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Accutite Environmental Engineering

35 So. Linden Avenue, South San Francisco, CA 94080-6407 Tel: (650) 952-5551 Fax: (650) 952-7631 Tank Testing: (650) 952-0327

ENVIRONMENTAL PROTECTION
99 APR 15 11:53

- install 2 add'l MDS. Move MDS further north.
- do utility line survey.
- research potential off site sources

April 1, 1999

Ms. Eva Chu
Hazardous Materials Specialist
Alameda County Health Agency
Division of Environmental Protection
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

SUBJECT: SUBSURFACE INVESTIGATION AND MONITORING WELL SAMPLING EPISODE AT 1435 WEBSTER STREET IN ALAMEDA, CALIFORNIA

Dear Ms. Chu:

Accutite Environmental Engineering is pleased to submit the enclosed report on advancing four borings and sampling three monitoring wells at the former gasoline station, located at 1435 Webster Street in Alameda, California. For a speedy review of the findings, please review the conclusion and recommendation sections of the report.

Thank you for your cooperation. If you have any questions, please call me at (650) 952-5551, Ext. 209.

Sincerely,
Accutite Environmental Engineering

Sami Malaeb, R.E., R.E.A.
Project Manager

cc: Mr. Dan Koch, Olympian, 260 Michelle Court, South San Francisco, CA 94080
Mr. David Harris, Esq., Trump, Alioto, Trump & Prescott, LLP, 2280 Union Street, San Francisco, CA 94123
Mr. Jeff Farrar, 3100 Cohasset Road, Chico, CA 95973

99 APR 15 11:53
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35 So. Linden Avenue, South San Francisco, CA 94080-6407 Tel: (650) 952-5551 Fax: (650) 952-7631 Tank Testing: (650) 952-0327

**SUBSURFACE INVESTIGATION
&
MONITORING WELL SAMPLING EPISODE**

AT

**FORMER GASOLINE STATION
1435 WEBSTER STREET
ALAMEDA, CALIFORNIA**

**PREPARED BY:
ACCUTITE ENVIRONMENTAL ENGINEERING**

**FOR:
OLYMPIAN**

APRIL 1, 1999

1435WREP

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- B. LABORATORY RESULTS
- C. BORING LOGS
- D. DRILLING AND ENCROACHMENT PERMITS



1.0 INTRODUCTION

Accutite Environmental Engineering (Accutite) was retained by Olympian to perform a subsurface investigation and sample the existing monitoring wells at the former gasoline station, 1435 Webster Street in Alameda, California. Please refer to the attached Figure 1 for site location. The work was performed according to Accutite's workplan dated October 2, 1998. Ms. Eva Chu, of the Alameda County Health Care Services (ACHCS) approved the workplan by a letter dated October 22, 1998. The work included advancing four direct push borings with sampling and analysis of the soil and groundwater, and sampling the existing three monitoring wells with analysis of the groundwater.

2.0 BACKGROUND AND PURPOSE

The subject site is located on the northwest corner of Webster Street and Taylor Avenue in the City of Alameda, California. The subject site had operated as a gasoline service station until 1988. Presently, the site is a city, metered parking lot. The depth to groundwater on site varied historically between 7 and 12 feet below surface grade, and the groundwater flow direction varied from the northeast to southeast. Soil on site is mostly a mixture of brown sand and gravel.

The site was a home of four underground storage tanks (USTs). These tanks were as follows:

- Two 10,000-gallon gasoline USTs
- One 7,500-gallon diesel UST
- One 300-gallon waste oil UST

Please see Figure 3 for the location of the USTs. All USTs were removed in September 1989. Following the UST removal, the collected soil samples detected a maximum of 220 parts per million (ppm) Total Petroleum Hydrocarbons as Gasoline (TPH-G), 430 ppm Total Petroleum Hydrocarbons as Diesel (TPH-D), and 650 ppm of Total Recoverable Petroleum Hydrocarbons as Oil and Grease (TRPH).

In January 1991, approximately 550 cubic yards of soil, impacted with gasoline and diesel, were excavated from the former UST excavation and biologically treated by Uriah Environmental Services, Inc.

In January 1993, three monitoring wells (MW-1, MW-2, and MW-3) were installed at the subject site. To date, these wells have been sampled for a total of eight episodes. Noticeable concentrations of TPH-D, TPH-G, Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) and Methyl-t-butyl ether (MTBE) have been detected in MW-1. Please see the cumulative analytical results in Table 2 of this report. At the request of ACHCS, further groundwater assessment was performed by advancing four borings and sampling the existing three monitoring wells onsite. Below we detail the latest sampling of the wells, completed on February 11, 1999, and the advancing of four borings.

3.0 MONITORING WELL SAMPLING

On February 11, 1999, Accutite purged and collected groundwater samples from MW-1, MW-2, and MW-3. The sampling logs are provided in Appendix A. Prior to sampling, depth to water measurements were taken for each well and the groundwater flow direction/gradient was calculated. Groundwater samples were collected using a disposable bailer and transferred into clean, laboratory certified VOA vials and jars. All samples were labeled, placed on blue ice (approximately 4°C), and transported under a chain of custody, within 24 hours, to North State Environmental (a State of California certified laboratory) for analysis.

4.0 ELEVATION DATA AND GROUND WATER FLOW DIRECTION

On February 11, 1999, prior to sampling, Accutite surveyed the groundwater elevations in all three wells. The reference mark considered as a base for calculating these elevations was a fire hydrant, located on the sidewalk of Webster Street (Figure 2).

The calculated groundwater flow direction was to the southeast (Figure 2) with a gradient of 0.0078 ft/ft. Table 1 below summarizes the elevation data from 02/11/99:

Table 1 **Elevation Data**

Well Identification	Elevation of Casing in ft	Depth to Ground-Water in ft on February 11, 1999	Ground Water Elevation in ft
MW-1	19.53	7.91	11.62
MW-2	19.80	8.12	11.68
MW-3	19.79	7.77	12.02

5.0 LABORATORY RESULTS FROM THE MONITORING WELLS

The groundwater samples were analyzed using the following United State Environmental Protection Agency (USEPA) Methods:

- ◆ USEPA Method 8010M for total petroleum hydrocarbons as gasoline (TPH-G);
- ◆ USEPA Method 8020 for benzene, toluene, ethylbenzene, and xylenes (BTEX);
- ◆ USEPA Method 8020 for methyl-t-butyl ether (MTBE);
- ◆ USEPA Method 8015M for total petroleum hydrocarbons as diesel (TPH-D); and
- ◆ USEPA Method 7420, AA spectroscopy for total Lead (Pb);

The laboratory report is included in Appendix B. See Figure 3. The cumulative laboratory results are summarized in Table 2 below:

TABLE 2 CUMULATIVE GROUNDWATER ANALYTICAL RESULTS

Sample ID	Date Of Sampling	Depth to Water (ft)	TPH-D ⁽¹⁾	TPH-G ⁽³⁾	Benzene	Toluene	Ethyl Benzene	Xylenes	MTBE ⁽⁴⁾	TRPH ⁽⁵⁾
			in ppb ⁽²⁾	in ppb	in ppb	in ppb	in ppb	in ppb	in ppb	in ppb
MW-1	6/03/93	N/A ⁽⁷⁾	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/14/94	11.46	<50	14,000	44	28	25	50	NA ⁽⁸⁾	0.8
	12/30/94	9.22	<50	4,000	12	9	6.8	30	NA ⁽⁸⁾	<0.5
	3/26/95	6.76	<50	1,000	21	10	7.1	25	NA ⁽⁸⁾	2.1
	07/9/95	8.92	<50	16,000	57	28	25	53	NA ⁽⁸⁾	NA
	07/31/98	8.30	1,700	4,700	1,300	48	140	150	6,600	<5
	02/11/99	7.91	2000	25,000	18,000	1,600	1,400	500	28,000	NA ⁽⁸⁾
	MW-2	6/03/93	9.54	<50	<50	5.8	<0.5	<0.5	<0.5	N/A
9/14/94		11.82	<50	<50	<0.5	<0.5	<0.5	<0.5	NA ⁽⁸⁾	<0.5
12/30/94		9.46	<50	160	1.4	1.4	0.8	5.0	NA ⁽⁸⁾	<0.5
3/26/95		6.82	<50	<50	<0.5	<0.5	<0.5	<0.5	NA ⁽⁸⁾	<0.5
07/9/95		9.22	NA	NA	NA	NA	NA	NA	NA ⁽⁸⁾	NA
07/31/98		8.56	220	<50	<0.5	<0.5	<0.5	<0.5	73	<5
02/11/99		8.12	<50	<50	<0.5	<0.5	<0.5	<0.5	75	NA ⁽⁸⁾
MW-3		6/03/93	9.80	<50	<50	<0.5	<0.5	<0.5	<0.5	N/A
	9/14/94	12.19	<50	<50	<0.5	<0.5	<0.5	<0.5	NA ⁽⁸⁾	<0.5
	12/30/94	9.72	<50	<50	<0.5	<0.5	<0.5	<0.5	NA ⁽⁸⁾	<0.5
	3/26/95	6.88	<50	<50	<0.5	<0.5	<0.5	<0.5	NA ⁽⁸⁾	<0.5
	07/9/95	9.52	N/A ⁽⁷⁾	N/A ⁽⁷⁾	N/A ⁽⁷⁾	N/A ⁽⁷⁾	N/A ⁽⁷⁾	N/A ⁽⁷⁾	N/A ⁽⁷⁾	N/A ⁽⁷⁾
	07/31/98	8.40	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5
	02/11/99	7.77	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NA ⁽⁸⁾

- (1) TPH-D = Total Petroleum Hydrocarbons as Diesel
- (2) ppb = part per billion or microgram per liter
- (3) TPH-G = Total Petroleum Hydrocarbons as Gasoline
- (4) MTBE = Methyl tertiary butyl ether. Confirmed using GC/MS, EPA Method 8260
- (5) TRPH = Total Recoverable Petroleum Hydrocarbons as Oil and Grease
- (6) ppm = part per million or milligram per liter
- (7) Well was not accessible because of a parking car in its location
- (8) Not analyzed for the indicated compound

6.0 SUBSURFACE INVESTIGATION BY PERFORMING DIRECT PUSH BORINGS

To advance the borings, Accutite contracted Vironex Environmental Field Services to advance four (4) borings (see the attached Figure 3). On February 11, 1998, Four borings (4) borings (B1 through B4) were extended to a depth of approximately 15 feet bgs, using the Geoprobe system. The soil was mostly sand. Signs of contamination, such as staining and odor of hydrocarbons are recorded on the boring logs in Appendix C. Please see the attached drilling and encroachment permits in Appendix D.

7.0 LABORATORY RESULTS FROM THE BORINGS

A minimum of two soil samples were collected from each boring. One sample was collected from the shallow soil at 4 feet bgs and another soil sample was collected at the soil-groundwater interface. One groundwater sample was collected from each boring. The standard procedures for the soil and groundwater sampling were attached to the workplan, dated October 2, 1998. The



samples were analyzed for the following contaminants: TPH-D, TPH-G, BTEX and MTBE, and Total Lead (Pb).

The laboratory report is included in Appendix B. The attached Figure 3 depicts the groundwater analytical results. The laboratory results are also summarized in Tables 3 and 4 below:

TABLE 3 ANALYTICAL RESULTS OF THE SOIL SAMPLES FROM THE BORINGS

Sample ID	Sampling Date	TPH-D ppm*	TPH-G ppm*	Benzene ppm	Toluene ppm	Ethyl- benzene ppm	Xylenes ppm	MTBE ppm	Total Lead (Pb) ppm
B1-7.5'	02/11/99	<1.0	0.65	<0.005	<0.005	<0.005	<0.010	<0.005	<1.0
B2-7.5'	02/11/99	<0.5	<0.5	<0.005	<0.005	<0.005	<0.010	<0.005	2.0
B3-6.0'	02/11/99	<0.5	<0.5	<0.005	<0.005	<0.005	<0.010	<0.005	1.2
B4-7.5'	02/11/99	<0.5	<0.5	<0.005	<0.005	<0.005	<0.010	<0.005	1.2

*ppm = part per million or mg/kg

TABLE 4 ANALYTICAL RESULTS OF THE GROUNDWATER SAMPLES FROM THE BORINGS

Sample ID	Sampling Date	TPH-D ppb*	TPH-G ppb	Benzene ppb	Toluene ppb	Ethyl- benzene ppb	Xylenes ppb	MTBE ppb	Total Lead (Pb) ppm**
B1-W	02/11/99	9000***	8,200	1,400	130	290	1,300	320	1.1
B2-W	02/11/99	<50	340	34	0.70	1.20	1.20	6,000****	0.51
B3-W	02/11/99	7,000***	38,000	2,000	3,700	1,600	6,300	750****	1.7
B4-W	02/11/99	9000***	33,000	460	2,300	1,500	8,300	110****	1.4

*ppb = part per billion or µg/l

**ppm = part per million or mg/kg

***Pattern does not match diesel

****Sample with highest concentration of MTBE was confirmed, using the GC/MS, EPA Method 8260

8.0 DISCUSSION OF RESULTS AND CONCLUSIONS

- The depth to groundwater is between 7.7 and 8.2 feet below ground surface. The calculated groundwater flow direction is toward the southeast with a gradient of 0.0078 ft/ft.
- The groundwater sample collected from MW-1 detected noticeable concentrations of TPH-D, TPH-G, BTEX, and MTBE (the highest to date). TPH-G was detected at 25,000 ppb, Benzene was detected at 18,000 ppb, and MTBE was detected at 28,000 ppb. MTBE was confirmed, using the GC/MS EPA Method 8260. These high concentrations could be attributed to the sampling of the wells during the wet season and the seasonal rise of the groundwater table. The fact that MTBE was detected at 28,000 ppb compared to TPH-G at 25,000 ppb may explain that gasoline is biodegrading at a faster rate than MTBE.
- MW-2 and MW-3 did not detect any significant concentration of TPH-G, TPH-D, BTEX, or MTBE.
- The soil samples, collected from the soil borings did not detect any significant concentration of TPH-G, TPH-D, BTEX, or MTBE.
- No significant lead (Pb) concentration was detected in any of the soil or groundwater samples.

- Groundwater analysis from Borings B1, B3, and B4 (Figure 3), drilled onsite, detected noticeable concentrations of TPH-D, TPH-G, BTEX, and MTBE. The maximum gasoline (TPH-G) concentration of 38,000 ppb, was detected in B3. The maximum concentration of benzene at 2,000 ppb, was also detected in B3. The maximum concentration of MTBE of 6,000 ppb, was detected in B2.

9.0 RECOMMENDATIONS

Based on the analytical findings and field observations, Accutite recommends the following:

- Since the former underground storage tank systems at this site have long been removed, and since the groundwater concentrations of TPH-G, BTEX, MTBE, and TPH-D are on the increase, it is prudent to investigate possible offsite source(s) of Petroleum Hydrocarbons. An enlarged figure, showing the site vicinity, will enhance the offsite assessment of such sources.
- To install two additional monitoring wells on site, in the indicated locations of Figure 4. One monitoring well MW-4, directly downgradient from the former USTs and MW-5, in the vicinity of the former gasoline dispenser, where high concentrations of petroleum hydrocarbons were detected.
- To continue sampling the existing and proposed wells onsite for additional four quarters. The analytical findings from these wells will assess the stability of the plume onsite.

10.0 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.

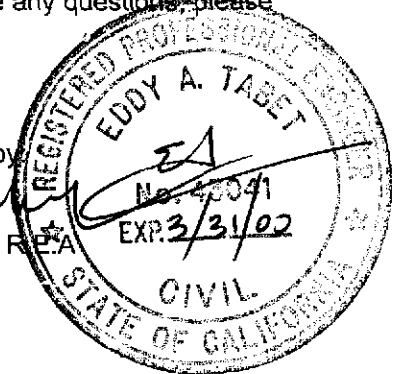
Thank you for the opportunity to provide you with our services. If you have any questions, please call me at (650) 952-5551. Ext. 208.

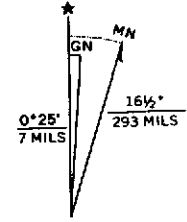
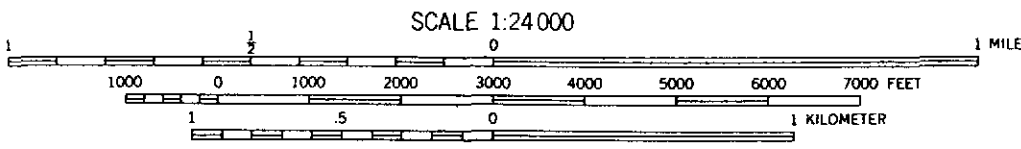
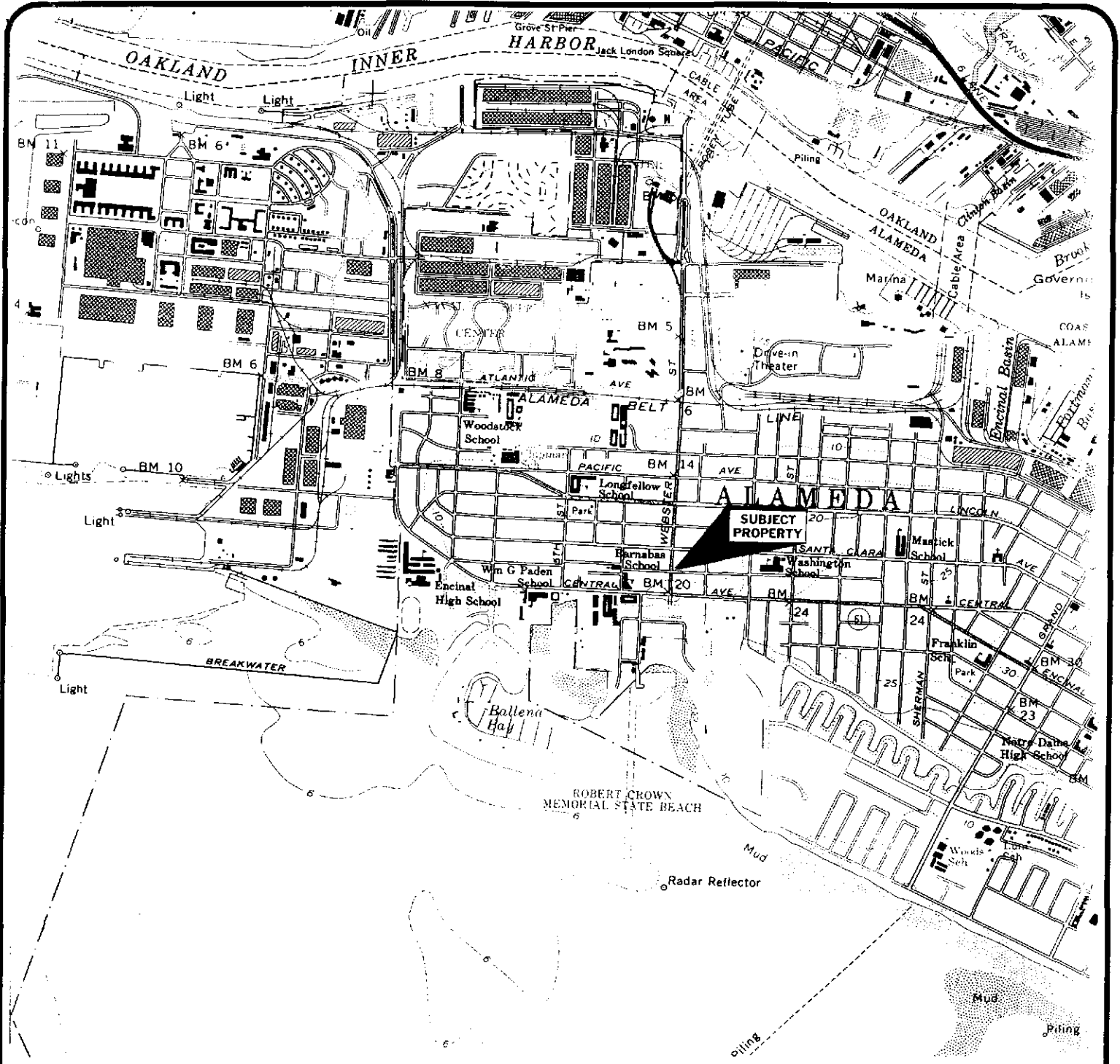
Sincerely,
Accutite Environmental Engineering

Sami Malaeb
Sami Malaeb, P.E., R.E.A.
Project Manager

Report reviewed by

Eddy A. Tabet
Eddy Tabet, P.E., R.E.A.
General Manager





REVISIONS	DATE 7/30/98	PAGE 1 of 1
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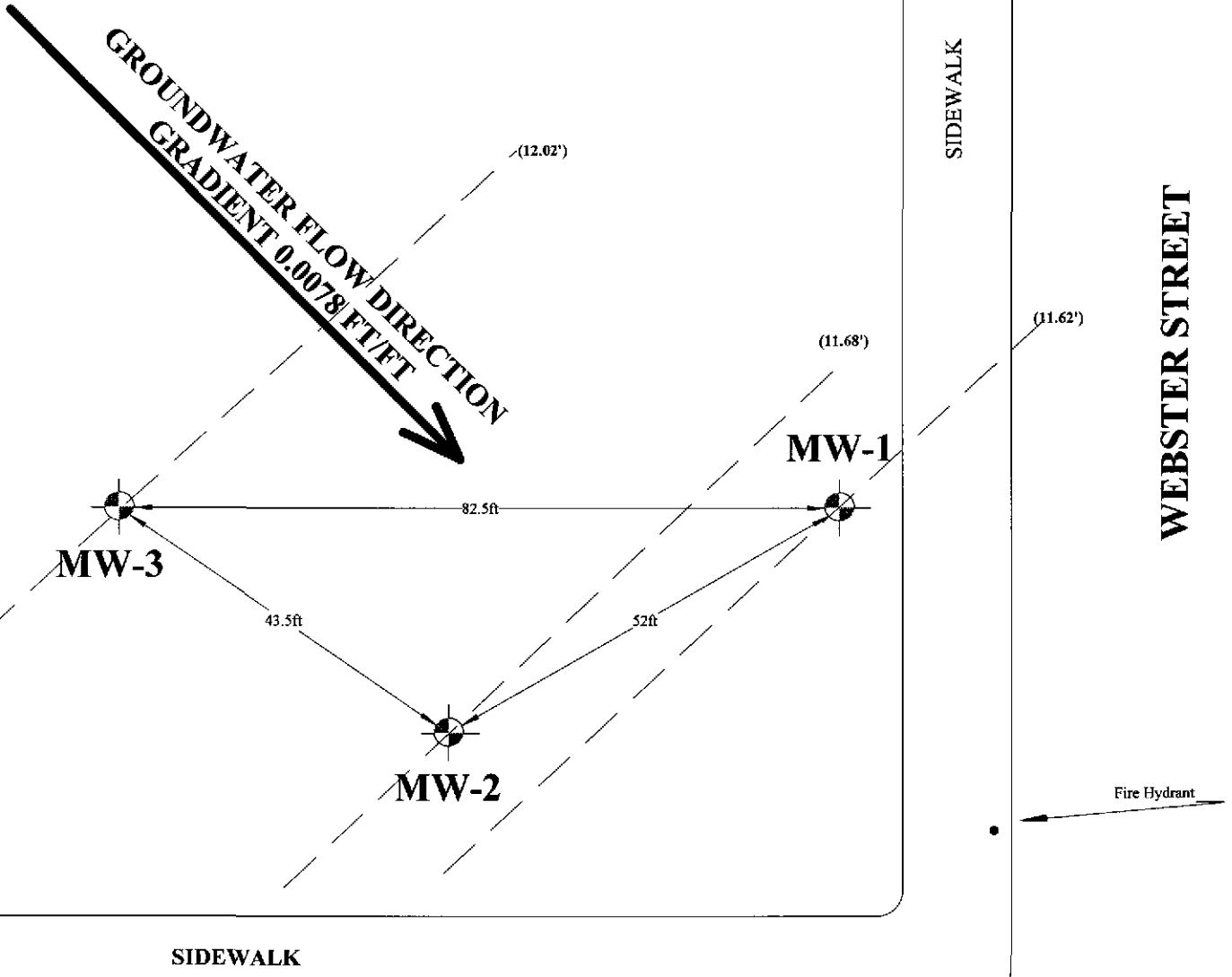
**ACCUTITE
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ENGINEERING**

35 SOUTH LINDEN AVENUE
SOUTH SAN FRANCISCO, CA 94080
1435

**FIGURE 1
SITE LOCATION**

SITE:
1435 Webster Street Alameda, California

**PUBLIC PARKING LOT
1435 Webster Street
Alameda, California**



TAYLOR AVENUE

REVISIONS

DATE
2/11/99

PAGE
1 of 1

SCALE: 20 FEET

LEGEND:

 LOCATION OF MONITORING WELLS



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SOUTH SAN FRANCISCO, CA 94080

1435

**FIGURE 2
GROUNDWATER FLOW DIRECTION
AND GRADIENT**

1435 Webster Street
Alameda, California

**PUBLIC PARKING LOT
AND FORMER GAS STATION
1435 WEBSTER STREET
ALAMEDA, CALIFORNIA**

**B4-W (WATER)
(2/11/99)**
TPH-D 9,000 PPB
TPH-G 33,000 PPB
B 460 PPB
T 2,300 PPB
E 1,500 PPB
X 8,300 PPB
MTBE 110 PPB
LEAD (PB) 1.4 PPM

FORMER
GAS ISLAND

**B3-W (WATER)
(2/11/99)**
TPH-D 7,000 PPB
TPH-G 38,000 PPB
B 2,000 PPB
T 3,700 PPB
E 1,600 PPB
X 6,300 PPB
MTBE 750 PPB
LEAD (PB) 1.7 PPM

B3

HISTORICAL GROUNDWATER
FLOW DIRECTION

SIDEWALK

WEBSTER STREET

**B2-W (WATER)
(2/11/99)**
TPH-D ND
TPH-G 340 PPB
B 34 PPB
T 0.7 PPB
E 1.2 PPB
X 1.2 PPB
MTBE 6,000 PPB
LEAD (PB) 0.51 PPM

B2

FORMER 300-GALLON
WASTE OIL UST

**MW-3
(2/11/99)**
TPH-D ND
TPH-G ND
B ND
T ND
E ND
X ND
MTBE ND
TRPH ND

MW-3

FORMER 10,000-GALLON
REG. GAS UST

MW-1

FORMER 10,000-GALLON
REG. GAS UST

**MW-2
(2/11/99)**
TPH-D ND
TPH-G ND
B ND
T ND
E ND
X ND
MTBE 75 PPB

MW-2

FORMER
GAS ISLAND

**MW-1
(2/11/99)**
TPH-D 2,000 PPB
TPH-G 25,000 PPB
B 18,000 PPB
T 1,600 PPB
E 1,400 PPB
X 500 PPB
MTBE 28,000 PPB

B1

FORMER 7,500-GALLON
DIESEL UST

Fire Hydrant

SIDEWALK

**B1-W (WATER)
(2/11/99)**
TPH-D 9,000 PPB
TPH-G 8,200 PPB
B 1,400 PPB
T 130 PPB
E 290 PPB
X 1,300 PPB
MTBE 320 PPB
LEAD (PB) 1.1 PPM

TAYLOR AVENUE

REVISIONS

DATE
2/11/99

PAGE
1 of 1



SCALE: 20 FEET

LEGEND:

LOCATION OF
MONITORING WELLS

LOCATION OF
THE DRILLED BORINGS

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SOUTH SAN FRANCISCO, CA 94080

1435W

**FIGURE 3
DEPICTION OF THE GROUNDWATER
ANALYTICAL RESULTS**

1435 Webster Street
Alameda, California

KEY: TPH-D = DIESEL
TPH-G = GASOLINE
B = BENZENE
T = TOLUENE
E = ETHYLBENZENE
X = XYLENES
MTBE = METHYL-T-BUTYL ETHER
TRPH = PETROLEUM OIL AND GREASE

**PUBLIC PARKING LOT
AND FORMER GAS STATION
1435 WEBSTER STREET
ALAMEDA, CALIFORNIA**

B4-W (WATER)
(2/11/99)
TPH-D 9,000 PPB
TPH-G 33,000 PPB
B 460 PPB
T 2,300 PPB
E 1,500 PPB
X 8,300 PPB
MTBE 110 PPB
LEAD (PB) 1.4 PPM

FORMER
GAS ISLAND

B3-W (WATER)
(2/11/99)
TPH-D 7,000 PPB
TPH-G 38,000 PPB
B 2,000 PPB
T 3,700 PPB
E 1,600 PPB
X 6,300 PPB
MTBE 750 PPB
LEAD (PB) 1.7 PPM

B2-W (WATER)
(2/11/99)
TPH-D ND
TPH-G 340 PPB
B 34 PPB
T 0.7 PPB
E 1.2 PPB
X 1.2 PPB
MTBE 6,000 PPB
LEAD (PB) 0.51 PPM

MW-1
(2/11/99)
TPH-D 2,000 PPB
TPH-G 25,000 PPB
B 18,000 PPB
T 1,600 PPB
E 1,400 PPB
X 500 PPB
MTBE 28,000 PPB

B1-W (WATER)
(2/11/99)
TPH-D 9,000 PPB
TPH-G 3,200 PPB
B 1,400 PPB
T 130 PPB
E 290 PPB
X 1,300 PPB
MTBE 320 PPB
LEAD (PB) 1.1 PPM

HISTORICAL GROUNDWATER
FLOW DIRECTION

FORMER 300-GALLON
WASTE OIL UST

MW-3
(2/11/99)
TPH-D ND
TPH-G ND
B ND
T ND
E ND
X ND
MTBE ND
TRPH ND

MW-3

FORMER 10,000-GALLON
REG. GAS UST

FORMER 10,000-GALLON
REG. GAS UST

MW-2
(2/11/99)
TPH-D ND
TPH-G ND
B ND
T ND
E ND
X ND
MTBE 75 PPB

MW-2

FORMER 7,500-GALLON
DIESEL UST

FORMER
GAS ISLAND

FORMER
GAS ISLAND

B3
MW-5

MW-1

B1
MW-4

SIDEWALK

SIDEWALK

WEBSTER STREET

PROPERTY
BOUNDARY

Fire Hydrant

TAYLOR AVENUE

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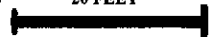
35 SOUTH LINDEN AVENUE
SOUTH SAN FRANCISCO, CA 94080

**FIGURE 4
LOCATION OF THE PROPOSED
MONITORING WELLS**

1435 Webster Street
Alameda, California

KEY: TPH-D = DIESEL
TPH-G = GASOLINE
B = BENZENE
T = TOLUENE
E = ETHYLBENZENE
X = XYLENES
MTBE = METHYL-T-BUTYL ETHER
TRPH = PETROLEUM OIL AND GREASE

SCALE: 20 FEET



REVISIONS

DATE
3/31/99

PAGE
1 of 1

LEGEND:

- EXISTING MONITORING WELLS
- LOCATION OF THE DRILLED BORINGS
- PROPOSED MONITORING WELLS



APPENDIX A
MONITORING WELL SAMPLING LOGS

WATER SAMPLING FORM

CLIENT: OLYMPIAN
 ADDRESS: 1435 Webster street, Alameda
 WELL # TESTED: MW-1

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

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

TOTAL WELL DEPTH 25
 - DEPTH TO WATER 7.91 0.17
 = WATER COLUMN HEIGHT 17.09 x A = 2.90 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)

$3 \times 2.9 = 8.7$ (3 well volume)

DATE 02/11/99
 TIME:
 WATER LEVEL:

TIME	GALS PUMPED	TEMP _{oc}	COND. <i>Rel</i>	PH
	<u>1.5</u>	<u>15.1</u>	<u>8.9</u>	<u>7.15</u>
	<u>3.0</u>	<u>16.9</u>	<u>5.0</u>	<u>7.08</u>
	<u>4.5</u>	<u>17.0</u>	<u>0.4</u>	<u>7.00</u>
	<u>6.0</u>	<u>16.2</u>	<u>1.0</u>	<u>6.98</u>
	<u>7.5</u>	<u>16.3</u>	<u>2.4</u>	<u>6.95</u>
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____

Time:
 Volume Pumped
 Sampler

Sheen or inches of free product
 Analyzed for:

WATER SAMPLING FORM

CLIENT: OLYMPIAN
 ADDRESS: 1435 Webster St. Alameda, CA
 WELL # TESTED: MW-2

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

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

TOTAL WELL DEPTH 25
 DEPTH TO WATER 8.12
 = WATER COLUMN HEIGHT 16.88 x A = 2.87 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)

$3 \times 2.87 = 8.6$ (3 well volume)

DATE: 02/11/99
 TIME:
 WATER LEVEL:

TIME	GALS PUMPED	TEMP. <u>oc</u>	COND. <u>REL</u>	PH
	<u>1.5</u>	<u>13.6</u>	<u>11.9</u>	<u>7.20</u>
	<u>3.0</u>	<u>17.1</u>	<u>9.5</u>	<u>7.17</u>
	<u>4.5</u>	<u>17.2</u>	<u>9.0</u>	<u>7.15</u>
	<u>6.0</u>	<u>17.5</u>	<u>9.4</u>	<u>7.66</u>
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____

Time:
 Volume Pumped
 Sampler ALBERT SIMMONS

Sheen or inches of free product
 Analyzed for:

WATER SAMPLING FORM

CLIENT: OLYMPIAN
 ADDRESS: 1435 Webster Street, Alameda, CA
 WELL # TESTED: MW-3

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

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

TOTAL WELL DEPTH 25'
 - DEPTH TO WATER 7.77 0.17
 = WATER COLUMN HEIGHT 17.23 x A = 2.93 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)

$3 \times 2.93 = 8.80$ (3 well volume)

DATE: 02/11/99
 TIME:
 WATER LEVEL

TIME:	GALS PUMPED	TEMP. _{°C}	REL COND.	PH
	<u>1.5</u>	<u>16.2</u>	<u>42.6</u>	<u>7.73</u>
	<u>3.0</u>	<u>15.9</u>	<u>35.4</u>	<u>7.61</u>
	<u>4.5</u>	<u>16.3</u>	<u>31.1</u>	<u>7.54</u>
	<u>6.0</u>	<u>16.7</u>	<u>27.7</u>	<u>7.48</u>
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____

Time:
 Volume Pumped
 Sampler ALBERT SIMMONS

Sheen or inches of free product.
 Analyzed for:

APPENDIX B
LABORATORY RESULTS





North State Environmental
 Chemical Waste Disposal • Trucking • Consulting

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

Lab Number: 99-0197
 Client: Accutite Envir. Engin.
 Project: 148 / 1435 Webster St.; Alameda, CA

Date Reported: 02/25/99

Gasoline, BTEX and MTBE by Methods 8015M and 8020
 Diesel Range Hydrocarbons by Method 8015 M
 Lead by Method 7420, AA Spectroscopy

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 99-0197-01 Client ID: B1-7.5'				02/11/99	SOIL
Gasoline	8015M	0.65	mg/Kg		02/18/99
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Lead	7420	ND			02/17/99
Diesel	8015M	ND			02/18/99
Sample: 99-0197-02 Client ID: B2-7.5'				02/11/99	SOIL
Gasoline	8015M	ND			02/18/99
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Lead	7420	2.0	mg/Kg		02/17/99
Diesel	8015M	ND			02/18/99

*Pattern does not match diesel **Confirmed by GC/MS
 P. O. Box 5624 • South San Francisco, California 94083 • 650-588-2838 FAX 588-1950



North State Environmental
Chemical Waste Disposal · Trucking · Consulting

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

Lab Number: 99-0197
Client: Accutite Envir. Engin.
Project: 148 / 1435 Webster St.; Alameda, CA

Date Reported: 02/25/99

Gasoline, BTEX and MTBE by Methods 8015M and 8020
Diesel Range Hydrocarbons by Method 8015 M
Lead by Method 7420, AA Spectroscopy

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 99-0197-03 Client ID: B3-6.0'				02/11/99	SOIL
Gasoline	8015M	ND			02/18/99
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Lead	7420	1.2	mg/Kg		02/17/99
Diesel	8015M	ND			02/18/99
Sample: 99-0197-04 Client ID: B4-7.5'				02/11/99	SOIL
Gasoline	8015M	ND			02/18/99
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Lead	7420	1.2	mg/Kg		02/17/99
Diesel	8015M	ND			02/18/99



North State Environmental
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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: 99-0197
 Client: Accutite Envir. Engin.
 Project: 148 / 1435 Webster St.; Alameda, CA
 Date Reported: 02/25/99

Gasoline, BTEX and MTBE by Methods 8015M and 8020
 Diesel Range Hydrocarbons by Method 8015 M
 Lead by Method 7420, AA Spectroscopy

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 99-0197-05 Client ID: B1-W				02/11/99	WATER
Gasoline	8015M	8200	ug/L		02/22/99
Benzene	8020	1400	ug/L		
Ethylbenzene	8020	290	ug/L		
MTBE	8020	320	ug/L		
Toluene	8020	130	ug/L		
Xylenes	8020	1300	ug/L		
Lead	7420	1.1	mg/L		02/17/99
Diesel	8015M	*9	mg/L		02/19/99
Sample: 99-0197-06 Client ID: B2-W				02/11/99	WATER
Gasoline	8015M	340	ug/L		02/22/99
Benzene	8020	34	ug/L		
Ethylbenzene	8020	1.2	ug/L		
MTBE	8020	6000	ug/L		
Toluene	8020	0.7	ug/L		
Xylenes	8020	1.2	ug/L		
Lead	7420	0.51	mg/L		02/17/99
Diesel	8015M	ND			02/19/99

*Pattern does not match diesel **Confirmed by GC/MS
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 Chemical Waste Disposal · Trucking · Consulting

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

Lab Number: 99-0197
 Client: Accutite Envir. Engin.
 Project: 148 / 1435 Webster St.; Alameda, CA

Date Reported: 02/25/99

Gasoline, BTEX and MTBE by Methods 8015M and 8020
 Diesel Range Hydrocarbons by Method 8015 M
 Lead by Method 7420, AA Spectroscopy

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 99-0197-07 Client ID: B3-W				02/11/99	WATER
Gasoline	8015M	38000	ug/L		02/24/99
Benzene	8020	2000	ug/L		
Ethylbenzene	8020	1600	ug/L		
MTBE	8020	750	ug/L		
Toluene	8020	3700	ug/L		
Xylenes	8020	6300	ug/L		
Lead	7420	1.7	mg/L		02/17/99
Diesel	8015M	*7	mg/L		02/19/99
Sample: 99-0197-08 Client ID: B4-W				02/11/99	WATER
Gasoline	8015M	33000	ug/L		02/24/99
Benzene	8020	460	ug/L		
Ethylbenzene	8020	1500	ug/L		
MTBE	8020	110	ug/L		
Toluene	8020	2300	ug/L		
Xylenes	8020	8300	ug/L		
Lead	7420	1.4	mg/L		02/17/99
Diesel	8015M	*9	mg/L		02/19/99



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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: 99-0197
 Client: Accutite Envir. Engin.
 Project: 148 / 1435 Webster St.; Alameda, CA

Date Reported: 02/25/99

Gasoline, BTEX and MTBE by Methods 8015M and 8020
 Diesel Range Hydrocarbons by Method 8015 M
 Lead by Method 7420, AA Spectroscopy

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 99-0197-09 Client ID: MW-1				02/11/99	WATER
Gasoline	8015M	25000	ug/L		02/24/99
Benzene	8020	18000	ug/L		
Ethylbenzene	8020	1400	ug/L		
MTBE	8020	**28000	ug/L		
Toluene	8020	1600	ug/L		
Xylenes	8020	500	ug/L		
Diesel	8015M	*2	mg/L		02/19/99
Sample: 99-0197-10 Client ID: MW-2				02/11/99	WATER
Gasoline	8015M	ND			02/22/99
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	75	ug/L		
Toluene	8020	ND			
Xylenes	8020	ND			
Diesel	8015M	ND			02/19/99
Sample: 99-0197-11 Client ID: MW-3				02/11/99	WATER
Gasoline	8015M	ND			02/22/99
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			

*Pattern does not match diesel **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: 99-0197
 Client: Accutite Envir. Engin.
 Project: 148 / 1435 Webster St.; Alameda, CA
 Date Reported: 02/25/99

Gasoline, BTEX and MTBE by Methods 8015M and 8020
 Diesel Range Hydrocarbons by Method 8015 M
 Lead by Method 7420, AA Spectroscopy

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 99-0197-11		Client ID: MW-3		02/11/99	WATER
Xylenes	8020	ND			
Diesel	8015M	ND			02/19/99

*Pattern does not match diesel **Confirmed by GC/MS
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CERTIFICATE OF ANALYSIS

Quality Control/Quality Assurance

Lab Number: 99-0197
 Client: Accutite Envir. Engin.
 Project: 148 / 1435 Webster St.; Alameda, CA

Date Reported: 02/25/99

Gasoline, BTEX and MTBE by Methods 8015M and 8020
 Diesel Range Hydrocarbons by Method 8015 M
 Lead by Method 7420, AA Spectroscopy

Analyte	Method	Reporting Limit	Unit	Blank	MS/MSD Recovery	RPD
Lead	7420	1.0	mg/Kg	ND	103	0
Lead	7420	0.05	mg/L	ND	80	25
Gasoline	8015M	0.5	mg/Kg	ND	106	1
Benzene	8020	.005	mg/Kg	ND	103	4
Ethylbenzene	8020	.005	mg/Kg	ND	97	4
Toluene	8020	.005	mg/Kg	ND	100	3
Xylenes	8020	.010	mg/Kg	ND	100	3
MTBE	8020	.005	mg/Kg	ND	92	18
Gasoline	8015M	50	ug/L	ND	88	3
Benzene	8020	0.5	ug/L	ND	91	6
Ethylbenzene	8020	0.5	ug/L	ND	93	6
Toluene	8020	0.5	ug/L	ND	94	5
Xylenes	8020	1.0	ug/L	ND	91	6
MTBE	8020	0.5	ug/L	ND	101	11
Diesel	8015M	0.05	mg/L	ND	86	1
Diesel	8015M	1.0	mg/Kg	ND	95	1

ELAP Certificate NO:1753

Reviewed and Approved

John A. Murphy, Laboratory Director

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Client Accutite Environmental Engineering					Report To SAMI MALAEB					Turnaround				
Address 35 South Linden Avenue South San Francisco, CA 94080					Bill To: Accutite					ASAP	1 Day	2 Day	3 Day	
Phone 650-952-5551					Billing Reference# 748					1 Week	12 Week	Others		
Project Name/Address 1435 Webster Street Alameda, CA					Analysis Required					Please confirm the sample showing the highest concentration of TPH-G for MTBE, using the GC/MS, EPA Method 8260.				
Sampler Sami Malaeb Date: 2/11/1999														
Sample ID	Sample Matrix	# of Containers	Container Type	Sample Date/Time	TPH-G MTBE	TPH-D								Remarks
9 MW-1	Water	3	40ml VOA	2/11/99	X									
MW-1	Water	1	Amber Jar	"		X								
10 MW-2	Water	3	40ml VOA	"	X									
MW-2	Water	1	Amber Jar	"		X								
11 MW-3	Water	3	40 ml VOA	"	X									
MW-3	Water	1	Amber Jar	"		X								
Relinquished by: [Signature] Date: 2/11/99 Time:					Received by: [Signature] Date: 2/11/99 Time: 2:35 PM									
Relinquished by:					Received by:									
Relinquished by:					Received by:									

Chain of Custody Accutite Environmental Engineering

Client Accutite Environmental Engineering				Report To SAMI MALAEB				Turnaround															
Address 35 South Linden Avenue South San Francisco, CA 94080				Bill To: Accutite				ASAP		1 Day	2 Day	3 Day											
Phone 650-952-5551				Billing Reference# 148				1 Week		(2 Week)	Others												
Project Name/Address 1435 Webster Street Alameda, CA				Date: 2/11/1999				Analysis Required				Confirm one soil and one water sample, showing the highest of TPH-C for MTOSK using GC/MS, EPA 8260 Remarks											
Sampler Sami Malaeb																							
Sample ID	Sample Matrix	#of Containers	Container Type	Sample Date/Time	TPH-G ATL	TPH-D	TPH-C (90-100)																
1 B1-75'	Soil	1	100ml Tube	2/11/99 am	X	X	X																
2 B2-75'	Soil	1	"	" "	X	X	X																
3 B3-6.0'	Soil	1	"	" "	X	X	X																
4 B4-75'	Soil	1	"	" "	X	X	X																
5 B1-W	Water	3	40ml VOA	" "	X																		
B1-W	"	1	Amber Jar	" "		X																	
B1-W	"	1	plastic 500ml	" "			X																
6 B2-W	"	3	40ml VOA	" "	X																		
B2-W	"	1	Amber Jar	" "		X																	
B2-W	"	1	plastic 500ml	" "			X																
7 B3-W	"	3	40ml VOA	" "	X																		
B3-W	"	1	Amber Jar	" "		X																	
B3-W	"	1	plastic 500ml	" "			X																
8 B4-W	"	3	40ml VOA	2/11/99 p-	X																		
B4-W	"	1	Amber Jar	" "		X																	
B4-W	"	1	plastic 500ml	" "			X																
Relinquished by: Sami Malaeb				Date: 2/11/99				Time: 2:35 PM				Received by: Erin Shea				Date: 2/11				Time: 2:35 PM			
Relinquished by:				Date:				Time:				Received by:				Date:				Time:			
Relinquished by:				Date:				Time:				Received by:				Date:				Time:			

APPENDIX C
BORING LOGS

APPENDIX D
DRILLING AND ENCROACHMENT PERMITS



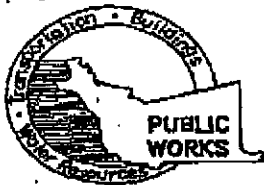
RECYCLED PAPER

FROM : Panasonic PFF

DEC 03 1998 14:49 FR ALA CO PUB WK H20 RES

510 TO 916509527631

P.02/02



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 1435 Webster Street
ALAMEDA, CA 94501

PERMIT NUMBER 98WR520
WELL NUMBER _____
APN _____

California Coordinates Source	Accuracy	Accuracy
CGN	ACE	R
APN		

PERMIT CONDITIONS

Circled Permit Requirements Apply

CLIENT Name OLYMPIAN
Address 260 Mitchell Court Phone (650) 952-5551
City SOUTH SAN FRANCISCO Zip 94080 Ext. 209
CA 94080

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 work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

APPLICANT Name Accutite Environmental
Address 35 South Linden Ave. Phone (650) 952-5551 Ext. 209
City South San Francisco, CA Zip 94080

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.

TYPE OF PROJECT

Well Construction	<input type="checkbox"/>	Geotechnical Investigation	<input type="checkbox"/>
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input checked="" type="checkbox"/>	Well Destruction	<input type="checkbox"/>

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.

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

D. GEOTECHNICAL

Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	<u>Direct push *</u>	

E. CATHODIC

Fill hole above anode zone with concrete placed by tremie.

DRILLER'S LICENSE NO. C57 License No. 705927

F. WELL DESTRUCTION

See attached.

G. SPECIAL CONDITIONS

WELL PROJECTS

Drill Hole Diameter	<u>1.5"</u> in.	Maximum Depth	<u>15</u> ft.
Casing Diameter	<u>N/A</u> in.	Number	<u>4</u>
Surface Seal Depth	<u>N/A</u> ft.		

APPROVED Alvin Kan DATE 12/11/98

GEOTECHNICAL PROJECTS

Number of Borings	_____	Maximum Depth	_____ ft.
Hole Diameter	_____ in.		

ESTIMATED STARTING DATE December 16, 1998
ESTIMATED COMPLETION DATE December 16, 1998

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

APPLICANT'S SIGNATURE Danni Hahn DATE 12/2/98

* 4 direct push borings will be drilled, sampled, and grouted in place in the same day. Workplan for the borings was approved by Eva Chu of Alameda County Health Services. An encroachment permit will be obtained from the City of Alameda.

*** TOTAL PAGE.02 ***

ENCROACHMENT PERMIT APPLICATION

City of Alameda

Building Inspections / Central Permits Office

2263 Santa Clara Avenue, Room 190 - Alameda, CA 94501

Phone: (510) 748-4530 - Fax: (510) 748-4548



FARRAR GEOFFREY A & HARRISON GEO

Property Owner Name

PO BOX 1701 (530) 893-1277

Address

Phone

CHICO CA 95927

City

State

Zip

PERMIT NO. _____

JOB ADDRESS 1435 Webster Street, Alameda, CA 94501

EXISTING USE Public Parking Lot

PROPOSED USE Public Parking Lot

DESCRIPTION OF WORK four

The job consists of advancing 2-inch borings to a depth of 15 feet. one boring will be located on a parking space, on the side of Webster Street and the remaining three borings will be advanced on the parking lot at 1435 Webster Street.

(see attached figure). soil and groundwater samples will be collected from the borings. Borings will be grouted in place in the same day.
Valuation of Work \$ 2000.

Including all labor, materials, and all lighting, heating, ventilating, water supply, plumbing, fire sprinklers, electric wiring, elevator equipment and all features that are affixed or a permanent part of the building.

Contact Name Sami Malaeb

Contact Phone (650) 952-5551, Ext. 209

OTHER PERMITS ARE REQUIRED FOR

PLUMBING, HEATING, ELECTRICAL WORK,

Business Lic. \$ _____

Permit Fees \$ _____

Filing Fee \$ 32.00

Plan Check \$ _____

Design Review \$ _____

Addt. Micro Fiche \$ _____

Misc. Fee \$ _____

TOTAL \$ _____

APPLICATION RECEIVED:

DATE _____ SIGNED _____

APPROVAL: DATE _____ SIGNED _____

ISSUED: DATE _____ SIGNED _____

I hereby affirm that I am licensed under provisions of Chapter 9 commencing with Section 7000 of Division 3 of the Business and Professions Code, and my license is in full force and effect.

LICENSE No. 643881 705927 CITY BUSINESS

AND CLASS A&B C57 LICENSE No. _____

Contractor Name

Accufite (650) 952-5551, ext. 209 Address

35 South Linden Ave. South San Francisco, CA 94080

City

State

Zip

SIGNATURE Sami Malaeb

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9 - commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500).

I, as owner of the property, or my employees with wages as their sole compensation, will do the work and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of providing that he did not build or improve for the purpose of sale).

I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law).

I am exempt under Sec. _____ B&P.C. for this reason _____
Owner's Signature _____ Date _____

hereby affirm under penalty of perjury one of the following declarations:

I have and will maintain a certificate of consent to self-insure for workers' compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier _____ Policy Number _____

(THIS SECTION NEED NOT BE COMPLETED IF THE PERMIT IS FOR ONE HUNDRED DOLLARS(\$100) OR LESS).

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that if I should become subject to workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Applicant Sami Malaeb Date 01/26/99

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3708 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

I certify that I have read this application and state that the information given is true and correct. I agree to comply with all local ordinance and state laws relating to building construction and I make this statement under penalty of law. I hereby authorize representatives of the city/county to enter upon the above mentioned property for inspection purposes. NOTICE! This permit will expire by limitation if work is not started in 180 days or if work is abandoned for more than 180 days. Do not conceal or cover any construction until the work is inspected and the inspection is recorded on the Building Inspection Card.

SIGNATURE OF: Contractor Owner Agent

X Accufite Sami Malaeb

City of Alameda

Building Inspections / Central Permits Office
2263 Santa Clara Avenue, Room 190 ■ Alameda, CA 94501
Phone: (510) 748-4530 ■ Fax: (510) 748-4548



Indemnity and Hold Harmless Agreement

Accutite Environmental Engineering whose address is
35 South Linden Avenue, South San Francisco, CA 94080 (hereinafter "Indemnitor")

desires to install and maintain a soil boring that will encroach
on City property (See Encroachment Permit No. _____). In consideration of being
allowed to install and maintain this boring, Indemnitor
agrees to the following terms and conditions:

Indemnitor shall indemnify and hold harmless City, its City Council, Boards and Commissions,
officers and employees from and against any and all loss, damages, liability, claims, suits, costs and
expenses whatsoever, including reasonable attorneys' fees, regardless of the merit of outcome of any such
claim or suit arising from or in any manner connected to the installation, maintenance or removal of the
Boring.

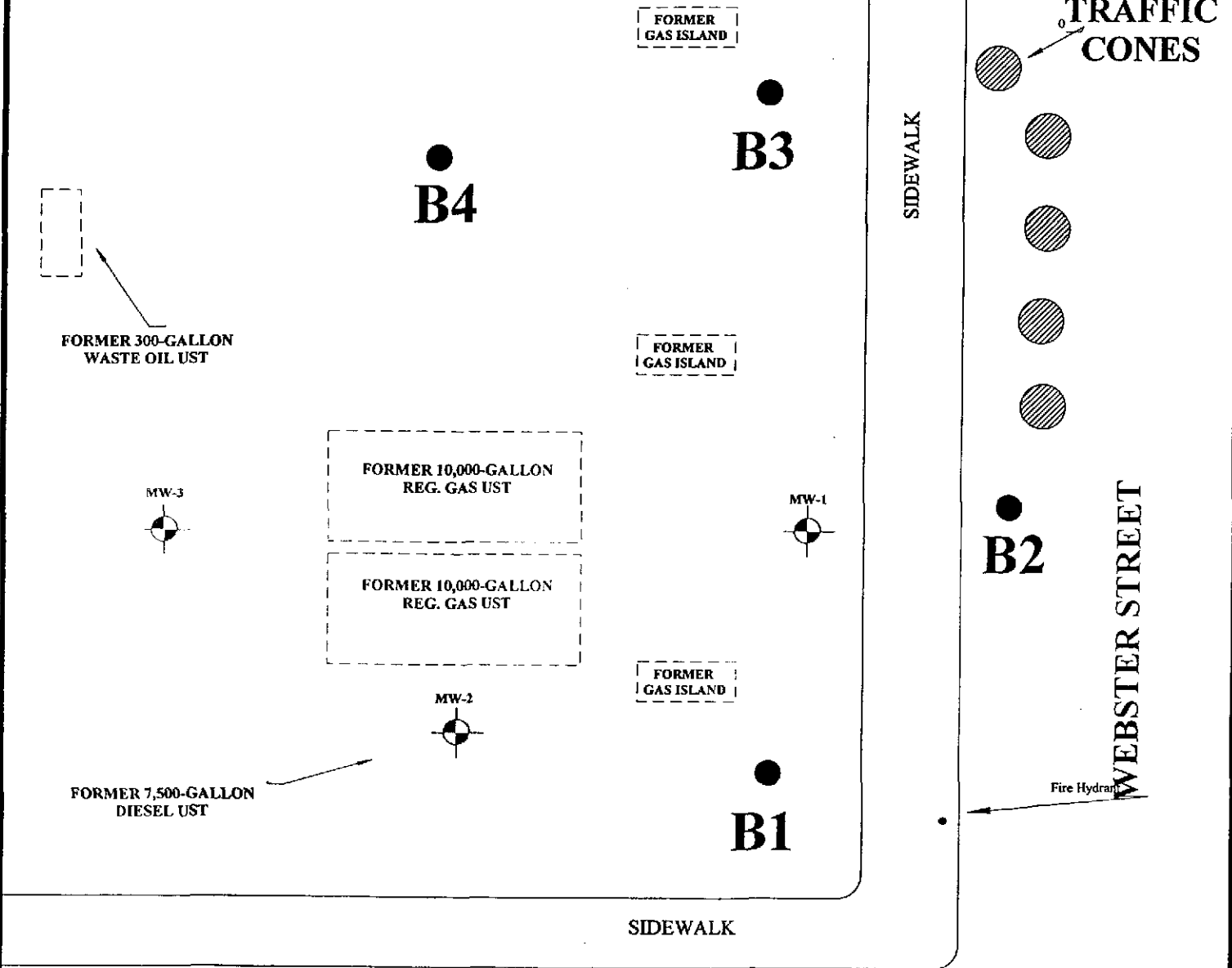
Indemnitor shall indemnify and hold harmless City, its City Council, Boards and Commissions,
officers and employees from and against any and all loss, damages, liability, claims, suits, costs and
expenses whatsoever, including reasonable attorneys' fees, accruing or resulting to any and all
persons, firms or corporations furnishing or supplying work, services, materials, equipment or supplies
arising from or in any manner connected to the installation, maintenance or removal of the
Boring.

Indemnitor agrees to remove the boring at his/her
expense in the event that the boring
interferes with any City project.

By the signature below, Indemnitor agrees that it has read this Indemnity and Hold Harmless
Agreement and accepts and agrees to each and every term and condition herein.

Dated: 12/11/98 INDEMNITOR
By [Signature]
for Accutite

**PUBLIC PARKING LOT
AND FORMER GAS STATION
1435 WEBSTER STREET
ALAMEDA, CALIFORNIA**



(11.30')
(11.29')

TAYLOR AVENUE

REVISIONS	DATE 7/30/98	PAGE 1 of 1
N ↑	SCALE: 20 FEET 	
	LEGEND: LOCATION OF MONITORING WELLS LOCATION OF THE PROPOSED BORINGS	

**ACCUTITE
ENVIRONMENTAL
ENGINEERING**

35 SOUTH LINDEN AVENUE
SOUTH SAN FRANCISCO, CA 94080

1435TC

FIGURE 3

LOCATIONS OF THE PROPOSED BORINGS

1435 Webster Street
Alameda, California

KEY:

STATE OF CALIFORNIA · DEPARTMENT OF TRANSPORTATION
ENCROACHMENT PERMIT
 TR-0120 (NEW 9/91)

Permit No. 0498-6SV 3095	
Dist/Co/Rte/PM 04-ALA-260 0.08	
Date January 6, 1999	
Fee Paid \$ 210.00	Deposit \$
Performance Bond Amount (1) \$	Payment Bond Amount (2) \$
Bond Company	
Bond Number (1)	Bond Number (2)

In compliance with (check one):

Your application of December 11, 1998

Utility Notice No. _____ of _____

Agreement No. _____ of _____

R/W Contract No. _____ of _____

TO:

Accutite Environmental Engineering
35 South Linden Avenue
South San Francisco, CA 94583

ATTN: Sami Malaeb
PHONE: (650) 952-5551

, PERMITTEE

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

Drill one-50mm (2") diameter by 4.6m (15') deep hole and collect soil and groundwater sample on State Highway 04-ALA-260, Post Mile 0.08, 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.

Certain details of work authorized hereby are shown on permittee's plan (job at 1435 Webster St.) submitted with request for permit.

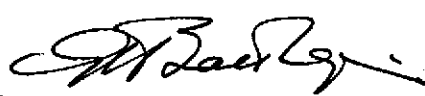
The following attachments are also included as part of this permit. (Check applicable):			In addition to fee the permittee will be billed actual costs for:		
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	General Provisions	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Review
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Utility Maintenance Provisions	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Inspection
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Special Provisions	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Field Work
<input type="checkbox"/> Yes	<input type="checkbox"/> No	A Cal-OSHA permit required prior to beginning work; # _____	(If any Caltrans effort expended)		
<input type="checkbox"/> Yes	<input type="checkbox"/> 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 February 28, 1999

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:

G. J. Battaglini, District Permit Engineer

NAME: Accutite Environmental Engineering
PERMIT #: 0498-6SV 3095
DATE: January 6, 1999

The site of the work shall be enclosed by suitable barricades, signs and lights, as approved by State's representative, to warn and protect traffic effectively.

Before any work is begun which will interrupt the normal flow of public traffic, approval shall be obtained from State's representative, and closures will be as shown on the attached copy of Standard Plan Sheet T-10.

The attached freeway traffic control plan is for shoulder closure detail only.

Field surveys shall be conducted off the traveled way except where necessary to cross pavements and medians.

Any painted markings shall be made with water soluble paint.

Permission is also granted to park survey vehicles temporarily within the right of way, outside the shoulders, while survey work is in progress.

Any damage to existing facilities, landscaping, or irrigation within the State's Right of Way shall be replaced in kind by the permittee at permittee's expense.

No excavation shall be left open overnight without written permission from Caltrans representative or unless otherwise specified herein.

STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION
ENCROACHMENT PERMIT GENERAL PROVISIONS
TR-0045 (REV. 8/98)

1. **AUTHORITY:** The Department's authority to issue encroachment permits is provided under, Div. 1, Chpt. 3, Art. 1, Sect. 660 to 734 of the Streets and Highways Code.
2. **REVOCAION:** Encroachment permits are revocable on five days notice unless otherwise stated on the permit and except as provided by law for public corporations, franchise holders, and utilities. These General Provisions and the Encroachment Permit Utility Provisions are subject to modification or abrogation at any time. Permittees' joint use agreements, franchise rights, reserved rights or any other agreements for operating purposes in State highway right of way are exceptions to this revocation.
3. **DENIAL FOR NONPAYMENT OF FEES:** Failure to pay permit fees when due can result in rejection of future applications and denial of permits.
4. **ASSIGNMENT:** No party other than the permittee or permittee's authorized agent is allowed to work under this permit.
5. **ACCEPTANCE OF PROVISIONS:** Permittee understands and agrees to accept these General Provisions and all attachments to this permit, for any work to be performed under this permit.
6. **BEGINNING OF WORK:** When traffic is not impacted (see Number 35), the permittee shall notify the Department's representative, two (2) days before the intent to start permitted work. Permittee shall notify the Department's Representative if the work is to be interrupted for a period of five (5) days or more, unless otherwise agreed upon. All work shall be performed on weekdays during regular work hours, excluding holidays, unless otherwise specified in this permit.
7. **STANDARDS OF CONSTRUCTION:** All work performed within highway right of way shall conform to recognized construction standards and current Department Standard Specifications, Department Standard Plans High and Low Risk Facility Specifications, and Utility Special Provisions. Where reference is made to "Contractor and Engineer," these are amended to be read as "Permittee and Department representative."
8. **PLAN CHANGES:** Changes to plans, specifications, and permit provisions are not allowed without prior approval from the State representative.
9. **INSPECTION AND APPROVAL:** All work is subject to monitoring and inspection. Upon completion of work, permittee shall request a final inspection for acceptance and approval by the Department. The local agency permittee shall not give final construction approval to its contractor until final acceptance and approval by the Department is obtained.
10. **PERMIT AT WORKSITE:** Permittee shall keep the permit package or a copy thereof, at the work site and show it upon request to any Department representative or law enforcement officer. If the permit package is not kept and made available at the work site, the work shall be suspended.
11. **CONFLICTING ENCROACHMENTS:** Permittee shall yield start of work to ongoing, prior authorized, work adjacent to or within the limits of the project site. When existing encroachments conflict with new work, the permittee shall bear all cost for rearrangements, (e.g., relocation, alteration, removal, etc.).
12. **PERMITS FROM OTHER AGENCIES:** This permit is invalidated if the permittee has not obtained all permits necessary and required by law, from the Public Utilities Commission of the State of California (PUC), California Occupational Safety and Health Administration (Cal-OSHA), or any other public agency having jurisdiction.
13. **PEDESTRIAN AND BICYCLIST SAFETY:** A safe minimum passageway of 1.21 meter (4') shall be maintained through the work area at existing pedestrian or bicycle facilities. At no time shall pedestrians be diverted onto a portion of the street used for vehicular traffic. At locations where safe alternate passageways cannot be provided, appropriate signs and barricades shall be installed at the limits of construction and in advance of the limits of construction at the nearest crosswalk or intersection to detour pedestrians to facilities across the street.
14. **PUBLIC TRAFFIC CONTROL:** As required by law, the permittee shall provide traffic control protection warning signs, lights, safety devices, etc., and take all other measures necessary for traveling public's safety. Day and night time lane closures shall comply with the Manuals of Traffic Controls, Standard Plans, and Standard Specifications for traffic control systems. These General Provisions are not intended to impose upon the permittee, by third parties, any duty or standard of care, greater than or different from, as required by law.
15. **MINIMUM INTERFERENCE WITH TRAFFIC:** Permittee shall plan and conduct work so as to create the least possible inconvenience to the traveling public; traffic shall not be unreasonably delayed. On conventional highways, permittee shall place properly attired flagger(s) to stop or warn the traveling public in compliance with the Manual of Traffic Controls and Instructions to Flaggers Pamphlet.
16. **STORAGE OF EQUIPMENT AND MATERIALS:** Equipment and material storage in State right of way shall comply with Standard Specifications, Standard Plans, and Special Provisions. Whenever the permittee places an obstacle within 3.63 m (12') feet of the traveled way, the permittee shall place temporary railing (Type K).
17. **CARE OF DRAINAGE:** Permittee shall provide alternate drainage for any work interfering with an existing drainage facility in compliance with the Standard Specifications, Standard Plans and/or as directed by the Department's representative.
18. **RESTORATION AND REPAIRS IN RIGHT OF WAY:** Permittee is responsible for restoration and repair of State highway right of way resulting from permitted work (State Streets and Highways Code, Sections 670 et. seq.).
19. **RIGHT OF WAY CLEAN UP:** Upon completion of work, permittee shall remove and dispose of all scraps, brush, timber, materials, etc. off the right of way. The aesthetics of the highway shall be as it was before work started.
20. **COST OF WORK:** Unless stated in the permit, or a separate written agreement, the permittee shall bear all costs incurred for work within the State right of way and waives all claims for indemnification or contribution from the State.
21. **ACTUAL COST BILLING:** When specified in the permit, the Department will bill the permittee actual costs at the currently set hourly rate for encroachment permits.
22. **AS-BUILT PLANS:** When required, permittee shall submit one (1) set of as-built plans in compliance with Department's requirements. Plans shall be submitted within thirty (30) days after completion and approval of work.

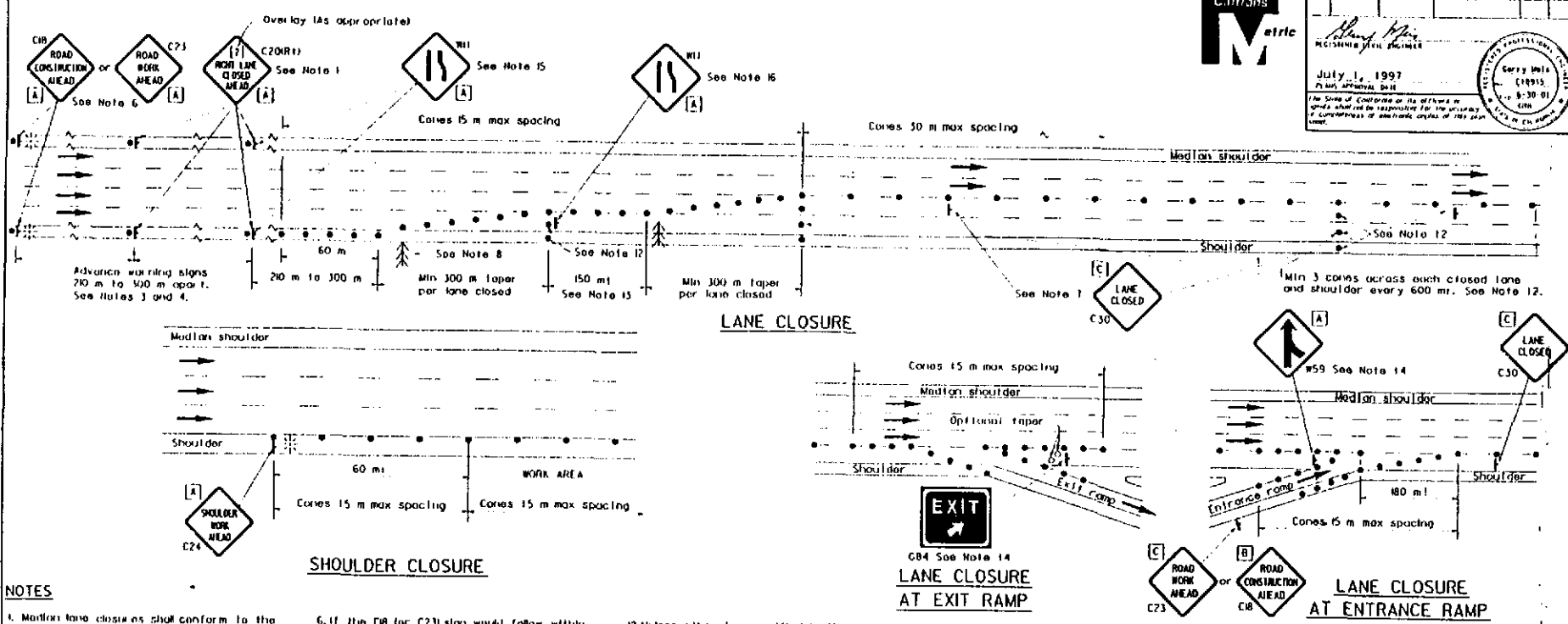
As-Built plans or accompanying correspondence shall not include disclaimer statements of any kind. Such statements shall constitute non-compliance with these provisions. Failure to provide complete and signed As-Built plans shall be cause for bond or deposit retention by the Department.
23. **PERMITS FOR RECORD PURPOSES ONLY:** When work in the right of way is within an area under a Joint Use Agreement (JUA) or a Consent to Common Use Agreement (CCUA), a fee exempt permit is issued to the permittee for the purpose of providing a notice and record of work. The Permittee's prior rights shall be preserved without the intention of creating new or different rights or obligations. "Notice and Record Purposes Only" shall be stamped across the face of the permit.
24. **BONDING:** The permittee shall file bond(s), in advance, in the amount set by the Department. Failure to maintain bond(s) in full force and effect will result in the Department stopping of all work and revoking permit(s). Bonds are not required of public corporations or privately owned utilities, unless permittee failed to comply with the provision and conditions under a prior permit. The surety company is responsible for any latent defects as provided in California Code of Civil Procedures, Section 337.15. Local agency permittee shall comply with requirements established as follows: In recognition that project construction work done on State property will not be directly funded and paid by State, for the purpose of protecting stop notice claimants and the interests of State relative to successful project completion, the local agency permittee agrees to require the construction contractor furnish both a payment and performance bond in the local agency's name with both bonds complying with the requirements set forth in Section 3-1.02 of State's current Standard Specifications before performing any project construction work. The local agency permittee shall defend, indemnify, and hold harmless the State, its officers and employees from all project construction related claims by contractors and all stop notice or mechanic's lien claimants. The local agency also agrees to remedy, in a timely manner and to State's satisfaction, any latent defects occurring as a result of the project construction work.
25. **FUTURE MOVING OF INSTALLATIONS:** Permittee understands and agrees to rearrange a permitted installation upon request by the Department, for State construction, reconstruction, or maintenance



DATE	CONTRACT	ROUTE	PRIME CONTRACT	POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
July 1, 1997						

Richard M. [Signature]
 REGISTERED PROFESSIONAL ENGINEER
 No. 9-30-01
 Exp. 12/31/98

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS



NOTES

1. Median lane closures shall conform to the details for outside lane closures except that C20 (B) signs shall be used.
2. Not less than one person shall be assigned to full time maintenance of traffic control devices on all night lane closures or daytime closures exceeding 1.6 km in length, including taper.
3. Duplicate sign installations are not required on opposite shoulder if at least one-half of the available lanes remain open to traffic.
 - a. If the median or the width of the median shoulder is less than 2.4 m and the outside lanes are to be closed.
4. All advance warning sign installations shall be equipped with flags for daytime closures. Flashing beacons shall be placed at the locations indicated during night lane closure.
5. A C13 "END CONSTRUCTION" or C14 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
6. If the C18 (or C21) sign would follow within 600 m of a stationary C18, C23 or C11 "STATE HIGHWAY CONSTRUCTION NEXT AHEAD" sign, use a C20 sign for the first advance warning sign.
7. Place a C30 sign every 600 m throughout length of lane closure.
8. One flashing arrow sign for each lane closed. The first flashing arrow sign shall be Type I. All others may be either Type I or Type II.
9. A minimum 450 m of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
10. All cones used for night lane closures shall be fitted with reflective sleeves as specified in the specifications.
11. For table delineators, placed at one-half the spacing indicated for traffic cones may be used in lieu of cones for daytime closures only.
12. Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 600 m as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
13. Unless otherwise specified in the special provisions, the 150 m section of the lane closure shown along lane(s) shall be used between the 300 m lane closure tapers when two or more adjacent traffic lanes are to be closed.
14. Unless otherwise specified in the special provisions, the C84 and W59 signs shall be used as shown.
15. Where specified in the special provisions, a W11 "LANE REDUCTION SYMBOL" sign is to be used in place of the C20 "RIGHT LANE CLOSED AHEAD" sign.
16. The W11 "LANE REDUCTION SYMBOL" sign shown at this location is to be used where the W11 sign is used as advance warning as described in Note 15.

SIGN PANEL SIZE (Min)

- [A] 1200 mm x 1200 mm
- [B] 900 mm x 900 mm
- [C] 750 mm x 750 mm

LEGEND

- Traffic Cone
- Traffic Cone (optional taper)
- ↑ Portable Sign
- ← Flashing Arrow Sign
- Direction of Travel
- ⊛ Portable Flashing Beacon

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM
 FOR LANE CLOSURE ON
 FREEWAYS AND EXPRESSWAYS**

NO SCALE

STD. PLAN T10

T10