

**QUARTERLY GROUNDWATER  
MONITORING AND SAMPLING  
FOR THE PROPERTY  
LOCATED AT 400 SAN PABLO AVENUE  
ALBANY, CALIFORNIA  
SEPTEMBER 15, 1998**

**PREPARED FOR:  
MR. MURRAY STEVENS  
KAMUR INDUSTRIES, INC.  
2351 SHORELINE DRIVE  
ALAMEDA, CALIFORNIA 94501**

**BY:  
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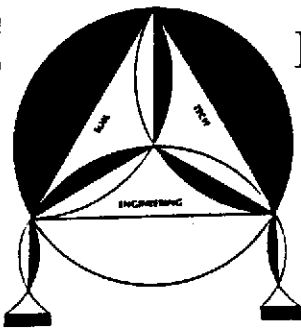
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September 15, 1998

File No. 8-90-421-SI

**Mr. Murray Stevens**  
Kamur Industries, Inc.  
2351 Shoreline Drive  
Alameda, California 94501

**SUBJECT: QUARTERLY GROUNDWATER MONITORING  
AND SAMPLING AT THE PROPERTY**

Located at 400 San Pablo Avenue, in  
Albany, California

Dear Mr. Stevens:

This report summarizes the results of quarterly groundwater monitoring and sampling conducted by Soil Tech Engineering, Inc. (STE), on June 25, 1998, at the subject site (Figure 1).

Seven monitoring wells (STMW-1 through STMW-5, MW-2 and MW-3) located on- and off-site were monitored for presence of sheen and/or odor. The wells were sampled, and the groundwater samples were analyzed for presence of Total Petroleum Hydrocarbons as gasoline (TPHg), Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX). In addition, monitoring wells STMW-5 and MW-3 were analyzed for Volatile Organic Compounds (VOC's).

The services that STE provided have been in accordance with generally accepted environmental professional practices for the nature and conditions of the work completed in the same or similar localities, at the time the work was performed.

Per your request, this report will be submitted to Alameda County Health Care Services Agency-Department of Environmental Health (ACHCSA-DEH).

If you have any questions or require additional information, please feel free to contact our office at (408) 297-1500.

Sincerely,

*ENVIRO SOIL TECH CONSULTANTS*

  
FRANK HAMEDI-FARD  
GENERAL MANAGER

  
LAWRENCE KOO, P. E.  
C. E. #34928

## **SITE DESCRIPTION:**

The site is located at 400 San Pablo Avenue, in Albany, California, approximately one mile east of San Francisco Bay (see Figure 1). The site is bordered by El Cerrito Creek to the north, San Pablo Avenue to the east and Adams Street to the west. The surrounding area comprises primarily light commercial and residential buildings (Figure 2).

## **BACKGROUND:**

### *SITE HISTORY:*

The site was vacant until the late 1950's when Plaza Car Wash and the adjacent Norge Dry Cleaner buildings were constructed. The three underground fuel storage tanks were installed on the site in 1970.

Observation of petroleum free-floating product in the adjacent El Cerrito Creek, on July 3, 1989, prompted the Albany Fire Department to install absorbent materials and a boom as a temporary containment measure. A storm drain, which borders the site on the west, was found to be the source of petroleum products discharged into El Cerrito Creek.

The inventory reconciliation records for Plaza Car Wash, reviewed by Kamur Industries in July 1989, showed discrepancies in the unleaded gasoline inventory. A product line test, conducted in mid-July 1989, confirmed a small leak in the unleaded gasoline fuel lines beneath the pump island. The leak was repaired and approximately five to ten cubic yards of gasoline contaminated soil was removed from beneath the line. Analytical results of a composite sample of the excavated soil revealed Total Petroleum Hydrocarbon (TPH) concentration of 7,500 parts per million (ppm).

*SITE INVESTIGATION:*

Subsurface Consultants, Inc. (SCI) was retained by Kamur Industries to perform a site assessment. In August 1989, SCI drilled five soil borings and obtained soil samples for laboratory analysis. Four of the soil borings were converted to monitoring wells. Laboratory analysis showed the presence of gasoline contaminants in all soil and groundwater samples.

Per California Regional Water Quality Control Board (CRWQCB) staff request, water samples were also obtained from El Cerrito Creek and the storm drain outlet on August 3, 1989. Laboratory analysis revealed high levels of dissolved hydrocarbons at the storm drain outlet and low levels approximately 20 feet down-stream.

A soil vapor study (SVS), conducted by SCI in the area of the Plaza Car Wash and adjacent properties, revealed the presence of hydrocarbon contamination in the soil.

On September 19, 1989, Pacific Pipeline Survey conducted a video inspection of the Adams Street storm drain. The inspection revealed excess concrete along the pipe bottom, a bent area across the pipe section and large cracks in the pipe. The bent area was considered to be the most likely location for petroleum products to enter the storm drain pipe and eventually discharge into El Cerrito Creek.

Storm drain pipe joints exposed during sump installation procedures were sealed with mortar. All excavated soils found to be contaminated (when screened with organic vapor analyzer) were removed and stored on-site pending proper disposal. Stockpiled soils from the product line repair and sump installation areas were treated on-site and transported to the West Contra Costa Sanitary Landfill for disposal.

In December 1989, Kamur industries retained International Technology Environmental Services (ITES) to conduct monitoring and sampling of on-site monitoring wells, the Adams Street sump and El Cerrito Creek. Monitoring and sampling was conducted on a monthly basis from December 1989 through May 1990. All on-site wells showed high levels of dissolved hydrocarbons, and one well showed traces of floating product. The sump also indicated high levels of dissolved hydrocarbons. The El Cerrito Creek samples, taken after each significant rainstorm, showed non-detectable levels in the upstream station; the storm drain outlet samples showed moderate levels of dissolved hydrocarbons and the down-stream station showed fairly low to non-detectable levels.

In September 1990, Kamur Industries, Inc. retained Alpha Geo Services, Inc. (AGS) and STE to remove three underground tanks, conduct soil sampling and excavate, characterize and dispose of contaminated soil. In addition, STE conducted water sampling of El Cerrito Creek during rainy months per Regional Water Quality control Board (RWQCB) requirements and installed additional monitoring wells as requested by Alameda County Health Department (ACHD).

The details of tank removal, soil sampling and excavation of contaminated soil are described in AGS and STE reports titled "Removal of 3 Underground Storage Tanks" dated January 9, 1991 and "Underground Tank Soil Sampling and Excavation Report" dated January 15, 1991. The report on soil treatment and disposal is included in STE's report titled "Report on Soil Remediation at the Plaza Car Wash" dated May 13, 1991.

In February 1991, STE installed two on-site monitoring wells (STMW-1 and STMW-2). In addition, the on-site wells MW-1 and MW-4 were abandoned during soil excavation of the former underground tank area. The investigation detected no free-floating



product in the wells. Dissolved hydrocarbons were detected in all on-site and off-site wells. The details of this subsurface investigation are described in STE's report titled "Report of Supplemental Subsurface Investigation for Kamur Industries, Inc. at the Plaza Car Wash" dated May 14, 1991.

*SUMMARY OF RESULTS OF PREVIOUS INVESTIGATION:*

The soil material beneath the site consists of an irregular layer of clayey silt and sandy clay with some lenses of gravel.

Results of previous subsurface investigation indicated that the shallow groundwater at the site is impacted with the dissolved petroleum hydrocarbons; namely TPHg and BTEX. Dissolved hydrocarbons in groundwater are yet to be delineated off-site northeast and west of the site.

Groundwater was encountered at the site at an average depth of 5 to 6.5 feet below grade. The direction of groundwater flow was approximately north to northwest. The groundwater appears to be in unconfined condition. The highest concentration of dissolved TPHg was detected in groundwater from the northern and eastern part of the site.

**CURRENT FIELD ACTIVITIES:**

Currently there are seven monitoring wells (STMW-1 through STMW-5, MW-2 and MW-3) located on- and off-site (Figure 2). During this quarter's reporting period, the following field activities were performed:

- Monitored depth-to-static groundwater for monitoring wells STMW-1 through STMW-5, MW-2 and MW-3
- Purged monitoring wells (STMW-1 through STMW-5, MW-2 and MW-3) prior to sampling.
- Submitted water samples to a state-certified laboratory to be analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg), Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX) and Methyl Tertiary Butyl Ether, and selected water samples (STMW-5 and MW-3) for Volatile Organic Compounds (VOC's) per EPA Method 601.
- Reviewed results and prepared a report of the investigation.

#### **GROUNDATER MONITORING:**

On June 25, 1998, STE's staff monitored the seven wells to measure water depth and check for the presence of sheen and/or odor. No sheen or odor were detected in monitoring wells MW-2, STMW-3, STMW-4 and STMW-5. Rainbow sheen and strong petroleum odor were noted in monitoring wells STMW-1. Rainbow sheen and light petroleum odor were detected in monitoring well STMW-2. Light sheen and light sewerage odor were noted in monitoring well MW-3.

Table 1 summarizes the depth-to-groundwater and observations made. The static shallow groundwater levels ranged from 4.40 feet to 6.94 feet below ground surface during the recent quarterly sampling event.

### **GROUNDWATER SAMPLING:**

Following groundwater monitoring, the wells were purged at least four well volumes and sampled in accordance with STE's Standard Operation Procedure (Appendix "C"), which follows State and Local guidelines for sampling and monitoring wells. The samples were submitted to a California state-certified laboratory for analysis accompanied by chain-of-custody. The samples were analyzed for TPHg per EPA Methods 5030/8025; BTEX per EPA Method 602, Methyl Tertiary Butyl Ether (MTBE) and VOC's per EPA Method 601.

### **GROUNDWATER FLOW DIRECTION:**

Water elevation data were used to determine groundwater direction. Table 1 summarizes the groundwater elevations. The groundwater flow beneath the site was in a northwesterly direction as of June 25, 1998 (Figure 1).

### **ANALYTICAL RESULTS:**

Water sample from monitoring well STMW-1 detected low levels of TPHg at 0.57 milligrams per liter (mg/L) and BTEX at (0.0019 mg/L; 0.0006 mg/L; 0.0013 mg/L and 0.0071 mg/L). Water sample from monitoring well STMW-2 detected low levels of TPHg at 2.2 mg/L and BTEX at (0.02 mg/L; 0.0054 mg/L; 0.012 mg/L and 0.021 mg/L). Water sample from monitoring well MW-3 detected low levels TPHg at 23 mg/L and BTEX at (0.1 mg/L; 0.022 mg/L; 0.086 mg/L and 0.13 mg/L), respectively. TPHg and BTEX concentrations were below laboratory detection limit in monitoring wells STMW-3, STMW-4, STMW-5 and MW-2. Monitoring wells MW-3 and STMW-5 detected VOC's below laboratory detection limit. All seven monitoring wells detected MTBE below laboratory detection limit.

Laboratory analytical results are summarized in Table 1. Chain-of-custody documentation and certified laboratory reports are included in Appendix "D".

**DISCUSSION:**

A comparison of the recent analytical results, with results from the previous quarter (March 24, 1998), indicates a decrease of TPHg and BTEX concentrations in monitoring well STMW-1. Monitoring STMW-2 indicates a decrease of TPHg and BEX concentrations and a slight increase of Toluene concentration. Monitoring well MW-3 indicated an increase of TPHg and BTEX concentrations. Monitoring well STMW-3 shows a significant decrease of TPHg and BTEX concentrations. Monitoring wells STMW-4, STMW-5 and MW-2 continue to detected TPHg and BTEX below laboratory detection limit. VOC's concentrations still remain below laboratory detection limit in wells MW-3 and STMW-5.

**RECOMMENDATIONS:**

We recommend continuation of quarterly groundwater monitoring and sampling for monitoring wells STMW-1, STMW-2, STMW-3 and MW-3. Since monitoring wells MW-2, STMW-4 and STMW-5 continue to detect TPHg, BTEX and MTBE below laboratory detection limit, you may request from the regulatory agency that these wells be monitored and sampled at annually.

**LIMITATIONS:**

This report and the associated work have been provided in accordance with the general principles and practices currently employed in the environmental consulting profession. The contents of this report reflect the conditions of the site at this particular time. The findings of this report are based on:

- 1) The observations of field personnel.
- 2) The results of laboratory analyses performed by a state-certified laboratory.

It is possible that variations in the soil and groundwater could exist beyond the points explored in this investigation. Also, changes in groundwater conditions of a property can occur with the passage of time due to variations in rainfall, temperature, regional water usage and other natural processes or the works of man on this property or adjacent properties.

**A P P E N D I X "A"**

**TABLE 1  
GROUNDWATER MONITORING DATA (feet)  
AND ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	VOCs
12/10/92	STMW-1 (100.62)	14	4	6.61	94.01	Light sheen Mild petroelum odor	35	0.054	0.079	0.083	0.22	NA	NA
3/18/93				6.68	93.94	Light rainbow sheen Mild petroleum odor	19	0.049	0.052	0.055	0.18	NA	NA
7/13/93				7.13	93.49	NMFP Strong petroleum odor	17	0.034	0.043	0.017	NA	NA	NA
10/11/93				7.26	93.36	NMFP Strong petroleum odor	51	2.1	2.4	0.53	2.6	NA	NA
1/07/94				7.15	93.47	NMFP Strong petroleum odor	29	1.5	1.6	0.45	2.5	NA	NA
4/06/94				7.10	93.52	NMFP Strong petroleum odor	20	1.1	0.56	0.30	1.6	NA	NA
8/03/94				5.70	94.92	NMFP Strong petroleum odor	43	1.0	1.7	0.64	4.7	NA	NA
11/08/94				6.47	94.15	Brown NMFP Strong petroleum odor	92	9.0	12.0	1.6	9.1	NA	NA
2/16/95				6.96	93.66	Rainbow sheen/NMFP Strong petroleum odor	150	0.85	0.54	0.40	1.2	NA	NA
5/19/95				6.84	93.78	Brown NMFP Strong petroleum odor	59	0.4	0.33	0.17	0.61	NA	NA
8/18/95	(96.81) resurveyed			4.64	92.17	Brown NMFP Strong petroleum odor	300	0.88	0.78	0.54	1.7	NA	NA
11/30/95				7.34	89.47	Thick brown sheen spots/Mild petroleum odor	67	0.8	0.91	0.39	1.5	NA	NA

**TABLE 1 CONT'D  
GROUNDWATER MONITORING DATA (feet)  
AND ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	VOCs
2/29/96	STMW-1 (96.81)	14	4	7.83	88.98	NMFP Strong petroleum odor	71	0.12	0.095	0.018	0.26	NA	ND
6/07/96				7.10	89.71	NMFP Strong petroleum odor	36	0.21	0.14	0.081	0.21	NA	ND
11/14/96				7.29	89.52	Brown NMFP Mild petroleum odor	140	0.48	0.49	0.42	1.2	ND	NA
2/12/97				6.96	89.85	Rainbow sheen spots Strong petroleum odor	42	0.21	0.19	0.06	0.19	ND	NA
5/15/97				7.33	89.48	Brown sheen spots Mild petroleum odor	15	0.083	0.027	0.045	0.13	NA	NA
8/27/97				7.46	89.35	NMFP Strong petroleum odor	82	0.11	0.052	0.066	0.4	ND	NA
12/24/97				6.94	89.87	Rainbow sheen Strong petroleum odor	3.7	0.043	0.018	0.0091	0.025	ND	NA
3/24/98				6.36	90.45	Rainbow sheen Strong petroleum odor	10	0.065	0.068	0.009	0.12	ND	NA
6/25/98				6.94	89.87	Rainbow sheen Strong petroleum odor	0.57	0.0019	0.0006	0.0013	0.0071	ND	NA
12/10/92	STMW-2 (100.63)	14	4	6.39	94.24	Light rainbow sheen Mild petroleum odor	44	0.084	0.096	0.12	0.35	NA	NA
3/18/93				6.50	94.13	Light rainbow sheen Mild petroleum odor	9.2	0.022	0.031	0.04	0.11	NA	NA
7/13/93				6.95	93.10	No sheen Light sewerage odor	9.3	0.018	0.024	0.026	0.089	NA	NA



**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet)**  
**AND ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	VOCs
10/11/93	STMW-2 (100.63)	14	4	7.09	93.54	NMFP Strong petroleum odor	62	2.8	3.9	0.67	4.4	NA	NA
1/07/94				6.93	93.70	Rainbow sheen Mild petroleum odor	22	1.1	1	0.28	1.8	NA	NA
4/06/94				6.84	93.79	NMFP Strong petroleum odor	6.6	0.49	0.14	0.33	0.062	NA	NA
8/03/94				7.10	93.53	NMFP Mild petroleum odor	4	0.25	0.052	0.055	0.24	NA	NA
11/08/94				6.19	94.44	Brown NMFP Strong petroleum odor	10	0.73	0.79	0.2	13	NA	NA
2/16/95	STMW-2 (96.79) Resurveye			6.72	93.91	Rainbow sheen/NMFP Strong petroleum odor	37	0.23	0.088	0.092	0.32	NA	NA
5/19/95				6.61	94.02	Brown sheen spots Light petroleum odor	9.3	0.04	0.016	0.022	0.068	NA	NA
8/18/95				7.09	89.70	Brown NMFP Light petroleum odor	210	0.72	0.55	0.52	1.4	NA	NA
11/30/95				7.07	89.72	Rainbow sheen spots Light petroleum odor	66	0.66	0.51	0.37	1.5	NA	NA
2/29/96				7.57	89.22	Rainbow sheen Light petroleum odor	33	0.075	0.055	0.052	0.15	NA	ND
6/07/96				6.74	90.05	Rainbow sheen Light petroleum odor	92	0.25	0.075	0.018	0.47	NA	ND
11/14/96				6.96	89.83	Rainbow sheen spots Light petroleum odor	39	0.38	0.23	0.27	0.72	ND	NA

**TABLE 1 CONT'D  
GROUNDWATER MONITORING DATA (feet)  
AND ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	VOCs
2/12/97	STMW-2 (96.79)	14	4	6.71	90.08	Rainbow sheen spots Mild petroleum odor	23	0.11	0.028	0.048	0.14	ND	NA
5/15/97				7.06	89.73	Light rainbow sheen spots/Very light petroleum odor	30	0.32	0.048	0.094	0.2	NA	NA
8/27/97				7.20	89.59	No sheen/Very light petroleum odor	19	0.082	0.0091	0.018	0.027	ND	NA
12/24/97				6.72	90.07	Rainbow sheen Strong petroleum odor	4.1	0.077	0.0089	0.015	0.034	ND	NA
3/24/98				6.10	90.69	Rainbow Sheen Strong petroleum odor	3.3	0.031	0.0042	0.016	0.026	ND	NA
6/25/98				5.52	91.27	Rainbow sheen Light petroleum odor	2.2	0.02	0.0054	0.012	0.021	ND	NA
11/18/96	STMW-3 (95.24)	15	2.5	5.34	89.90	No sheen or odor	0.24	0.0091	0.0028	0.0047	0.013	ND	ND
2/12/97				5.14	90.10	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
5/15/97				5.42	89.82	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
8/27/97				5.58	89.66	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
12/24/97				5.14	90.10	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
3/24/98				4.54	90.70	No sheen or odor	13	0.087	0.023	0.08	0.13	ND	NA
6/25/98				5.06	90.18	No sheen or odor	ND	ND	ND	ND	ND	ND	NA

**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet)**  
**AND ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	VOCs
11/14/96	SSTMW-4 (94.41)	15	2	4.67	89.74	No sheen or odor	ND	ND	ND	ND	ND	ND	ND
2/12/97				4.45	89.96	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
5/15/97				4.75	89.66	No sheen or odor	ND	ND	ND	ND	ND	NA	NA
8/27/97				4.87	89.54	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
12/24/97				4.44	89.97	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
3/24/98				3.88	90.53	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
6/25/98				4.40	90.01	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
11/14/96	STMW-5 (94.49)	15	2	5.20	89.29	No sheen or odor	ND	ND	ND	ND	ND	ND	ND
2/12/97				4.99	89.50	No sheen or odor	ND	ND	ND	ND	ND	ND	ND
5/15/97				5.30	89.19	No sheen or odor	ND	ND	ND	ND	ND	NA	NA
8/27/97				5.33	89.16	No sheen or odor	ND	ND	ND	ND	ND	NA	NA
12/24/97				4.94	89.55	No sheen or odor	ND	ND	ND	ND	ND	ND	ND
3/24/98				4.52	89.97	No sheen Slight sewerage odor	ND	ND	ND	ND	ND	ND	ND
6/25/98				5.00	89.49	No sheen or odor	ND	ND	ND	ND	ND	ND	ND
12/10/92	MW-2 (99.39)	11.50	5	4.94	94.45	No sheen Mild petroleum odor	7.2	0.015	0.023	0.032	0.082	NA	NA
3/18/93				5.11	94.28	No sheen Light sewerage odor	1.4	0.0083	0.011	0.013	0.048	NA	NA

**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet)**  
**AND ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	VOCs
12/10/92	MW-2 (99.39)	11.50	5	4.94	94.45	No sheen Mild petroleum odor	7.2	0.015	0.023	0.032	0.082	NA	NA
3/18/93				5.11	94.28	No sheen Light sewerage odor	1.4	0.0083	0.011	0.013	0.048	NA	NA
7/13/93				5.53	93.86	Rainbow sheen Light petroleum odor	2.4	0.0047	0.0062	0.0068	0.025	NA	NA
10/11/93				5.64	93.75	No sheen or odor	0.41	0.043	0.0026	0.0045	0.012	NA	NA
1/07/94				5.52	93.87	No sheen or odor	0.24	0.025	0.0031	ND	0.02	NA	NA
4/06/94				5.82	93.57	No sheen or odor	3	0.12	0.023	0.022	0.19	NA	NA
8/03/94				7.47	91.92	No sheen or odor	0.5	0.057	0.001	0.017	0.025	NA	NA
11/08/94				4.69	94.70	No sheen or odor	8	0.65	0.085	0.5	1	NA	NA
2/16/95				5.31	94.08	No sheen or odor	0.66	0.0064	0.001	0.0056	0.0089	NA	NA
5/19/95				5.17	94.22	No sheen Mild sewerage odor	1.9	0.011	0.01	0.023	0.026	NA	NA
8/18/95	(95.22) Reserved			5.65	89.57	No sheen Light sewerage odor	1.8	0.015	0.0016	0.015	0.02	NA	NA
11/30/95				5.64	89.58	No sheen or odor	0.12	0.0093	ND	0.0005	0.0035	NA	NA
2/29/96				4.61	90.61	No sheen Light sewerage odor	1.2	0.0061	0.0012	0.0062	0.0087	NA	ND
6/07/96				5.37	89.85	No sheen Light sewerage odor	ND	ND	ND	ND	ND	NA	ND
11/14/96				5.55	89.67	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
2/12/97				5.14	90.08	No sheen or odor	ND	ND	ND	ND	ND	ND	NA

**TABLE 1 CONT'D  
GROUNDWATER MONITORING DATA (feet)  
AND ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	VOCs
5/15/97	MW-2 (95.22)	11.50	5	5.63	89.59	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
8/27/97				5.73	89.49	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
12/27/97				5.30	89.91	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
3/24/98				4.76	90.46	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
6/25/98				5.28	89.94	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
12/10/92	MW-3 (100.09)	12	5	4.42	95.67	Light sheen Strong petroleum odor	94	0.4	0.41	0.43	1.1	NA	NA
3/18/93				5.39	94.70	Thick NMFP Mild Petroleum odor	51	0.092	0.13	0.16	0.59	NA	NA
7/13/93				6.07	94.02	L. rainbow sheen spots Strong petroleum odor	80	0.16	0.21	0.23	0.82	NA	NA
10/11/93				6.34	93.75	NMFP Strong petroleum odor	180	14	8.8	0.32	9.4	NA	NA
1/07/94				6.34	93.75	NMFP Strong petroleum odor	120	9.5	4.6	7.8	0.23	NA	NA
4/06/94				6.14	93.95	No sheen or odor	3.0	0.12	0.023	0.022	0.19	NA	NA
8/03/94				6.34	93.75	Few sheen spots Mild petroleum odor	0.2	6.5	5.7	1.5	18.0	NA	NA
11/08/94				3.89	96.20	Brown NMFP Strong petroleum odor	86	7.4	8.5	2.2	12.0	NA	NA
2/16/95				5.90	94.19	Brown NMFP Strong petroleum odor	59	0.28	0.12	0.12	0.57	NA	NA

**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet)**  
**AND ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	VOCs
5/19/95	MW-3 (100.09)	12	5	4.15	95.94	Brown NMFP Strong petroleum odor	12	0.15	0.068	0.069	0.16	NA	NA
8/18/95	(95.62) Resurveyed			6.08	89.54	Brown NMFP Mild petroleum odor	33	0.074	0.028	0.038	0.1	NA	NA
11/30/95				6.26	89.36	Rainbow sheen spots Light petroleum odor	100	1.3	0.51	0.25	2.4	NA	NA
2/29/96				4.37	91.25	Rainbow sheen spots Mild petroleum odor	15	0.012	0.0038	0.01	0.024	NA	Det.
6/07/96				5.90	89.72	Rainbow sheen spots Mild petroleum odor	5.2	0.023	0.0069	0.014	0.034	NA	Det.
11/14/96				6.14	89.48	Rainbow sheen Light petroleum odor	33	0.32	0.13	0.25	0.62	ND	ND
2/12/97				4.45	91.17	No sheen or odor	15	0.043	0.009	0.02	0.041	ND	ND
5/15/97				5.77	89.85	No sheen or odor	15	0.068	0.03	0.06	0.11	NA	ND
8/27/97				5.98	89.64	No sheen Mild sewerage odor	15	0.022	0.0052	0.0097	0.018	ND	ND
12/24/97				5.70	89.92	Rainbow sheen Strong petroleum odor	15	0.15	0.01	0.081	0.11	ND	ND
3/24/98				5.06	90.56	No sheen or odor	15	0.15	0.01	0.081	0.11	ND	ND
6/25/98				5.66	89.96	Light sheen spots Light sewerage odor	23	0.1	0.022	0.086	0.13	ND	ND

TPHg - Total Petroleum Hydrocarbons as gasoline

VOC's - Volatile Organic Compounds

NMFP - Non-Measurable Floating Product

Perf. - Perforation

ND - Not Detected (Below Laboratory Detection Limit)

MTBE - Methyl Tertiary Butyl Ether

BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes

GW Elev. - Groundwater Elevation

Det. - Detected

NA - Not Analyzed

**A P P E N D I X "B"**

**ENVIRO SOIL TECH CONSULTANTS**



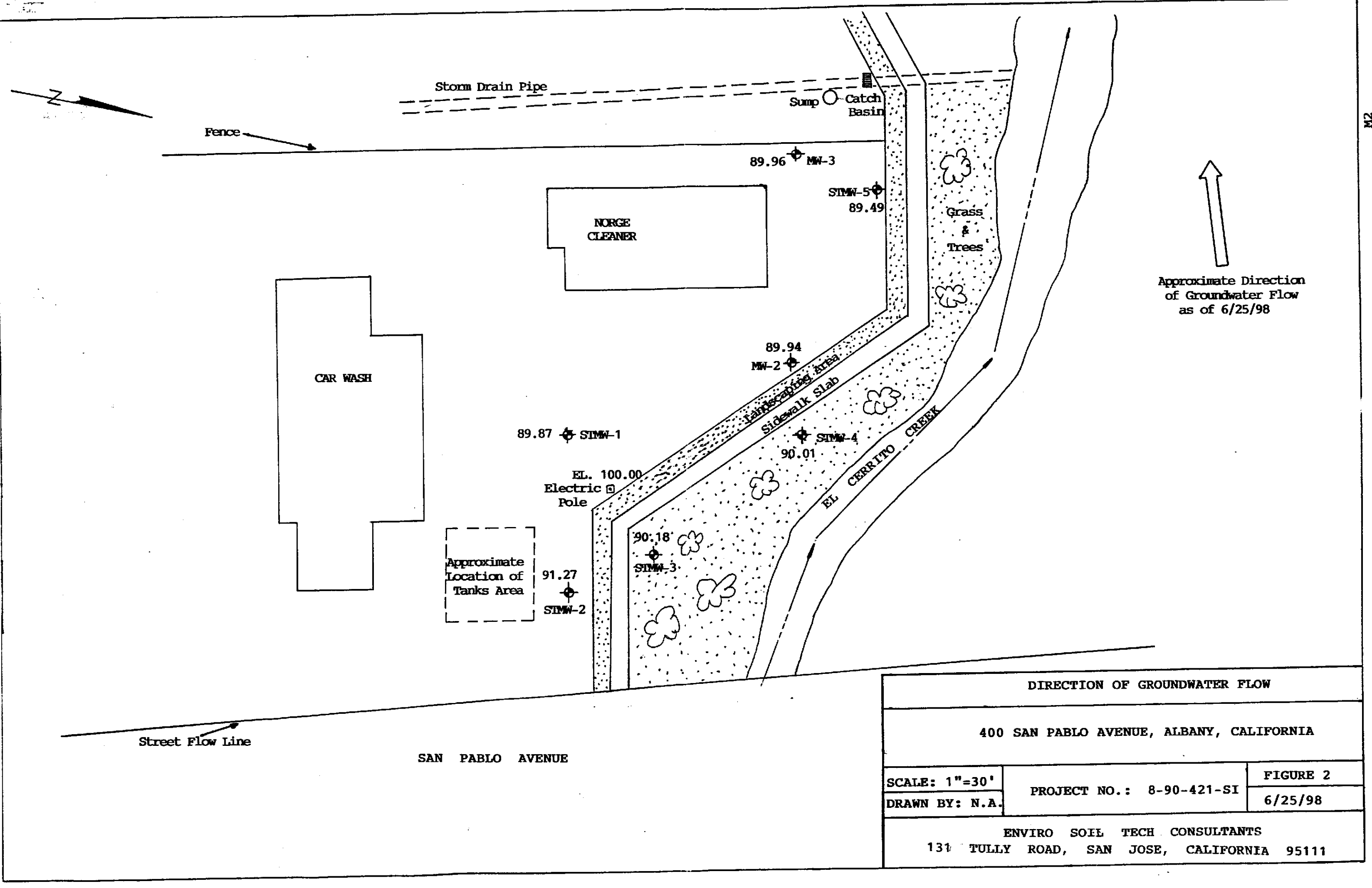
San Jose/Oakland [CA]  
Map data Copyright © Etak, Inc., 1984-1995. All rights reserved.  
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Figure 1

M1





M2

DIRECTION OF GROUNDWATER FLOW		
400 SAN PABLO AVENUE, ALBANY, CALIFORNIA		
SCALE: 1"=30'	PROJECT NO.: 8-90-421-SI	FIGURE 2
DRAWN BY: N.A.		6/25/98
ENVIRO SOIL TECH CONSULTANTS 131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111		

**A P P E N D I X "C"**

**ENVIRO SOIL TECH CONSULTANTS**

## GROUNDWATER SAMPLING

Prior to collection of groundwater samples, all of the sampling equipment (i.e. bailer, cables, bladder pump, discharge lines and etc.) was cleaned by pumping TSP water solution followed by distilled water.

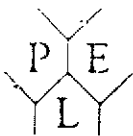
Prior to purging, the well "Water Sampling Field Survey Forms" were filled out (depth to water and total depth of water column were measured and recorded). The well was then bailed or pumped to remove four to ten well volumes or until the discharged water temperature, conductivity and pH stabilized. "Stabilized" is defined as three consecutive readings within 15% of one another.

The groundwater sample was collected when the water level in the well recovered to 80% of its static level.

Forty milliliter (ml.), glass volatile organic analysis (VOA) vials with Teflon septa were used as sample containers. The groundwater sample was decanted into each VOA vial in such a manner that there was a meniscus at the top. The cap was quickly placed over the top of the vial and securely tightened. The VOA vial was then inverted and tapped to see if air bubbles were present. If none were present, the sample was labeled and refrigerated for delivery under chain-of-custody to the laboratory. The label information would include a sample identification number, job identification number, date, time, type of analysis requested, and the sampler's name.

**A P P E N D I X "D"**

**ENVIRO SOIL TECH CONSULTANTS**



# PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

July 02, 1998

PEL # 9806045

SOIL TECH ENGINEERING

Attn: Frank Hamedi

Re: Seven water samples for Gasoline/BTEX with MTBE analyses.

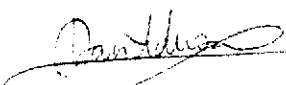
Project number: 421

Date sampled: June 25, 1998  
Date extracted: June 26-29, 1998

Date submitted: June 26, 1998  
Date analyzed: June 26-29, 1998

## RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)
MW-2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-3	23000	100	22	86	130	N.D.
STMW-1	570	1.9	0.6	1.3	7.1	N.D.
STMW-2	2200	20	5.4	12	21	N.D.
STMW-3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
STMW-4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
STMW-5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	88.0%	95.1%	89.4%	93.7%	96.2%	---
Detection limit	50	0.5	0.5	0.5	0.5	0.5
Method of Analysis	5030/ 8015	602	602	602	602	602

  
David Duong  
Laboratory Director



# PRIORITY ENVIRONMENTAL LABS

Regulatory Environmental Analytical Laboratory

July 02, 1998

PEL # 9806045

SOIL TECH ENGINEERING

Attn: Frank Hamedi

Project number: 421

Sample I.D.: MW - 3

Date Sampled: June 25, 1998

Date Submitted: June 26, 1998

Date Analyzed: June 01-02, 1998

Method of Analysis: EPA 601

Detection limit: 0.5 ug/L

COMPOUND NAME	CONCENTRATION ( ug/L)	SPIKE RECOVERY (%)
Chloromethane	N.D.	-----
Vinyl Chloride	N.D.	83.4
Bromomethane	N.D.	-----
Chloroethane	N.D.	-----
Trichlorofluoromethane	N.D.	-----
1,1-Dichloroethene	N.D.	-----
Methylene Chloride	N.D.	-----
1,2-Dichloroethene (TOTAL)	N.D.	-----
1,1-Dichloroethane	N.D.	-----
Chloroform	N.D.	92.8
1,1,1-Trichloroethane	N.D.	-----
Carbon Tetrachloride	N.D.	-----
1,2-Dichloroethane	N.D.	-----
Trichloroethene	N.D.	101.0
1,2-Dichloropropane	N.D.	-----
Bromodichloromethane	N.D.	-----
2-Chloroethylvinylether	N.D.	-----
Trans-1,3-Dichloropropene	N.D.	-----
Cis-1,3-Dichloropropene	N.D.	-----
1,1,2-Trichloroethane	N.D.	-----
Tetrachloroethene	N.D.	97.7
Dibromochloromethane	N.D.	-----
Chlorobenzene	N.D.	-----
Bromoform	N.D.	-----
1,1,2,2-Tetrachloroethane	N.D.	-----
1,3-Dichlorobenzene	N.D.	-----
1,4-Dichlorobenzene	N.D.	-----
1,2-Dichlorobenzene	N.D.	-----

David Duong  
Laboratory Director



# PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

July 02, 1998

PEL # 9806045

SOIL TECH ENGINEERING

Attn: Frank Hamedi

Project number: 421

Sample I.D.: STMW - 5

Date Sampled: June 25, 1998

Date Submitted: June 26, 1998

Date Analyzed: June 01-02, 1998

Method of Analysis: EPA 601

Detection limit: 0.5 ug/L

COMPOUND NAME	CONCENTRATION ( ug/L)	SPIKE RECOVERY (%)
Chloromethane	N.D.	-----
Vinyl Chloride	N.D.	83.4
Bromomethane	N.D.	-----
Chloroethane	N.D.	-----
Trichlorofluoromethane	N.D.	-----
1,1-Dichloroethene	N.D.	-----
Methylene Chloride	N.D.	-----
1,2-Dichloroethene (TOTAL)	N.D.	-----
1,1-Dichloroethane	N.D.	-----
Chloroform	N.D.	92.8
1,1,1-Trichloroethane	N.D.	-----
Carbon Tetrachloride	N.D.	-----
1,2-Dichloroethane	N.D.	-----
Trichloroethene	N.D.	101.0
1,2-Dichloropropane	N.D.	-----
Bromodichloromethane	N.D.	-----
2-Chloroethylvinylether	N.D.	-----
Trans-1,3-Dichloropropene	N.D.	-----
Cis-1,3-Dichloropropene	N.D.	-----
1,1,2-Trichloroethane	N.D.	-----
Tetrachloroethene	N.D.	97.7
Dibromochloromethane	N.D.	-----
Chlorobenzene	N.D.	-----
Bromoform	N.D.	-----
1,1,2,2-Tetrachloroethane	N.D.	-----
1,3-Dichlorobenzene	N.D.	-----
1,4-Dichlorobenzene	N.D.	-----
1,2-Dichlorobenzene	N.D.	-----

David Duong  
Laboratory Director

PROJ. NO.		NAME			CON-TAINER	ANALYSES REQUESTED TPH / P / TBA / M / TBP / GWS	PEL # 9806045				
421		SAMPLERS: (Signature) Richard Mander					INV # 2R418				
NO.	DATE	TIME	SOIL	WATER			LOCATION				
1	6/25/98	10:58			ST MW-1	2	✓	✓			
2		11:30			ST MW-2	2	✓	✓			
3		2:48			ST MW-3	2	✓	✓			
4		3:10			ST MW-4	2	✓	✓			
5		4:15			ST MW-5	2	✓	✓	✓		
6		5:30			ST W-2	2	✓	✓			
7		6:05			MW-3	2	✓	✓	✓		
Relinquished by: (Signature) Richard Mander		Date / Time 6/24/98 8:30		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Receive by: (Signature)	
Relinquished by: (Signature)		Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)	
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature) A. Pardo		Date / Time 8:30 06/26/98		Remarks			



# SOIL TECH ENGINEERING

Environmental and Geotechnical Engineers

1761 Junction Ave. San Jose CA 95112 (408)441-1881