentially suitable for municipal and industrial use (San Francisco Bay Water Quality Control Plan, 1995).

3.0 ENVIRONMENTAL BACKGROUND

Request report.

1st time I've heard of soil gas samples.

In October 1988, CHIPS Environmental Consultants, Inc. performed soil gas analysis at the subject site. High soil gas readings were found on the eastern side of one of the pump islands, between the pump islands, and from backfill between the gasoline storage tanks.

In September 1989, Accutite removed the following USTs:

- Two 10,000-gallon gasoline USTs
- One 7,500-gallon diesel UST
- One 500-gallon waste oil UST

Analysis of soil samples collected during removal of the USTs detected hydrocarbons at maximum concentrations of 220 parts per million (ppm) Total Petroleum Hydrocarbons as gasoline (TPHg), 430 ppm Total Petroleum Hydrocarbons as diesel (TPHd), and 650 ppm Total Recoverable Petroleum Hydrocarbons as Oil and Grease (TRPH).

In January 1991, remedial excavation of the hydrocarbon impacted soil was conducted by AAA Tank Removal / Forcade Excavations Services. Approximately 950 cubic yards of soil were removed from the former location of the USTs. This soil was bioremediated onsite and returned to the former excavation.

In January 1993, Uriah Environmental Services, Inc. installed three monitoring wells onsite (MW-1 through MW-3). Soil samples collected during well installation contained no detectable concentrations of petroleum hydrocarbons. Bi-annual groundwater monitoring was initiated. Dissolved phase hydrocarbons have been detected in all wells at varying concentrations.

In February 1999, TEC Accutite advanced four borings on and offsite (B1 through B4) to determine the extent of hydrocarbon impact to soil and groundwater. The soil analytical results detected non-significant concentrations of TPHg, benzene, toluene, ethyl-benzene, xylenes (BTEX), and methyl tert-butyl ether (MTBE). The groundwater samples detected hydrocarbon concentrations up to 6,000 parts per billion (ppb) MTBE and 38,000 ppb ~~benzene~~ TPHg and 2000ppb benzene.

In December 1999, TEC Accutite installed three additional wells MW-4 through MW-6 to define the dissolved phase hydrocarbons and assess plume stability. Analysis of soil samples detected hydrocarbon concentrations of 1,100 ppm TPHg, 200 ppm TPHd and 3.4 ppm benzene from soil collected at 9.5 feet below grade (fbg) in well MW-5. No hydrocarbons were detected in soil samples collected during installation of wells MW-4 and MW-6. Groundwater sampling from wells MW-6 and MW-3 defined the dissolved phase hydrocarbon plume upgradient of the former dispenser islands and cross-gradient of the former USTs.

In November 2000, TEC Accutite completed a site conceptual model. Based on historical quarterly monitoring data, it was determined that the contaminant plume required further definition downgradient. An assessment of hydrological conditions, proximity to sensitive receptors and current groundwater usage, suggest that MTBE in groundwater is not the primary chemical of concern. Given the shallow groundwater elevation (9 fbg), estimated high permeability of soils beneath the site, the potential for benzene vapor phase migration from hydrocarbon impacted groundwater to indoor and ambient air was identified as an exposure pathway requiring future evaluation.

As part of an ongoing investigation, this report details the combined second quarter 2001 groundwater monitoring episode and most recent subsurface investigation.

4.0 SCOPE OF WORK

The investigation objective was to evaluate the extent of dissolved phase hydrocarbons in groundwater beneath and downgradient of the site. Quarterly groundwater sampling was conducted simultaneously with soil borings to obtain groundwater analytical data representative of one time hydrogeological conditions. Boring logs and permits are presented in Attachment A. The laboratory analytical reports for soil and groundwater are presented in Attachment B. Attachment C contains well sampling logs.

SOIL BORINGS

Project Personnel: Geologist David Gregory conducted all fieldwork under the supervision of Registered Engineer Sami Malaeb PE# 60888.

Permits:
City of Alameda Public Works Drilling Permit# WO1-266
City of Alameda Public Works Encroachment Permit# EN01-019
City of Alameda Public Works Right of Way Permit# EX01-0048
CALTRANS Encroachment Permit# 0401-6SV-0824

Drilling Co: Gregg Drilling, C57# 485 165

Drilling Dates: June 27, 2001

Number of Borings: Four Borings (B1 through B4). A fifth soil boring attempted on the southwest corner of the intersection of Webster Street and Taylor Street could not be completed due to underground utility constraints.

Drilling Method: Borings were completed with a hydraulic push drill rig.

Boring Depth: Borings B1 through B3 were drilled to an approximate depth of 15 fbg. Boring B4 was drilled to an approximate depth of 14 fbg.

Sediment Lithology: Sediments beneath the site consist of fine grained sand.

Depth to Water: Groundwater was first encountered 9.5 to 10 fbg.

Sample Technique: Continuous soil samples were collected by pushing a core barrel lined with 2-inch diameter plastic macro core liners at the bottom of the boring. Soil samples were collected at 9 fbg within the capillary fringe. Soil samples were covered with Teflon liners and capped.

Soil borings were installed with temporary 1-inch screened PVC casing. Groundwater samples were obtained from within the casing with a metal bailer decontaminated in Alconox and water prior to sampling. Groundwater samples were transferred into HCl preserved laboratory VOA's. All samples were labeled, placed on ice, and delivered to North State Environmental Laboratory (a California State Certified Laboratory) under a Chain of Custody.

QUARTERLY GROUNDWATER SAMPLING

Project Personnel: Accutite Geologist David Gregory conducted monitoring well sampling.

Sampling Date: June 25, 2001

Wells Sampled: MW-1 through MW-6

Sampling Procedure: Approximately three casing volumes of water were purged from wells MW-1 through MW-6 prior to sampling. Following purging, groundwater samples were collected with disposable bailers and transferred into HCl preserved VOA's. Sample containers were labeled, placed on blue ice in an ice chest, and transported under chain of custody to North State Environmental Laboratory for analysis.

Laboratory Analysis: Selected soil samples and groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg: EPA Method 8015), benzene, toluene, ethylbenzene, xylenes, and methyl tert-butyl ether (BTEX, MTBE: EPA Method 8020). MTBE was confirmed by EPA Method 8260. As approved by the Alameda County Health Services Agency (ACHSA) no further analysis of TPHd is required. Gas chromatograms are not typical of diesel.

5.0 RESULTS

GROUNDWATER ELEVATION AND FLOW DIRECTION

The reference mark considered as a base for calculating the groundwater elevations was a fire hydrant, located on the sidewalk of Webster Street. The calculated groundwater flow direction is toward the south at a gradient of 0.002 (Figure 3). Groundwater elevation data are summarized below:

Groundwater Elevation Data

Well Identification	Elevation of Casing in ft	Depth to Ground-Water in ft	Ground Water Elevation in ft
MW-1	19.53	9.73	9.8
MW-2	19.80	10.11	9.69
MW-3	19.79	10.04	9.75
MW-4	19.30	9.68	9.62
MW-5	18.99	9.05	9.94
MW-6	20.27	10.39	9.88

Soil

Soil samples were collected approximately 9 fbg within the capillary fringe from soil borings B1 through B4. No petroleum hydrocarbons were detected in soil above laboratory reporting limits (Table 1).

Groundwater

The greatest concentration of dissolved phase petroleum hydrocarbons were detected in monitoring well MW-1 at 18,000 ppb TPHg, 1,200 ppb benzene, 1,500 ppb MTBE (Table 2). Hydrocarbons were detected in well MW-5 at concentrations of 3,100 ppb TPHg, 1,000 ppb benzene. Dissolved phase concentrations of TPHg, benzene, and MTBE in surrounding monitoring wells are either non-detect or insignificant.

Insignificant concentrations of petroleum hydrocarbons were detected in groundwater samples collected from downgradient and cross gradient soil borings B1 through B4 (Table 3). The greatest concentration of petroleum hydrocarbons was detected in boring B3 at 400 ppb TPHg and 3 ppb MTBE. MTBE was detected in all soil boring groundwater samples below 5 ppb.

Tier 1 RBSL Comparison

Groundwater concentrations detected in monitoring wells MW-1 and MW-5 were compared to the California Regional Water Quality Control Board (CRWQCB) Tier 1 Risk Based Screening Levels (RBSL; CRWQCB Interim Final – August 2000). Based on the current groundwater use and criteria outlined in TEC Accutite's Site Conceptual Model Report (TEC Accutite, 2000), a comparison of Tier 1 screening levels for groundwater designated as a current or potential drinking water use was not included. The comparison was based on Tier 1 groundwater screening levels for potential indoor air impacts by vapors, emanating from impacted groundwater (Table 4). This comparison was deemed more applicable, as any future development of the property would be required to address the potential risk of emanating vapors from hydrocarbon impacted groundwater.

Benzene concentrations detected in wells MW-1 (1,200 ppb) and MW-5 (1,000 ppb) greatly exceed the RBSL of 84 ppb. Benzene is the most conservative RBSL, as it is a known carcinogen and it has a high propensity to partition between the dissolved phase and gas phase (Henry's Constant).
Toluene, ethylbenzene, xylenes and MTBE are below RBSL's.

The RBSL Ceiling Value (CV) reflects the lowest one-half the chemicals solubility, the taste and odor threshold and a maximum of 50,000 ug/L limit for any chemical. A comparison of the CV was made with respect to TPHg, RBSL for TPHg are calculated on site by site basis. TPHg concentrations in well MW-1 and MW-5 significantly exceed the CV of 100 ppb.

6.0 CONCLUSIONS AND RECOMMENDATIONS

- A groundwater gradient of 0.002 is consistent with previous sampling events. The flow direction has deviated from the Southeast to the south.

- No petroleum hydrocarbons were detected in soil samples collected from offsite soil borings B1 through B4.

- The greatest concentrations of dissolved phase hydrocarbons were detected in wells MW-1 and MW-5. Hydrocarbons were either non-detect or non-significant in surrounding Wells MW-2, MW-3, MW-4 and MW-6.

- Benzene and MTBE Isoconcentration maps produced from quarterly groundwater monitoring data and soil boring groundwater data (Borings B1 through B4) indicate the contaminant plume is concentrated around onsite wells MW-1 and MW-5 (Figures 4 & 5). TPHg Isoconcentration maps indicate TPHg has migrated offsite toward the US Bank. TPHg concentrations have decreased from 18,000 ppb at the source to 400 ppb 140 ft down gradient (Figure 6). MTBE concentrations detected in offsite borings are below the secondary Maximum Contaminant Level (MCL) of 5 ppb.

- A natural log of BTEX concentration versus time was plotted for onsite wells MW-1 and MW-5 (Figure 7). The analytical data for the last two years was used so concentration trends in well MW-5 could be compared with well MW-1. The natural log of concentrations was used to reduce the effects of random concentration fluctuations. A linear trend line was applied to the data to determine the best fit line. A review of the data indicates BTEX concentrations in well MW-5 are decreasing. Linear analysis of concentrations in well MW-1 suggests concentrations have remained relatively stable during the past two years. This analysis is in contrast to the time versus benzene concentration plot illustrated in the November 2000 site conceptual model report, which identifies increasing concentrations. It is evident that there are large fluctuations in BTEX concentrations in well MW-1 which have influenced the data. Concentration fluctuations are significant in that they are evident even when smoothed by the natural logarithmic approach. Given the age of the release and that no significant BTEX concentrations were detected in downgradient borings suggests BTEX concentrations are stable in well MW-1.

- As previously identified in the site conceptual model, the identified potential risk from site hydrocarbons was by vapor phase migration of hydrocarbons from groundwater to indoor air.

Benzene concentrations in onsite wells MW-1 and MW-5 exceed the TIER 1 RBSl of 84 ppb for impacted groundwater 1.5m beneath a residential dwelling. However, given

1) the BTEX plume is small and localized around monitoring wells MW-1, MW-5, and is located beneath a public parking lot, and

2) the nearest downgradient residence is in excess of 500ft downgradient, and

3) the primary line of evidence for natural attenuation (BTEX concentration / time plots) indicates *the plume is stable*, suggests the risk associated with site hydrocarbons is minimal.

Based on the above conclusions, TEC Accutite would like to meet with the Alameda County Health Services Agency to discuss future requirements to bring this site towards closure.

7.0 LIMITATIONS

Our services consist of professional opinions, conclusions and recommendations made today in accordance with generally accepted engineering principles and practices. This warranty is in lieu of all other warranties either expressed or implied. Accutite's liability is limited to the dollar amount of the work performed.

Thank you for your cooperation with this project. If you have any questions, please call at (650) 952-5551, Ext. 208.

Sincerely,
TEC Accutite

David Gregory
Project Manager

Reviewed by:

Sami Malaeb, P.E., R.E.A.
Environmental Director
08/27/01

cc: Mr. Dan Koch, Olympian, 260 Michelle Court, South San Francisco, CA 94080
Mr. Rusty Firenze, Olympian, 260 Michelle Court, South San Francisco, CA 94080
Mr. David Harris, Trump-Alioto-Trump & Prescott, LLP, 2280 Union Street, San Francisco, CA 94123
Mr. Jeff Farrar, P.O. Box 1701, Chico, CA 95927
Mr. Thomas Ballard, GHH Engineering Inc., 8084 Old Auburn Rd., Citrus Heights, CA 95610

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REFERENCE

CRWQCB Interim Final – August 2000, Application of Risk-Based Screening Levels and Decision Making to Sites With Impacted Soil and Groundwater.

California Regional Water Quality Control Board – San Francisco Bay Region 2 Water Quality Control Plan, June 1995.

TEC Accutite, 2000. *Report on* Quarterly Groundwater Monitoring, Sensitivė Receptor Survey and Site Conceptual Model, 1435 Webster Street, Alameda, CA., November 29, 2000.

TABLE 1: Soil Analytical Data Borings B1 - B4 June 27, 2001

Former Olympian Station, 1435 Webster Street, Alameda CA.

Sample ID	Sample Depth (ft)	Sample Date	TPHg	B	T	E	X	MTBE
			Concentrations in parts per million (ppm)					
B1-9	9	6/27/01	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005
B2-9	9	6/27/01	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005
B3-9	9	6/27/01	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005
B4-9	9	6/27/01	<0.5	<0.005	<0.005	<0.005	<0.01	<0.005

Abbreviations / Notes

TPHg = Total Petroleum Hydrocarbons as Gasoline (EPA Method 8015)
BTEX = Benzene, Toluene, Ethylbenzene, Xylenes (EPA Method 8020)
MTBE = Methyl tert-butyl Ether (EPA Method 8020)
<X = Concentration less than laboratory reporting limit

TABLE 2: Historical Groundwater Analytical Data - Former Olympian Station, 1435 Webster Street, Alameda CA.

Well ID	Sample Date	Depth to Water (ft)	TPHd	TPHg	B	T	E	X	MTBE	TRPH
					Concentrations in parts per billion (ppb)					
MW-1	6/3/93	NA(1)	NA	NA	NA	NA	NA	NA	NA	NA
	9/14/94	11.46	<50	14,000	44	28	25	50	NA	800
	12/30/94	9.22	<50	4,000	12	9	6.8	30	NA	<500
	3/26/95	6.76	<50	1,000	21	10	7.1	25	NA	2,100
	7/9/95	8.92	<50	16,000	57	28	25	53	NA	NA
	7/31/98	8.3	1,700	4,700	1,300	48	140	150	6,600	<5000
	2/11/99	7.91	2000	25,000	18,000	1,600	1,400	500	28,000	NA
	6/23/99	9.03	4,900	42,000	11,000	1,100	1,500	2,300	15,000	NA
	12/6/99	10.86	4,000	44,000	8,900	3,400	1,900	5,100	11,000	NA
	3/16/00	6.93	700	5,100	2,400	100	280	460	2,700(2)	NA
	6/13/00	8.73	2,800	17,000	5,300	260	720	790	7,000(2)	NA
	9/29/00	10.18	5,200*	50,000	11,000	2,900	1,900	4,600	7,200(2)	NA
	3/22/01	8.24	1,500*	8,600	2,600	750	250	950	3,200(2)	NA
	6/25/01	9.73	NA	18,000	1,200	1,800	970	3,200	1500(2)	NA
MW-2	6/3/93	9.54	<50	<50	5.8	<0.5	<0.5	<0.5	NA	<500
	9/14/94	11.82	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<500
	12/30/94	9.46	<50	160	1.4	1.4	0.8	5	NA	<500
	3/26/95	6.82	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<500
	7/9/95	9.22	NA	NA	NA	NA	NA	NA	NA	NA
	7/31/98	8.56	220	<50	<0.5	<0.5	<0.5	<0.5	73	<500
	2/11/99	8.12	<50	<50	<0.5	<0.5	<0.5	<0.5	75	NA
	6/23/99	9.33	420	<50	<0.5	<0.5	<0.5	<0.5	96	NA
	12/6/99	11.2	<110	300	28	45	6	37	210	NA
	3/16/00	6.88	<50	<50	1	<0.5	0.5	1	3	NA
	6/13/00	8.99	<50	68	0.8	<0.5	<0.5	<0.5	38	NA
	9/29/00	10.4	<50	67	0.8	0.5	<0.5	1	86(2)	NA
	3/22/01	8.46	<50	<50	1	0.5	<0.5	1	14	NA
	6/25/01	10.11	NA	<50	<0.5	<0.5	<0.5	<1.0	13	NA
MW-3	6/3/93	9.8	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<500
	9/14/94	12.19	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<500
	12/30/94	9.72	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<500
	3/26/95	6.88	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<500
	7/9/95	9.52	NA	NA	NA	NA	NA	NA	NA	NA
	7/31/98	8.4	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5000
	2/11/99	7.77	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NA
	6/23/99	9.21	<50	<50	<0.5	<0.5	<0.5	<0.5	3	NA
	12/6/99	11.12	<110	<50	3	1	<0.5	1	0.6	NA
	3/16/00	6.48	<50	<50	<0.5	<0.5	<0.5	<1.0	1	NA
	6/13/00	8.76	<50	490	0.8	<0.5	<0.5	9	2	NA
	9/29/00	10.2	<50	57	<0.5	<0.5	<0.5	<1.0	<1.0(2)	NA
	3/22/01	8.24	<50	<50	<0.5	<0.5	<0.5	<1.0	2	NA
	6/25/01	10.04	NA	<50	<0.5	<0.5	<0.5	<1.0	0.8	NA
MW-4	12/6/99	10.79	160	<50	3	2	0.6	4	140	NA
	3/16/00	6.86	90	<50	0.5	0.5	<0.5	2	34	NA
	6/13/00	8.18	<50	56	<0.5	<0.5	<0.5	<1.0	1	NA
	9/29/00	10.11	<50	92	0.7	<0.5	<0.5	3	<1.0(2)	NA
	4/5/01	8.26	<50	51	<0.5	0.5	<0.5	1	6.0(2)	NA
	6/25/01	9.68	NA	<50	<0.5	<0.5	<0.5	<1.0	<0.5	NA
MW-5	12/6/99	10.17	2,800	30,000	2,200	3,300	910	7000	670	NA
	3/16/00	6.28	1,100	3,500	1,100	260	210	6300	260	NA
	6/13/00	7.95	1,100	6,500	2200	360	360	730	480	NA
	9/29/00	9.54	700*	3,900	990	120	300	340	390(2)	NA
	3/22/01	7.48	380*	4,300	780	240	250	530	190	NA
	6/25/01	9.05	NA	3,100	1,000	110	200	320	140	NA

TABLE 2: Continued

Well ID	Sample Date	Depth to Water (ft)	TPHd	TPHg	B	T	E	X	MTBE	TRPH
					Concentrations in parts per billion (ppb)					
MW-6	12/6/99	11.46	110	<50	2	2	0.8	8	1	NA
	3/16/00	8.32	<50	<50	8	8	5	18	<0.5	NA
	6/13/00	9.14	<50	75	0.7	1	0.9	2	0.6	NA
	9/29/00	10.81	<50	<50	<0.5	<0.5	<0.5	<1.0	<0.5	NA
	3/22/01	8.64	<50	66	0.5	<0.5	<0.5	<1.0	3	NA
	6/25/01	10.39	NA	<50	<0.5	<0.5	<0.5	<1.0	4	NA

TABLE 3: Soil Borings Groundwater Analytical Data June 27, 2001.

Former Olympian Station, 1435 Webster Street, Alameda CA.

Sample ID	Sample Date	TPHg	B	T	E	X	MTBE
			Concentrations in parts per billion (ppb)				
B1	6/27/01	<50	<0.005	3	<0.005	<0.01	4
B2	6/27/01	<50	<0.005	0.9	0.5	2	4(2)
B3	6/27/01	400	<0.005	1	0.6	1	3
B4	6/27/01	96	2	3	0.6	2	2

Abbreviations / Notes
TPHd = Total Petroleum Hydrocarbons as Diesel (EPA Method 8015)
TPHg = Total Petroleum Hydrocarbons as Gasoline (EPA Method 8015)
BTEX = Benzene, Toluene, Ethylbenzene, Xylenes (EPA Method 8020)
MTBE = Methyl tert-butyl Ether (EPA Method 8020)
TRPH = Total Recoverable Petroleum Hydrocarbons
<X = Concentration less than laboratory reporting limit
(1) Well not accessible because of a car obstruction
NA = not analyzed
* Does not match diesel chromatogram pattern
(2) Confirmed by EPA Method 8260

TABLE 4 : Comparison of groundwater hydrocarbon concentrations in monitoring wells MW-1 and MW-5 with Tier 1 RBSL's - Former Olympian Station, 1435 Webster St., Alameda, CA.

from Table F-1

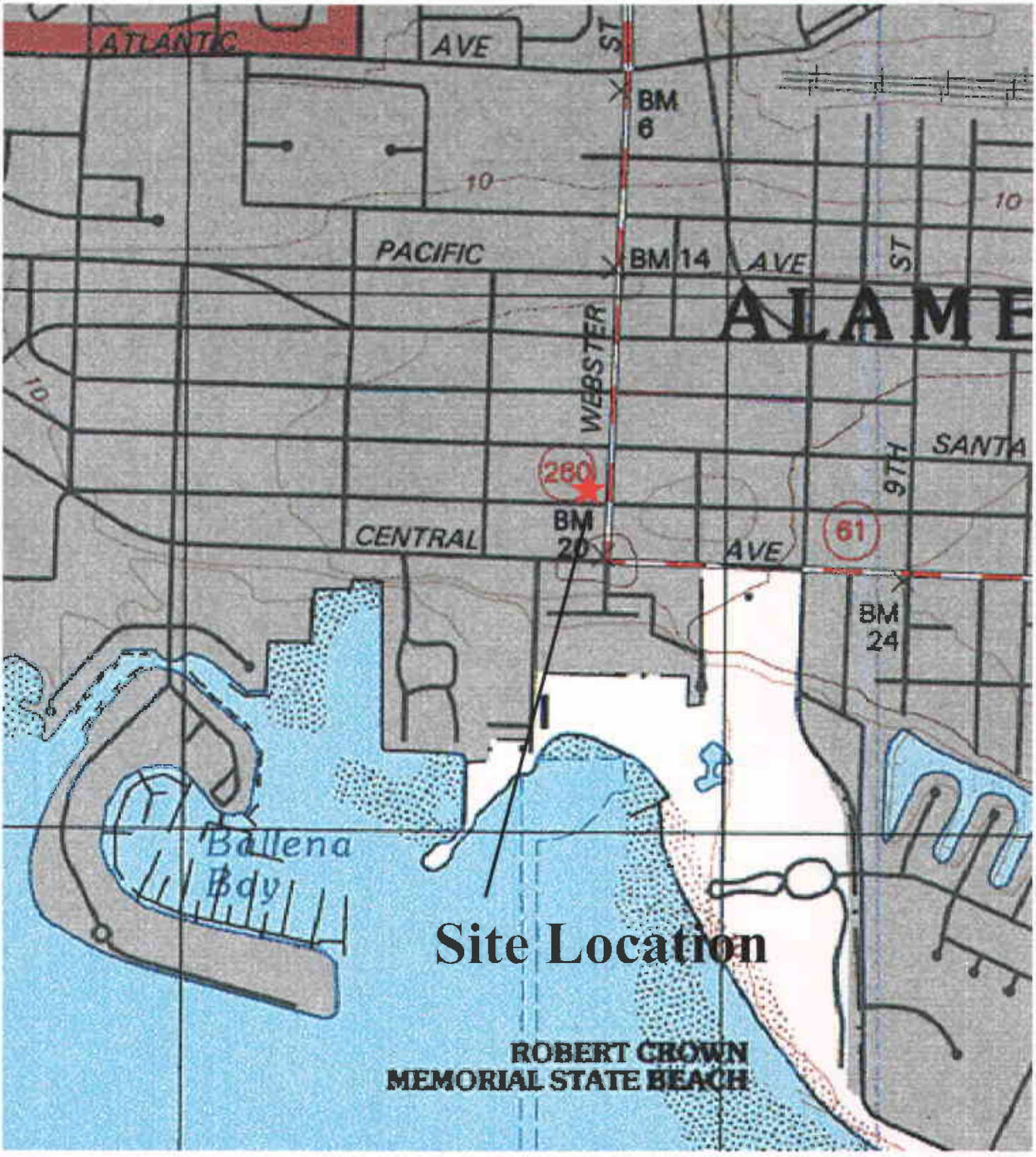
Chemical	Well MW-1	Well MW-5	RBSL Indoor air impacts	RBSL Ceiling Value	From F2
		Concentrations in micrograms per liter ug/l			
TPHg	18,000	3,100	--	[redacted]	5000
Benzene	1,200	1,000	[redacted]	[redacted]	20,000
Toluene	1,800	110	76,000	40	400
Ethylbenzene	970	200	170,000	30	300
Xylenes	3,200	320	150000	20	5,300
MTBE	1,500	140	290000	5	1,800

"-- not established

Indoor air impacts = impact to indoor air quality from emission of vapors from impacted groundwater 1.5 m below ground surface.

Ceiling Value = reflect the lowest value of one-half the chemicals solubility, the taste and odor threshold and a maximum 50000 ug/L limit for any chemical.

where did this value come from? RBSLs show ceiling value for TPHg = 5000 ppb ↓ for site where water is not potential drinking water resource



	DATE 11/15/00	PAGE 1 of 1
N	NO SCALE	
	LEGEND:	

TEC ACCUTITE

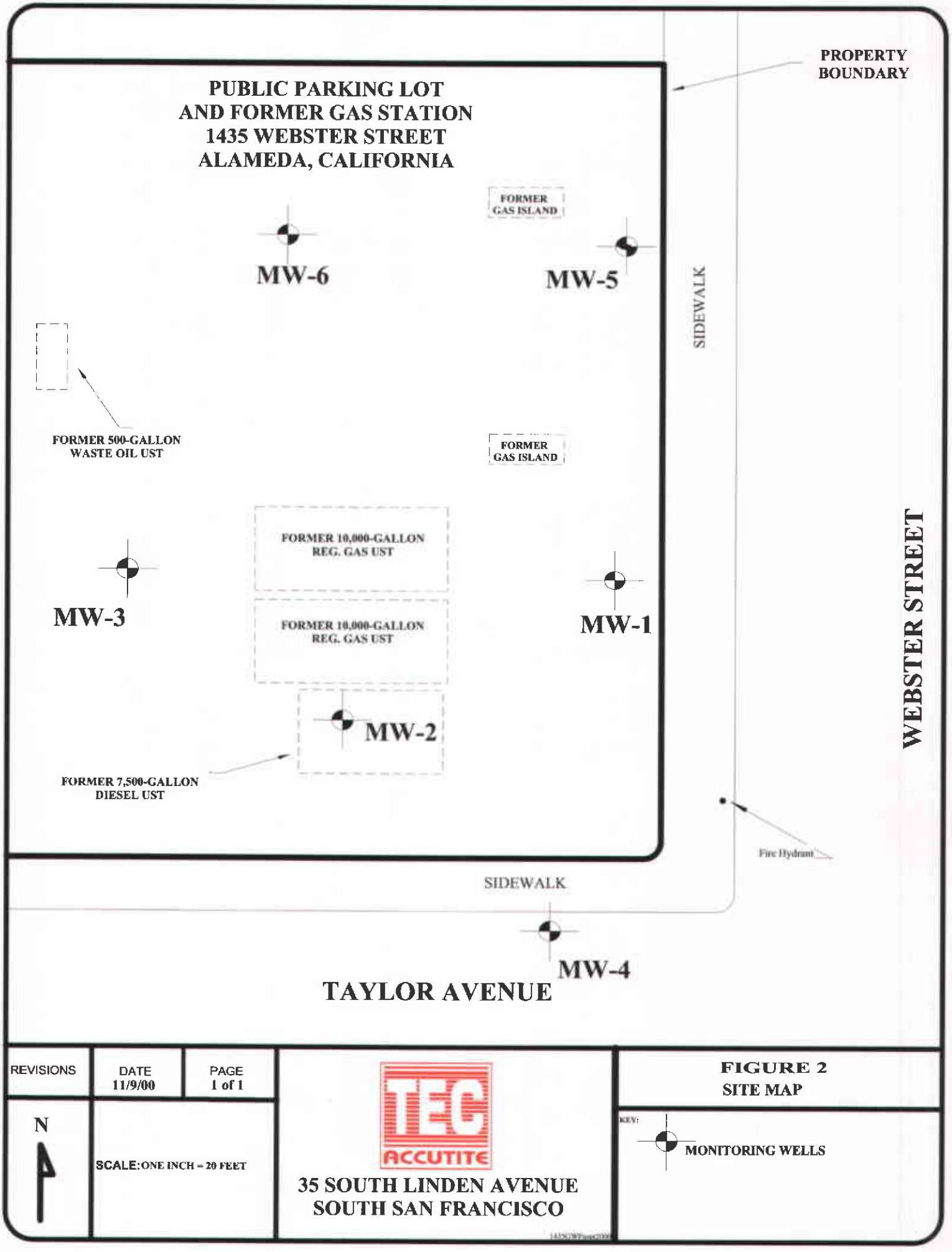
35 SOUTH LINDEN AVENUE
SOUTH SAN FRANCISCO

FIGURE 1

SITE VICINITY MAP

Vicinitymap.TCW

SITE:
1435 WEBSTER STREET
ALAMEDA, CA



REVISIONS	DATE	PAGE
	11/9/00	1 of 1

N

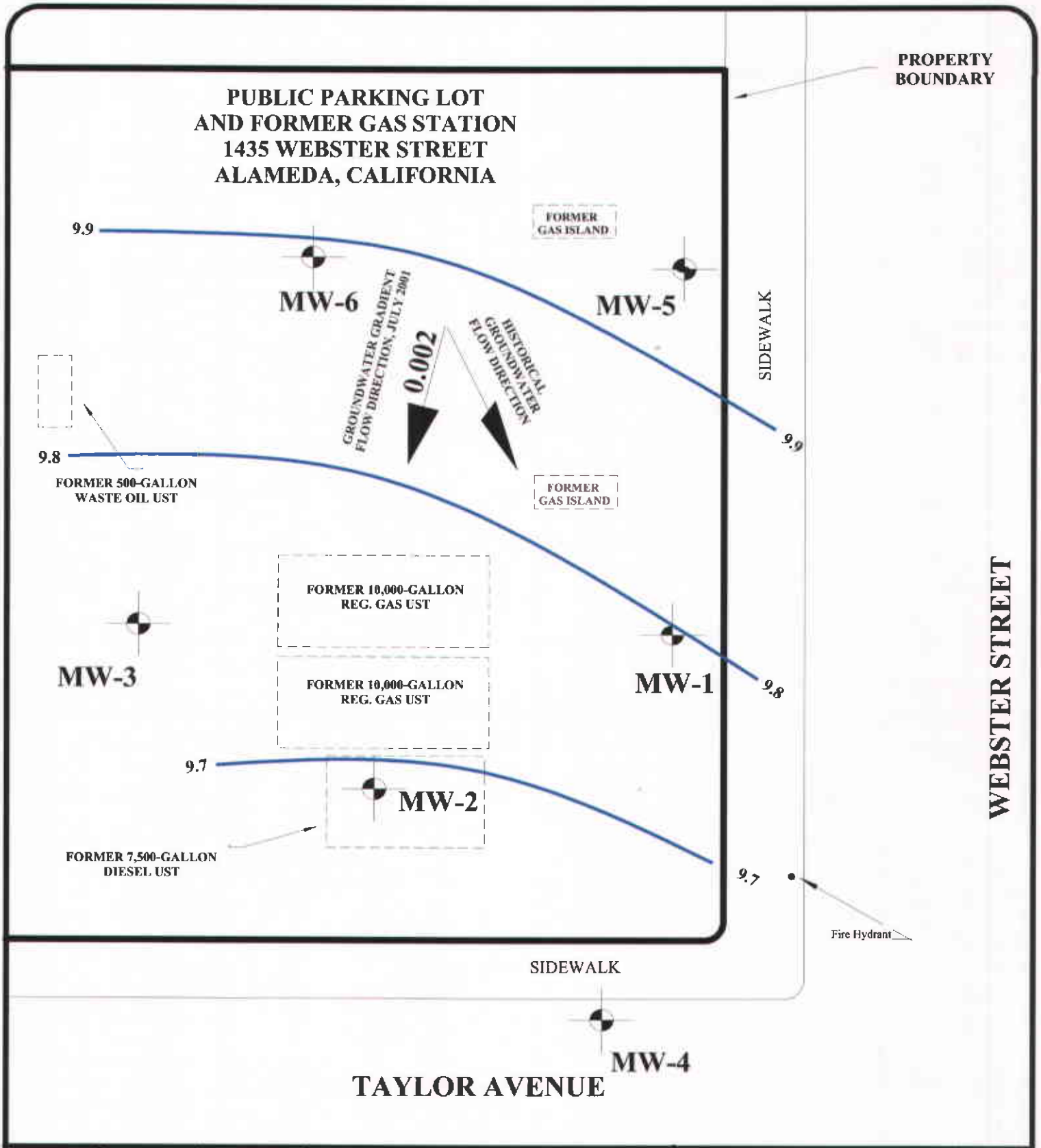
SCALE: ONE INCH = 20 FEET

TEG ACCUTITE

35 SOUTH LINDEN AVENUE
SOUTH SAN FRANCISCO

FIGURE 2
SITE MAP

KEY: MONITORING WELLS



REVISIONS	DATE	PAGE
	5/7/01	1 of 1

N

SCALE: ONE INCH = 20 FEET

TEC ACCUTITE

35 SOUTH LINDEN AVENUE
SOUTH SAN FRANCISCO

FIGURE 3
GROUNDWATER FLOW DIRECTION AND GRADIENT JULY 2001

KEY:

- MONITORING WELLS
- 11.4 GROUNDWATER ELEVATION AND CONTOUR
- 0.002 GROUNDWATER FLOW DIRECTION AND GRADIENT

N
SCALE: 1": 60'

Legend:
- Monitoring Well
- Soil boring location
- 100 Benzene Isoconcentration contour line concentrations in parts per billion

Drawn by: D Gregory

Date: 7/20/01

benzcontjune01.tcw

TEC ACCUTITE
35 SOUTH LINDEN AVENUE
SOUTH SAN FRANCISCO

Former Olympian Station
1435 Webster Street,
Alameda, CA

FIGURE 4:

Benzene in Groundwater

N
SCALE: 1": 60'

Legend:
- Monitoring Well
- Soil boring location
- 100 MTBE Isoconcentration contour line concentrations in parts per billion

Drawn by: D Gregory
Date: 7/20/01
MTBEcontjune01.tcw

TEC ACCUTITE
35 SOUTH LINDEN AVENUE
SOUTH SAN FRANCISCO

Former Olympian Station
1435 Webster Street,
Alameda, CA

FIGURE 5:

MTBE in Groundwater

N
SCALE: 1"= 60'

Legend:
- Monitoring Well
- Soil boring location
- 100 TPHg Isoconcentration contour line concentrations in parts per billion

Drawn by: D Gregory

Date: 7/20/01

TPHgcontjune01.tcw

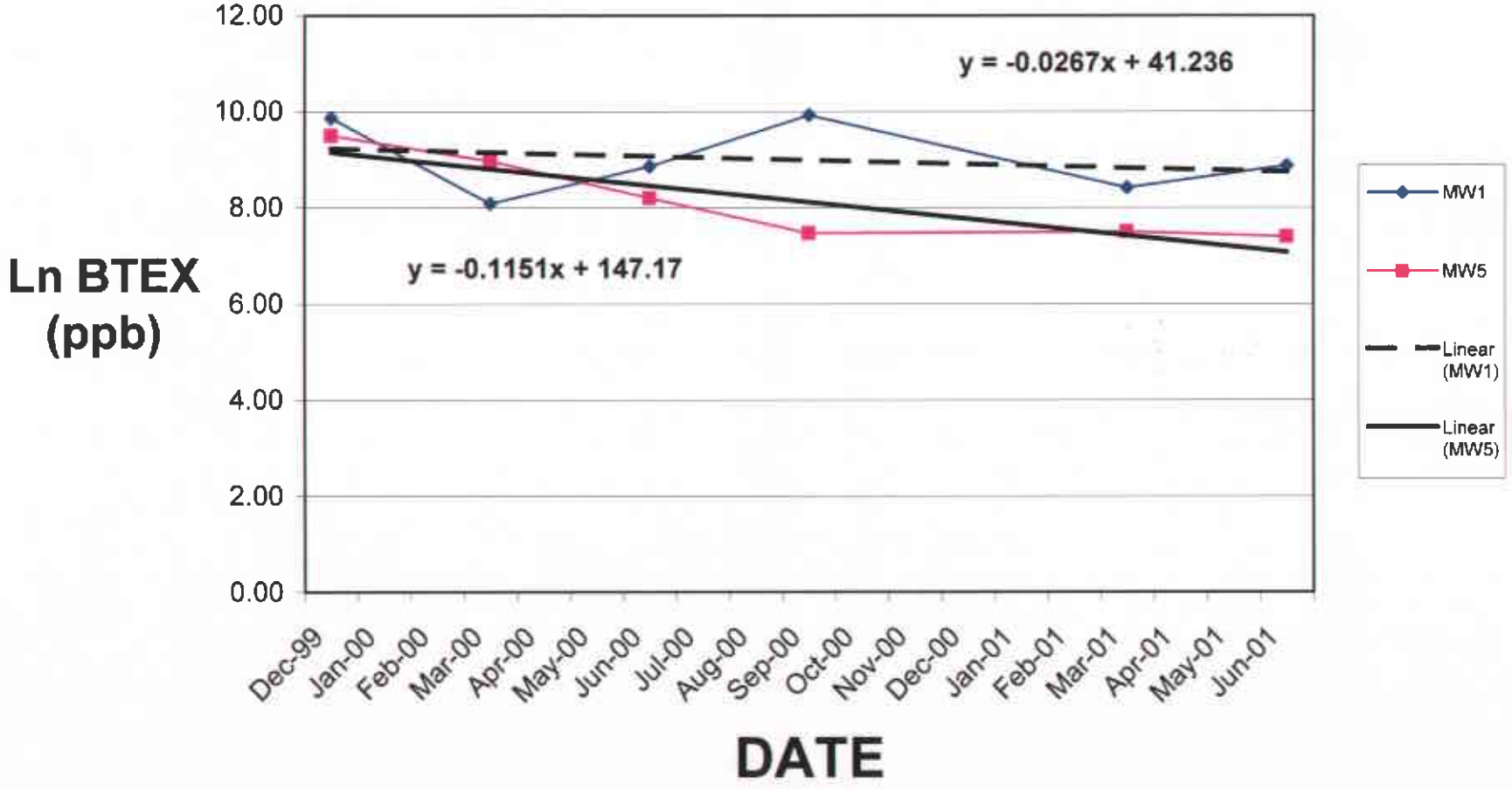
TEC ACCUTITE
35 SOUTH LINDEN AVENUE
SOUTH SAN FRANCISCO

Former Olympian Station
1435 Webster Street,
Alameda, CA

FIGURE 6:

TPHg in Groundwater

Figure 7: Plot of Natural Log of BTEX Concentrations Vs Time for Wells MW1 & MW5



TEC ACCUTITE	BORING LOG	BORING/WELL NUMBER
		B1

CLIENT:	Olympian	TOTAL DEPTH:	15 fbg
LOCATION:	1435 Webster St., Alameda, CA	WELL DEVELOPMENT:	
DRILLING CO:	Gregg	GROUND SURFACE ELEVATION:	N/A
DRILLING METHOD:	Geoprobe	TOP OF CASING ELEVATION:	
BORING DIAMETER:	2-inch	SCREENED INTERVAL:	
GEOLOGIST:	D.Gregory	FIRST ENCOUNTERED WATER	10 fbg
PE/RG:	S.Malaeb PE#60888	STATIC WATER	

DATE STARTED: 6/27/01 DATE COMPLETED: 6/27/01

DEPTH (ft)	Sample Interval	Sample ID	Water Level	Moisture	Estimated K	TPHg ppm	DESCRIPTION	USCS	WELL INSTALLATION
0.0							ASPHALT:		
				Damp	High		SAND: (SP): Moderate yellowish brown (10YR5/4); 5% silt, 95% fine grained sand.		
-5.0									
		B1-9		Moist	High	ND			
-10.0				Wet	High				
							Hydropunch		
-15.0							EOH		
-20.0									
-25.0									
-30.0									

TEC ACCUTITE	BORING LOG	BORING/WELL NUMBER B2

CLIENT: Olympian
LOCATION: 1435 Webster St., Alameda, CA
DRILLING CO: Gregg
DRILLING METHOD: Geoprobe
BORING DIAMETER: 2-inch
GEOLOGIST: D.Gregory
PE/RG: S.Malaeb PE#60888
DATE STARTED: 6/27/01 DATE COMPLETED: 6/27/01

TOTAL DEPTH: 15 fbg
WELL DEVELOPMENT:
GROUND SURFACE ELEVATION: N/A
TOP OF CASING ELEVATION:
SCREENED INTERVAL:
FIRST ENCOUNTERED WATER 10 fbg
STATIC WATER

DEPTH (ft)	Sample Interval	Sample ID	Water Level	Moisture	Estimated K	TPHg ppm	DESCRIPTION	USCS	WELL INSTALLATION
0.0							ASPHALT:		
				Damp	High		SILTY SAND: (SM): Dark yellowish brown (10YR4/2); 15% silt, 85% fine grained sand.		
-5.0							SAND: (SP): Moderate yellowish brown (10YR5/4); 5% silt, 95% fine grained sand.		
		B2-9		Damp	High	ND	CLAYEY SAND: (SC): Dark greenish gray (5G 4/1); 15% clay, 85% fine grained sand, moderate plasticity.		
-10.0				Wet	High		SAND: (SP): Moderate yellowish brown (10YR5/4); 5% silt, 95% fine grained sand.		
							Hydropunch		
-15.0							EOH		
-20.0									
-25.0									
-30.0									

TEC ACCUTITE	BORING LOG	BORING/WELL NUMBER B3

CLIENT: Olympian
LOCATION: 1435 Webster St., Alameda, CA
DRILLING CO: Gregg
DRILLING METHOD: Geoprobe
BORING DIAMETER: 2-inch
GEOLOGIST: D.Gregory
PE/RG: S.Malaeb PE#60888
DATE STARTED: 6/27/01 DATE COMPLETED: 6/27/01

TOTAL DEPTH: 15 fbg
WELL DEVELOPMENT:
GROUND SURFACE ELEVATION: N/A
TOP OF CASING ELEVATION:
SCREENED INTERVAL:
FIRST ENCOUNTERED WATER 10 fbg
STATIC WATER

DEPTH (ft)	Sample Interval	Sample ID	Water Level	Moisture	Estimated K	TPHg ppm	DESCRIPTION	USCS	WELL INSTALLATION
0.0							ASPHALT:		
							ROAD BASE: Road Base Gravel		
				Damp	High		SILTY SAND: (SM): Dark yellowish brown (10YR4/2); 15% silt, 85% fine grained sand		
-5.0							SAND: (SP): Moderate yellowish brown (10YR5/4); 5% silt, 95% fine grained sand		
		B3-9		Moist	High	ND			
-10.0			▽	Wet	High				
							Hydropunch		
-15.0							EOH		
-20.0									
-25.0									
-30.0									

TEC ACCUTITE	BORING LOG	BORING/WELL NUMBER B4

CLIENT: Olympian
LOCATION: 1435 Webster St., Alameda, CA
DRILLING CO: Gregg
DRILLING METHOD: Geoprobe
BORING DIAMETER: 2-inch
GEOLOGIST: D.Gregory
PE/RG: S.Malaeb PE#60888
DATE STARTED: 6/27/01 DATE COMPLETED: 6/27/01

TOTAL DEPTH: 14 fbg
WELL DEVELOPMENT:
GROUND SURFACE ELEVATION: N/A
TOP OF CASING ELEVATION:
SCREENED INTERVAL:
FIRST ENCOUNTERED WATER 9.5 fbg
STATIC WATER

DEPTH (ft)	Sample Interval	Sample ID	Water Level	Moisture	Estimated K	TPHg ppm	DESCRIPTION	USCS	WELL INSTALLATION
0.0							ASPHALT:		
				Damp	High		SAND: (SP): Moderate yellowish brown (10YR5/4); 5% silt, 95% fine grained sand.		
-5.0									
-10.0		B4-9		Moist	High	ND			
				Wet	High				
-15.0							Hydropunch		
							EOH Refusal		
-20.0									
-25.0									
-30.0									

ATTACHMENT A

BORING LOGS AND PERMITS

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-5554 MARLON MAGALLANES/FRANK CODD (510) 670-5783
FAX (510)782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 1935 Webster St. Alameda, CA

CLIENT
Name Olympian (Pam Koch)
Address 260 Michelle Ct. Phone 650 873 8208
City South San Francisco CA Zip 94080

APPLICANT
Name TEC Accutite
Matt Gaffney Fax 650-952-7631
Address 35 South Linden Phone 650 952 5551
City South San Francisco CA Zip 94080

TYPE OF PROJECT
Well Construction / Geotechnical Investigation
Cathodic Protection ☐ General ☐
Water Supply ☐ Contamination ☒
Monitoring ☐ Well Destruction ☐

PROPOSED WATER SUPPLY WELL USE
New Domestic ☐ Replacement Domestic ☐
Municipal ☐ Irrigation ☐
Industrial ☐ Other ______ ☐

DRILLING METHOD:
Mud Rotary ☐ Air Rotary ☐ Auger ☐
Cable ☐ Other ☒ Geoprobe

DRILLER'S NAME Gregg Drilling

DRILLER'S LICENSE NO. C57- 485165

WELL PROJECTS
Drill Hole Diameter ______ in. Maximum
Casing Diameter ______ in. Depth ______ ft.
Surface Seal Depth ______ ft. Owner's Well Number ______

GEOTECHNICAL PROJECTS
Number of Borings 5 Maximum
Hole Diameter 2.5 in. Depth 15 ft.

ESTIMATED STARTING DATE 5/15/01
ESTIMATED COMPLETION DATE 7/15/01

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Matt J. [signature] DATE 5/4/01

PLEASE PRINT NAME Matt J. Gaffney

FOR OFFICE USE

PERMIT NUMBER W01-266
WELL NUMBER ______
APN ______

PERMIT CONDITIONS
Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

E. CATHODIC
Fill hole anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
See attached requirements for destruction of shallow wells. Send a map of work site. A different permit application is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED [signature] DATE 5-4-01

Rev.6-5-00

950 West Mall Square, #110
Alameda Point
Alameda, CA 94501

CITY OF ALAMEDA

Public Works Department

(510) 749-5840

Fax (510) 749-5867

Printed: ***05-22-2001***

Encroachment Permit

Permit #
EN01-019

Applicant
TEC ACCUTITE
35 SOUTH LINDEN AVE
SOUTH SAN FRANCISCO, CA
94080
650-952-5551 X 209

Contractor Information
TEC ACCUTITE
35 SOUTH LINDEN AVE
SOUTH SAN FRANCISCO, CA
94080

Owner Information
FARRAR GEOFFREY A
950 W MALL SQ #110
ALAMEDA CA
94501

Project Information
ENCROACH - Encroachment Permit - ***APPROVED***
Sub-Type:

Applied: **05/22/2001**
Finaled:

Issued: **05/22/2001**
Expires: **05/22/2002**
Valuation: **$55.00**

Job Address: **1435 WEBSTER ST**
074 042700501
Suite / Unit:
Parcel Number:
Work Description: **10 METERED SPACES/JUNE 27, 2001 (1400 BLK CENTRAL BTWN CENTRAL & SANTA CLARA)**

Total Fees:	$55.00
Total Payments:	$55.00
BALANCE DUE	**$0.00**

Payments Made: 05/22/2001 03:49 PM

RECEIPT

Receipt #: R01-002469

Total Payment: **$55.00**

Payee: TEC ACCUTITE ENVIRONMENTAL

Current Payment Made to the Following Items:

Account Code	Description	Amount
224-37330 (8763)	Parking Meter Revenue	45.00
4520-33410 (1011)	Encroachment Fees	10.00

Payments Made for this Receipt:

Type	Method	Description	Amount
Payment	Check	2722	55.00

Account Summary for Fees and Payments:

Item#	Description	Account Code	Tot Fee	Paid	Prev. Pmts	Cur. Pmts
240	Encroachment Fees	4520-33410 (1011)	10.00	10.00	.00	10.00
1150	Parking Meter Revenue	224-37330 (8763)	45.00	45.00	.00	45.00

INSPECTIONS
Call for an inspection when work is complete.

510-749-5840

This is to certify that the above work has been completed to my satisfaction and approval.

Date

Inspector

950 West Mall Square, #110
Alameda Point
Alameda, CA 94501

CITY OF ALAMEDA

Public Works Department

(510) 749-5840
Fax (510) 749-5867

Printed: ***06-08-2001***

Right-of-Way Permit

Permit #
EX01-0048

Applicant	Contractor Information	Owner Information
TEC ACCUTITE FARRAR GEOFFREY A 35 SOUTH LINDEN AVE SOUTH SAN FRANCISCO, CA 94080 650-952-5551 X 205	TEC ACCUTITE 35 SOUTH LINDEN AVE SOUTH SAN FRANCISCO, CA 94080	 950 W MALL SQ #110 ALAMEDA CA 94501

Project Information

RTOFWAY - Right-of-Way Permit - *APPROVED*
Sub-Type:

Applied: **05/11/2001**
Finaled:

Issued: **06/08/2001**
Expires: **06/08/2002**
Valuation: **$77.00**

Job Address: **1435 WEBSTER ST**
074 042700501
Suite / Unit:
Work Description: **SOIL BORINGS (ONE DAY TO BE DETERMINED)**

Parcel Number:

Total Fees:	$201.50
Total Payments:	$201.50
BALANCE DUE	**$0.00**

Payments Made: 06/08/2001 10:47 AM

RECEIPT

Receipt #: R01-002800

Total Payment: **$124.50**
Payee:
TECHNOLOGY, ENGINEERING & CONSTRUCTION, INC.

Current Payment Made to the Following Items:

Account Code	Description	Amount
4110-37090 (1410)	Design Review Fees	12.00
4225-37160 (6319)	Engineering Plan Check	112.50

Payments Made for this Receipt:

Type	Method	Description	Amount
Payment	Check	2729	124.50

Account Summary for Fees and Payments:

Item#	Description	Account Code	Tot Fee	Paid	Prev. Pmts	Cur. Pmts
250	Permit Filing Fees	4520-37450 (1050)	36.00	36.00	36.00	.00
710	Design Review Fees	4110-37090 (1410)	12.00	12.00	.00	12.00
782	Engineering Plan Check	4225-37160 (6319)	112.50	112.50	.00	112.50
800	Concrete Permit Fee	4210-33700 (1315)	41.00	41.00	41.00	.00

**** See application for additional requirements ****

INSPECTIONS **510-749-5840**

NOTE: All construction within the public right of way must have barricades with flashers for night time protection.

This is to certify that the above work has been completed to my satisfaction and approval.

Date

Inspector

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

ENCROACHMENT PERMIT

TR-0120

Permit No.	0401-6SV-0824
Dist/Co/Rte/PM	04-Ala-260-0.10
Date	April 23, 2001
Fee Paid	$80.00
Deposit	$80.00
Performance Bond Amount (1)	
Payment Bond Amount (2)	
Bond Company	
Bond Number (1)	
Bond Number (2)	

In compliance with (*Check one*):

☒ Your application of March 26, 2001

Utility Notice No. _____ of _____

☐ Agreement No. _____ of _____

☐ R/W Contract No. _____ of _____

TO: TEC ACCUTITE
35 S. Linden Avenue
South San Francisco, CA 94583

Attn: David Gregory
Phone: (650) 952-5951

, **PERMITTEE**

and subject to the following, **PERMISSION IS HEREBY GRANTED** to:

Perform soil borings and take soil samples on State Highway 04-Ala-260, Post Mile 0.10, at 1435 Webster Street, in the City of Alameda.

Two days before work is started under this permit, notice shall be given to, and approval of construction details, operations, public safety, and traffic control shall be obtained from State Representative N. Freitag, 600 Lewelling Blvd., San Leandro, 94579, 510-614-5951, weekdays, between 8:00 AM and 4:30 PM.

Immediately following completion of the work permitted herein, the permittee shall fill out and mail the Notice of completion attached to this permit.

All personnel shall wear hard hats and orange vests, shirts, or jackets as appropriate during construction.

The following attachments are also included as part of this permit (*Check applicable*):

☒ Yes	☐ No	General Provisions
☐ Yes	☒ No	Utility Maintenance Provisions
☐ Yes	☒ No	Special Previsions
☐ Yes	☒ No	A Cal-OSHA permit required prior to beginning work: # _____

In addition to fee, the permittee will be billed actual costs for:

☐ Yes	☒ No	Review
☒ Yes	☐ No	Inspection
☒ Yes	---------	Field Work

(If any Caltrans effort expended)

☐ Yes ☒ No The information in the environmental documentation has been reviewed and considered prior to approval of this permit.

This permit is void unless the work is completed before December 31, 2001

This permit is to be strictly construed and no other work other than specifically mentioned is hereby authorized.
No project work shall be commenced until all other necessary permits and environmental clearances have been obtained.

APPROVED:

HARRY Y. YAHATA, District Director

BY:

S. S. NOZZARI, District Permit Engineer

ATTACHMENT B

LABORATORY ANALYTICAL REPORT

North State Environmental Laboratory
CA ELAP # 1753
90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • **(650) 266-4563** • FAX (650) 266-4560

C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 01-0917
Client: Technology Eng. Const.
Project: OLYMPIAN/1435 WEBSTER ST/ALAMEDA

Date Reported: 07/09/2001

Gasoline,BTEX and MTBE by Methods 8015M and 8020

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 01-0917-01 Client ID: B1-9				06/27/2001	SOIL
Gasoline	8015M	ND			07/02/2001
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Sample: 01-0917-02 Client ID: B2-9				06/27/2001	SOIL
Gasoline	8015M	ND			07/02/2001
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Sample: 01-0917-03 Client ID: B3-9				06/27/2001	SOIL
Gasoline	8015M	ND			07/02/2001
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			

*Confirmed by GC/MS method 8260.

North State Environmental Laboratory
CA ELAP # 1753
90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • **(650) 266-4563** • FAX (650) 266-4560

C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 01-0917
Client: Technology Eng. Const.
Project: OLYMPIAN/1435 WEBSTER ST/ALAMEDA

Date Reported: 07/09/2001

Gasoline,BTEX and MTBE by Methods 8015M and 8020

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 01-0917-04 Client ID: B4-9				06/27/2001	SOIL
Gasoline	8015M	ND			07/02/2001
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Sample: 01-0917-05 Client ID: B1				06/27/2001	WATER
Gasoline	8015M	ND			07/01/2001
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	4	ug/L		
Toluene	8020	3	ug/L		
Xylenes	8020	ND			
Sample: 01-0917-06 Client ID: B2				06/27/2001	WATER
Gasoline	8015M	ND			07/01/2001
Benzene	8020	ND			
Ethylbenzene	8020	0.5	ug/L		
MTBE	8020	*4	ug/L		
Toluene	8020	0.9	ug/L		
Xylenes	8020	2	ug/L		

*Confirmed by GC/MS method 8260.

North State Environmental Laboratory
CA ELAP # 1753
90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • **(650) 266-4563** • FAX (650) 266-4560

C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 01-0917
Client: Technology Eng. Const.
Project: OLYMPIAN/1435 WEBSTER ST/ALAMEDA

Date Reported: 07/09/2001

Gasoline,BTEX and MTBE by Methods 8015M and 8020

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 01-0917-07 Client ID: B3				06/27/2001	WATER
Gasoline	8015M	400	ug/L		07/01/2001
Benzene	8020	ND			
Ethylbenzene	8020	0.6	ug/L		
MTBE	8020	3	ug/L		
Toluene	8020	1	ug/L		
Xylenes	8020	1	ug/L		
Sample: 01-0917-08 Client ID: B4				06/27/2001	WATER
Gasoline	8015M	96	ug/L		07/01/2001
Benzene	8020	2	ug/L		
Ethylbenzene	8020	0.6	ug/L		
MTBE	8020	2	ug/L		
Toluene	8020	3	ug/L		
Xylenes	8020	2	ug/L		

*Confirmed by GC/MS method 8260.

North State Environmental Laboratory
CA ELAP # 1753
90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • **(650) 266-4563** • FAX (650) 266-4560

C E R T I F I C A T E O F A N A L Y S I S

Quality Control/Quality Assurance

Lab Number: 01-0917
Client: Technology Eng. Const.
Project: OLYMPIAN/1435 WEBSTER ST/ALAMEDA

Date Reported: 07/09/2001

Gasoline,BTEX and MTBE by Methods 8015M and 8020

Analyte	Method	Reporting Limit	Unit	Blank	Avg MS/MSD Recovery	RPD
Gasoline	8015M	0.5	mg/Kg	ND	99	4
Benzene	8020	.005	mg/Kg	ND	101	1
Toluene	8020	.005	mg/Kg	ND	102	0
Ethylbenzene	8020	.005	mg/Kg	ND	104	1
Xylenes	8020	.010	mg/Kg	ND	101	0
MTBE	8020	.005	mg/Kg	ND	98	2
Gasoline	8015M	50	mg/L	ND	108	4
Benzene	8020	0.5	mg/L	ND	99	7
Toluene	8020	0.5	mg/L	ND	98	6
Ethylbenzene	8020	0.5	mg/L	ND	99	8
Xylenes	8020	1.0	mg/L	ND	98	9
MTBE	8020	0.5	mg/L	ND	98	14

ELAP Certificate NO:1753
Reviewed and Approved

John A.Murphy, Laboratory Director

Chain of Custody Accutite Environmental Engineering

01-0917

Client	Accutite Environmental Engineering	Report To	David Gregory
Address	35 South Linden Avenue South San Francisco, CA 94080	Bill To:	Accutite
		Billing Reference#	5092
Phone	650-952-5551		
Project Name/Address	Olympian 1435 Webster St, Alameda		
Sampler	David Gregory	Date:	6/28/01

Turnaround: ASAP | 1 Day | 2 Day | (3 Day) | 1 Week | 2 Week | Others

	Sample ID	Sample Matrix	#of Containers	Container Type	Sample Date/Time	TPHd BTEX, MTBE	BTEX, MTBE 8020	Remarks
1	B1-9	Soil	1	Brass	6/27/01, 12.45	X	X	Confirm MTBE - 8260
2	B2-9	↓	↓	↓	, 12.00	X	X	
3	B3-9				, 11.00	X	X	
4	B4-9				, 10.30	X	X	
5	B1	Water	3	VOAs	6/27/01, 8.00	X	X	
6	B2				, 2.50	X	X	
7	B3				, 2.30	X	X	
8	B4				, 2.20	X	X	

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	6/27/01	8.00	[signature]	6.28.01	8:00
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

North State Environmental Laboratory
CA ELAP # 1753
90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • **(650) 266-4563** • FAX (650) 266-4560

C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 01-0900
Client: Technology Eng. Const.
Project: OLYMPIAN 1435 WEBSTER ST., ALAMEDA

Date Reported: 07/02/2001

Gasoline,BTEX and MTBE by Methods 8015M and 8020

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 01-0900-01	Client ID: MW 1			06/25/2001	WATER
Gasoline	8015M	18000	ug/L		06/26/2001
Benzene	8020	1200	ug/L		
Ethylbenzene	8020	970	ug/L		
MTBE	8020	*1500	ug/L		
Toluene	8020	1800	ug/L		
Xylenes	8020	3200	ug/L		
Sample: 01-0900-02	Client ID: MW 2			06/25/2001	WATER
Gasoline	8015M	ND			06/26/2001
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	13	ug/L		
Toluene	8020	ND			
Xylenes	8020	ND			
Sample: 01-0900-03	Client ID: MW 3			06/25/2001	WATER
Gasoline	8015M	ND			06/26/2001
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	0.8	ug/L		
Toluene	8020	ND			
Xylenes	8020	ND			

*Confirmed by GC/MS

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C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 01-0900
Client: Technology Eng. Const.
Project: OLYMPIAN 1435 WEBSTER ST., ALAMEDA

Date Reported: 07/02/2001

Gasoline,BTEX and MTBE by Methods 8015M and 8020

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 01-0900-04 Client ID: MW 4				06/25/2001	WATER
Gasoline	8015M	ND			06/26/2001
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Sample: 01-0900-05 Client ID: MW 5				06/25/2001	WATER
Gasoline	8015M	3100	ug/L		06/26/2001
Benzene	8020	1000	ug/L		
Ethylbenzene	8020	200	ug/L		
MTBE	8020	140	ug/L		
Toluene	8020	110	ug/L		
Xylenes	8020	320	ug/L		
Sample: 01-0900-06 Client ID: MW 6				06/25/2001	WATER
Gasoline	8015M	ND			06/26/2001
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	4	ug/L		
Toluene	8020	ND			
Xylenes	8020	ND			

*Confirmed by GC/MS

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C E R T I F I C A T E O F A N A L Y S I S

Quality Control/Quality Assurance

Lab Number: 01-0900
Client: Technology Eng. Const.
Project: OLYMPIAN 1435 WEBSTER ST., ALAMEDA

Date Reported: 07/02/2001

Gasoline,BTEX and MTBE by Methods 8015M and 8020

Analyte	Method	Reporting Limit	Unit	Blank	Avg MS/MSD Recovery	RPD
Gasoline	8015M	50	ug/L	ND	78/85	0
Benzene	8020	0.5	ug/L	ND	98/92	6
Toluene	8020	0.5	ug/L	ND	96/91	5
Ethylbenzene	8020	0.5	ug/L	ND	97/91	6
Xylenes	8020	1.0	ug/L	ND	94/90	4
MTBE	8020	0.5	ug/L	ND	90/83	9

ELAP Certificate NO:1753
Reviewed and Approved

John A.Murphy,Laboratory Director

Chain of Custody Accutite Environmental Engineering

01-0900

Client	Accutite Environmental Engineering	Report To	David Gregory
Address	35 South Linden Avenue South San Francisco, CA 94080	Bill To	Accutite
		Billing Reference#	5092
Phone	650-952-5551		
Project Name/Address	Olympian 1435 Webster St, Alameda		
Sampler	David Gregory	Date:	6/26/01

Turnaround

ASAP	1 Day	2 Day	3 Day
1 Week	2 Week	Others	

Sample ID	Sample Matrix	#of Containers	Container Type	Sample Date/Time	Analysis Required: TPHg 8015	Analysis Required: BTEX, MTBE 8020	Remarks
1 MW1	water	3	VOAs	6/25/01, 2.40	X	X	Confirm MTBE with 8260
2 MW2				2.00	X	X	
3 MW3				2.10	X	X	
4 MW4				1.00	X	X	
5 MW5				3.00	X	X	
6 MW6				2.30	X	X	
7							
8							
9							
10							
11							
12							
13							
14							
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17							
18							
19							
20							

Relinquished by:	Date	Time	Received by	Date	Time
David Gregory	6/26/01	8.10 am		6.26.01	8:00 a.m.
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by	Date	Time

ATTACHMENT C

WELL SAMPLING LOGS

WATER SAMPLING FORM

CLIENT: Olympian
ADDRESS: 1435 Webster St, Alameda
WELL # TESTED: MW1

To convert water column height to total amount of gallons in one (1) well volume, multiply the water colum height by A.

WELL DIAMETER	A
2"	0.17
3"	0.36
4"	0.65

TOTAL WELL DEPTH 20.7
- DEPTH TO WATER 9.73
= WATER COLUM HEIGHT 10.97 x A = 1.86 GAL (1 well volume)

Multiply one (1) well volume by three (3) to obtain the minimum # of gallons to be extracted before taking well sample(s).

3 x = 5.6 (3 well volume)

DATE: 6/25/01
TIME: 2.40
WATER LEVEL: 9.78

TIME:	GALS PUMPED	TEMP	COND.	PH
1.25	1.9	22.1	344	6.13
1.30	3.8	21.4	381	6.12
1.35	5.7	21.0	333	6.14

Time: 2.40
Volume Pumped:
Sampler:

Sheen or inches of free product:
Analyzed for: Mod - Str gas odor.

WATER SAMPLING FORM

CLIENT: Olympian
ADDRESS: 1435 Webster St, Alameda
WELL # TESTED: MW2

To convert water column height to total amount of gallons in one (1) well volume, multiply the water colum height by A.

WELL DIAMETER	A
2" ✓	0.17
3"	0.36
4"	0.65

TOTAL WELL DEPTH 19.15
- DEPTH TO WATER 10.11
= WATER COLUM HEIGHT 9.04 x A = 1.54 GAL (1 well volume)

Multiply one (1) well volume by three (3) to obtain the minimum # of gallons to be extracted before taking well sample(s).

3 x = 4.6 (3 well volume)

DATE: 6/25/01
TIME: 2.00
WATER LEVEL: 10.12

TIME:	GALS PUMPED	TEMP	COND.	PH
12.05	1.5	23.1	723	6.10
12.10	3.0	22.7	769	6.10
12.12	4.5	21.7	758	6.12

Time: 2.00
Volume Pumped:
Sampler: D.G

Sheen or inches of free product:
Analyzed for:

WATER SAMPLING FORM

CLIENT: Olympian
ADDRESS: 1435 Webster St, Alameda
WELL # TESTED: MW 3

To convert water column height to total amount of gallons in one (1) well volume, multiply the water colum height by A.

WELL DIAMETER	A
2" ✓	0.17
3"	0.36
4"	0.65

TOTAL WELL DEPTH 21.6
- DEPTH TO WATER 10.04
= WATER COLUM HEIGHT 11.56 x A = 1.96 GAL (1 well volume)

Multiply one (1) well volume by three (3) to obtain the minimum # of gallons to be extracted before taking well sample(s).

3 x = 5.9 (3 well volume)

DATE: 6/25/01
TIME: 2.10
WATER LEVEL: 10.06

TIME:	GALS PUMPED	TEMP	COND.	PH
12.20	2	24.6	127	6.04
12.25	4	22.9	169	6.11
12.27	6	22.7	211	6.11

Time:
Volume Pumped:
Sampler: D. G

Sheen or inches of free product:
Analyzed for:

WATER SAMPLING FORM

CLIENT: Olympian
ADDRESS: 1435 Webster St, Alameda
WELL # TESTED: MW4

To convert water column height to total amount of gallons in one (1) well volume, multiply the water colum height by A.

WELL DIAMETER	A
2"	0.17
3"	0.36
4"	0.65

TOTAL WELL DEPTH 19.44
- DEPTH TO WATER 9.68
= WATER COLUM HEIGHT 9.76 x A = 1.65 GAL (1 well volume)

Multiply one (1) well volume by three (3) to obtain the minimum # of gallons to be extracted before taking well sample(s).

3 x = 5.0 (3 well volume)

DATE: 6/25/01
TIME: 1:00
WATER LEVEL: 9.85

TIME:	GALS PUMPED	TEMP	COND.	PH
11:30	1.65	20.8	189	6.14
11:45	3.3	21.8	198	6.12
11:55	5.0	22.8	172	6.09

Time: 1:00
Volume Pumped:
Sampler: D.G

Sheen or inches of free product:
Analyzed for:

WATER SAMPLING FORM

CLIENT: Olympian
ADDRESS: 1435 webster st Alameda
WELL # TESTED: MW5

To convert water column height to total amount of gallons in one (1) well volume, multiply the water colum height by A.

WELL DIAMETER	A
2" ✓	0.17
3"	0.36
4"	0.65

TOTAL WELL DEPTH 18.45
- DEPTH TO WATER 9.05
= WATER COLUM HEIGHT 9.4 x A = 1.6 GAL (1 well volume)

Multiply one (1) well volume by three (3) to obtain the minimum # of gallons to be extracted before taking well sample(s).

3 x = 4.8 (3 well volume)

DATE: 6/25/01
TIME: 3.00
WATER LEVEL: 9.44

TIME:	GALS PUMPED	TEMP	COND.	PH
12.50	1.6	22.1	657	6.11
1.15	2.2	24.3	689	6.14

Time: 3.00
Volume Pumped:
Sampler: D.C

Sheen or inches of free product:
Analyzed for: Wk organic

odor - grayish green color (geology change)

Slow recharge - purge > 1 volume, let recharge and get sample.

WATER SAMPLING FORM

CLIENT: Olympian
ADDRESS: 1435 Webster St, Alameda
WELL # TESTED: MW6

To convert water column height to total amount of gallons in one (1) well volume, multiply the water colum height by A.

WELL DIAMETER	A
2"	0.17
3"	0.36
4"	0.65

TOTAL WELL DEPTH 18.2
- DEPTH TO WATER 10.39
= WATER COLUM HEIGHT 7.81 x A = 1.3 GAL (1 well volume)

Multiply one (1) well volume by three (3) to obtain the minimum # of gallons to be extracted before taking well sample(s).

3 x = 3.9 (3 well volume)

DATE: 6/25/01
TIME: 2:30
WATER LEVEL: 10.42

TIME:	GALS PUMPED	TEMP	COND.	PH
12:35	1.3	23.5	547	6.12
12:38	2.6	23.1	678	6.10
12:42	3.9	23.1	636	6.13

Time: 2:30
Volume Pumped:
Sampler: P.C

Sheen or inches of free product:
Analyzed for:

Chain of Custody Accutite Environmental Engineering

Client	Accutite Environmental Engineering	Report To	David Gregory
Address	35 South Linden Avenue South San Francisco, CA 94080	Bill To:	Accutite
		Billing Reference#	
Phone	650-952-5551		
Project Name/Address	Olympian 1435 Webster St, Alameda		
Sampler	David Gregory	Date:	6/26/01

Turnaround			
ASAP	1 Day	2 Day	3 Day
1 Week	2 Week	Others	

Sample ID	Sample Matrix	# of Containers	Container Type	Sample Date/Time	Analysis Required: TPHg BTEX, MTBE 8020	Remarks
MW1	water	3	VOAs	6/25/01, 2.40	X X	Confirm MTBE with 8260
MW2	↓	↓	↓	, 2.00	X X	
MW3				, 2.10	X X	
MW4				, 1.00	X X	
MW5				, 3.00	X X	
MW6	↓	↓	↓	, 2.30	X X	
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

Relinquished by:	Date	Time	Received by:	Date	Time
David Gregory	6/26/01	8.10 a.m.	[illegible]	6.26.01	8:00 a.m.
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time