File No. 8-90-421-SI

QUARTERLY GROUNDWATER MONITORING & SAMPLING FOR THE PROPERTY LOCATED AT 400 SAN PABLO AVENUE, ALBANY, CALIFORNIA FEBRUARY 20, 1997

PREPARED FOR:
MR. MURRAY STEVENS
KAMUR INDUSTRIES
2351 SHORELINE DRIVE
ALAMEDA, CA 94501

BY:
SOIL TECH ENGINEERING, INC.
1761 JUNCTION AVENUE
SAN JOSE, CALIFORNIA 95112

SOIL TECH ENGINEERING, INC.

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SOIL TECH ENGINEERING, INC.
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1761 JUNCTION AVENUE, SAN JOSE, CALIFORNIA 95112
Tel. (408) 441-1881 **Fax:** (408) 441-0705

February 20, 1997

File No. 8-90-421-SI

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

SUBJECT: **Quarterly Groundwater Monitoring and Sampling for 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 February 12, 1997, 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 free-floating product and/or odor. The wells were sampled and the groundwater samples analyzed for presence of Total Petroleum Hydrocarbons as gasoline (TPHg), Benzene, Toluene, Ethyl Benzene, Total Xylene (BTEX) and Methyl Tertiary Butyl Ether (MTBE). In addition, MW-3 and STMW-5 were analyzed for Volatile Organic Compounds (VOCs).

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 contact our office at (408) 441-1881 at your convenience.

Sincerely,

SOIL TECH ENGINEERING, INC.

NOORI AMELI
Project Engineer

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

FRANK HAMEDI-FARD
General Manager

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 (see 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, Ethyl Benzene, Total Xylenes (BTEX), Methyl Tertiary Butyl Ether (MTBE), and selected water samples (STMW-5 and MW-3) for Volatile Organic Compounds (VOC's)
- Reviewed results and prepared a report of the investigation

Groundwater Monitoring:

On February 12, 1997, STE's staff monitored the seven wells to measure water depth and check for the presence of floating product and/or odor. Rainbow sheen spots and strong petroleum odor were noted in STMW-1. STMW-2 noted rainbow sheen spots and mild petroleum odor, while no sheen or odor was noted in STMW-3, STMW-4, STMW-5 and MW-2. MW-3 noted no sheen and very light petroleum odor.

Table 1 summarizes the depth-to-groundwater and observations made. The static shallow groundwater levels ranged from 4.45 feet to 6.96 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 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 southwesterly direction as of February 12, 1997 (Figure 1).

Analytical Results:

Low to moderate levels of TPHg and BTEX were detected in STMW-1, STMW-2 and MW-3. Hydrocarbons levels in STMW-3, STMW-4, STMW-5 and MW-2 were below laboratory detection limit. STMW-5 and MW-3 detected VOCs below laboratory detection limit. All seven 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 (November 14, 1997), indicates reduced TPHg and BTEX concentrations in monitoring wells STMW-1, STMW-2, STMW-3, and MW-3, while STMW-4, STMW-5 and MW-2 continue to detect hydrocarbon concentrations below laboratory detection limit.

Recommendations:

We recommend continuation of groundwater monitoring and sampling for one year. The proposed program/site condition should then be re-evaluated at the end of one year.

An alternative risk assessment for the subject site is also recommended. This would provide further insight into future remedial measures and evaluation of potential risk(s) due to the levels of contaminants at the site.

A copy of this quarterly report should be submitted to Alameda County Health Department (ACHD) and the Regional Water Quality Control Board (RWQCB).

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.

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.

File No. 8-90-421-SI

A P P E N D I X "A"

SOIL TECH ENGINEERING, INC.

File No. 8-90-421-SI

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 pet. odor	35	0.054	0.079	0.083	0.22	NA	NA
03/18/93				6.68	93.94	L. rainbow sheen Mild pet. odor	19	0.049	0.052	0.055	0.18	NA	NA
07/13/93				7.13	93.49	NMFP Strong pet. odor	17	0.034	0.043	0.017	NA	NA	NA
10/11/93				7.26	93.36	NMFP Strong pet. odor	51	2.1	2.4	0.53	2.6	NA	NA
01/07/94				7.15	93.47	NMFP Strong pet. odor	29	1.5	1.6	0.45	2.5	NA	NA
04/06/94				7.10	93.52	NMFP Strong pet. odor	20	1.1	0.56	0.30	1.6	NA	NA
08/03/94				5.70	94.92	NMFP Strong pet. odor	43	1.0	1.7	0.64	4.7	NA	NA
11/08/94				6.47	94.15	Brown NMFP Strong pet. odor	92	9.0	12.0	1.6	9.1	NA	NA
02/16/95				6.96	93.66	Rainbow sheen/NMFP Strong pet. odor	150	0.85	0.54	0.40	1.2	NA	NA
05/19/95				6.84	93.78	Brown NMFP Strong pet. odor	59	0.4	0.33	0.17	0.61	NA	NA
08/18/95	(96.81) resurveyed			4.64	92.17	Brown NMFP Strong pet. odor	300	0.88	0.78	0.54	1.7	NA	NA
11/30/95				7.34	89.47	Thick brown sheen spots Mild pet. odor	67	0.8	0.91	0.39	1.5	NA	NA
02/29/96				7.83	88.98	NMFP Strong pet. odor	71	0.12	0.095	0.018	0.26	NA	ND
06/07/96				7.10	89.71	NMFP Strong pet. odor	36	0.21	0.14	0.081	0.21	NA	ND
11/14/96				7.29	89.52	Brown NMFP Mild pet. odor	140	0.48	0.49	0.42	1.2	ND	NA
02/12/97				6.96	89.85	Rainbow sheen spots Strong pet. odor	42	0.21	0.19	0.060	0.19	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
12/10/92	STMW-2 (100.63)	14	4	6.39	94.24	Light rainbow sheen Mild pet. odor	44	0.084	0.096	0.12	0.35	NA	NA
03/18/93				6.50	94.13	L. rainbow sheen Mild pet. odor	9.2	0.022	0.031	0.04	0.11	NA	NA
07/13/93				6.95	93.1	No sheen Light sewage odor	9.3	0.018	0.024	0.026	0.089	NA	NA
10/11/93				7.09	93.54	NMFP Strong pet. odor	62	2.8	3.9	0.67	4.4	NA	NA
01/07/94				6.93	93.70	Rainbow sheen Mild pet. odor	22	1.1	1.0	0.28	1.8	NA	NA
04/06/94				6.84	93.79	NMFP Strong pet. odor	6.6	0.49	0.14	0.33	0.062	NA	NA
08/03/94				7.10	93.53	NMFP Mild pet. odor	4	0.25	0.052	0.055	0.24	NA	NA
11/08/94				6.19	94.44	Brown NMFP Strong pet. odor	10	0.73	0.79	0.20	1.3	NA	NA
02/16/95				6.72	93.91	Rainbow sheen/NMFP Strong pet. odor	37	0.23	0.088	0.092	0.32	NA	NA
05/19/95				6.61	94.02	Brown sheen spots Light pet. odor	9.3	0.040	0.016	0.022	0.068	NA	NA
08/18/95	(96.79) resurveyed			7.09	89.70	Brown NMFP Light pet. odor	210	0.72	0.55	0.52	1.4	NA	NA
11/30/95				7.07	89.72	Rainbow sheen spots Light pet. odor	66	0.66	0.51	0.37	1.5	NA	NA
02/29/96				7.57	89.22	Rainbow sheen Light pet. odor	33	0.075	0.055	0.052	0.15	NA	ND
06/07/96				6.74	90.05	Rainbow sheen Light pet. odor	92	0.25	0.075	0.18	0.47	NA	ND
11/14/96				6.96	89.83	Rainbow sheen spots Light pet. odor	39	0.38	0.23	0.27	0.72	ND	NA
02/12/97				6.71	90.08	Rainbow sheen spots Mild pet. odor	23	0.11	0.028	0.048	0.14	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	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
02/12/97				5.14	90.10	No sheen or odor	ND	ND	ND	ND	ND	ND	NA
11/14/96	STMW-4 (94.41)	15	2	4.67	89.74	No sheen or odor	ND	ND	ND	ND	ND	ND	ND
02/12/97				4.45	89.96	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
02/12/97				4.99	89.50	No sheen or odor	ND	ND	ND	ND	ND	ND	ND

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 pet. odor	7.2	0.015	0.023	0.032	0.082	NA	NA
03/18/93				5.11	94.28	No sheen Light sewage odor	1.4	0.0083	0.011	0.013	0.048	NA	NA
07/13/93				5.53	93.86	Rainbow sheen Light pet. 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
01/07/94				5.52	93.87	No sheen or odor	0.24	0.025	0.0031	ND	0.020	NA	NA
04/06/94				5.82	93.57	No sheen or odor	0.24	0.025	0.0031	ND	0.02	NA	NA
08/03/94				7.47	91.92	No sheen or odor	0.50	0.057	0.001	0.017	0.025	NA	NA
11/08/94				4.69	94.70	No sheen Mild sewage odor	8.0	0.65	0.085	0.50	1.0	NA	NA
02/16/95				5.31	94.08	No sheen or odor	0.66	0.0064	0.001	0.0056	0.0089	NA	NA
05/19/95				5.17	94.22	No sheen Mild sewage odor	1.9	0.011	0.010	0.023	0.026	NA	NA
08/18/95	(95.22) resurveyed			5.65	89.57	No sheen Light sewage odor	1.8	0.015	0.0016	0.015	0.020	NA	NA
11/30/95				5.64	89.58	No sheen or odor	0.12	0.0093	ND	0.0005	0.0035	NA	NA
02/29/96				4.61	90.61	No sheen Light sewage odor	1.2	0.0061	0.0012	0.0062	0.0087	NA	ND
06/07/96				5.37	89.85	No sheen Light sewage 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
02/12/97				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 Perf.	Depth to Water	GW Elev.	Well Observation	TPHg	B	T	E	X	MTBE	VOCs
12/10/92	MW-3 (100.09)	12	5	4.42	95.67	Light sheen Strong pet. odor	94	0.4	0.41	0.43	1.1	NA	NA
03/18/93				5.39	94.70	Thick NMFP Mild pet. odor	51	0.092	0.13	0.16	0.59	NA	NA
07/13/93				6.07	94.02	L. rainbow sheen spots Strong pet. odor	80	0.16	0.21	0.23	0.82	NA	NA
10/11/93				6.34	93.75	NMFP Strong pet. odor	180	14.0	8.8	0.32	9.4	NA	NA
01/07/94				6.34	93.75	NMFP Strong pet. odor	120	9.5	4.6	7.8	0.23	NA	NA
04/06/94				6.14	93.95	No sheen or odor	3.0	0.12	0.023	0.022	0.19	NA	NA
08/03/94				6.34	93.75	Few sheen spots Mild pet. odor	0.2	6.5	5.7	1.5	18.0	NA	NA
11/08/94				3.89	96.20	Brown NMFP Strong pet. odor	86	7.4	8.5	2.2	12.0	NA	NA
02/16/95				5.90	94.19	Brown NMFP Strong pet. odor	59	0.28	0.12	0.12	0.57	NA	NA
05/19/95				4.15	95.94	Brown NMFP Strong pet. odor	12	0.15	0.068	0.069	0.16	NA	NA
08/18/95	(95.62) resurveyed			6.08	89.54	Brown NMFP Mild pet. odor	33	0.074	0.028	0.038	0.10	NA	NA
11/30/95				6.26	89.36	Rainbow sheen spots Light pet. odor	100	1.3	0.51	0.25	2.4	NA	NA
02/29/96				4.37	91.25	Rainbow sheen spots Mild pet. odor	15	0.012	0.0038	0.010	0.024	NA	Det.
06/07/96				5.90	89.72	Rainbow sheen spots Mild pet. odor	5.2	0.023	0.0069	0.014	0.034	NA	Det.
11/14/96				6.14	89.48	Rainbow sheen Light pet. odor	33	0.32	0.13	0.25	0.62	ND	ND
02/12/97				4.45	91.17	No sheen or odor	15	0.043	0.009	0.020	0.041	ND	ND

TABLE 2
GROUNDWATER ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS (VOCs)

Date	Well I.D.	Volatile Organic Compounds	Concentration (mg/L)
02/29/96	MW-3	1,2 - Dichloroethane (Total)	0.035
		Chloroform	0.16
		Trichloroethane	0.11
		Tetrachloroethane	0.08
06/07/96	MW-3	Chloroform	0.031
		Trichloroethene	0.11
		Tetrachloroethene	0.61

2/12/97 ~~re~~ lab results in back

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TABLE 1 & 2
GROUNDWATER MONITORING DATA (feet) AND ANALYTICAL RESULTS (mg/L)

TPHg - Total Petroleum Hydrocarbons as Gasoline

B - Benzene

T - Toluene

E - Ethyl Benzene

X - Total Xylenes

ND - Not Detected

NA- Not Analyzed

N/A - Not Applicable

GW Elev. - Groundwater Elevation

MTBE - Methyl Tertiary Butyl Ether

NMFP - Non-Measurable Floating Product

Pet. - Petroleum

VOCs - Volatile Organic Compounds

L. - Light

Perf. - Perforation

Det. - Detected (see **TABLE 2**)

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A P P E N D I X "B"

SOIL TECH ENGINEERING, INC.

File No. 8-90-421-SI

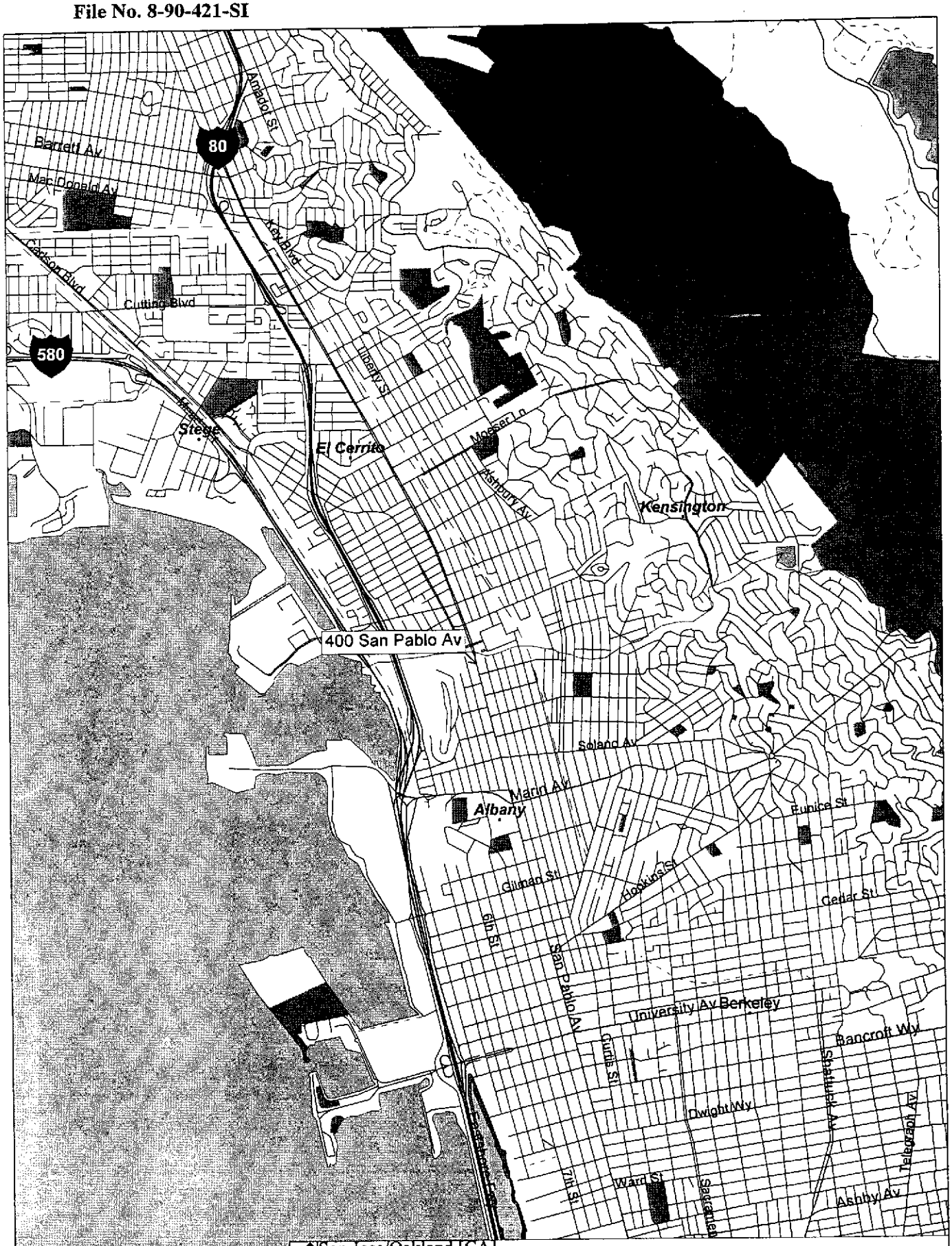
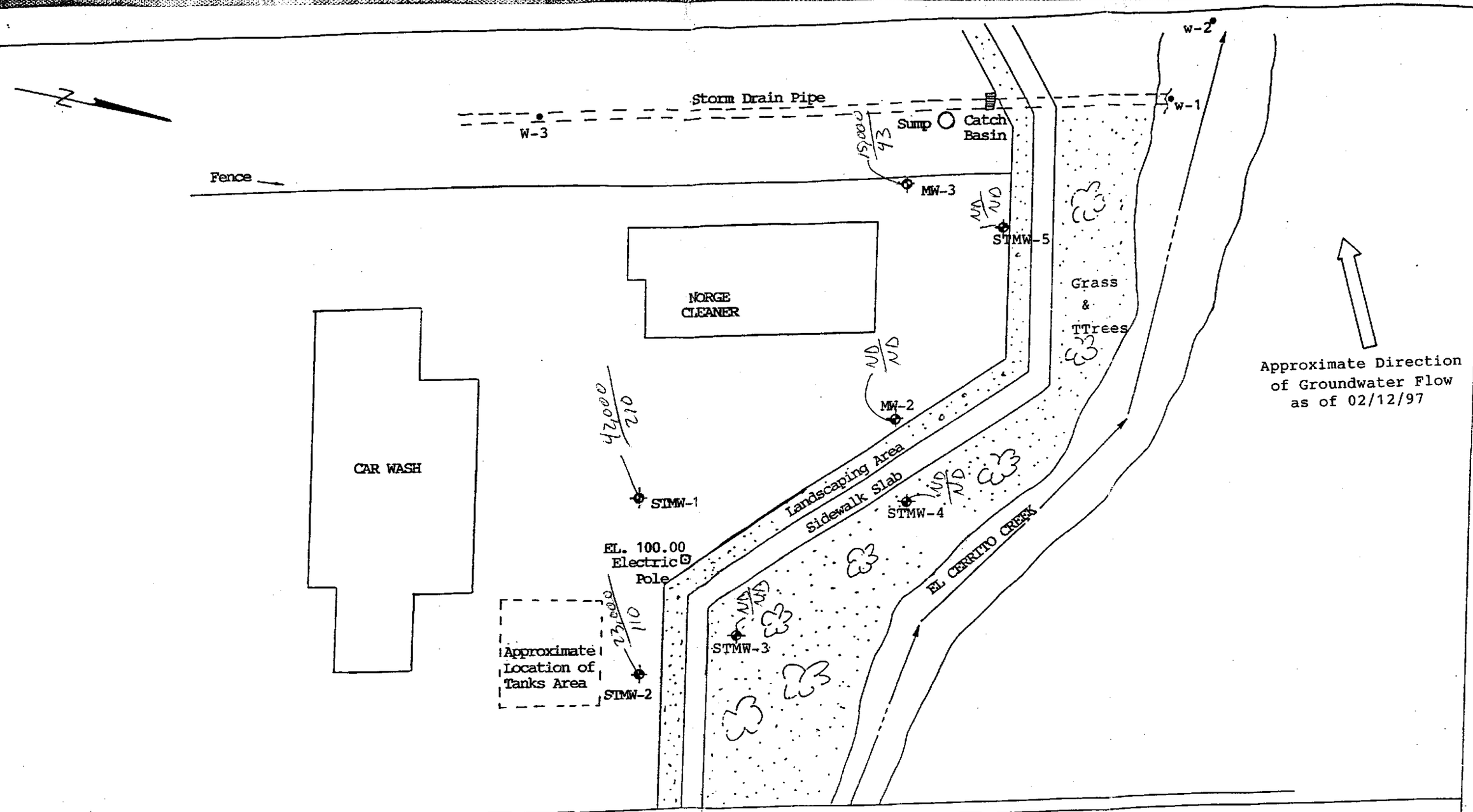


Figure 1 SOIL TECH ENGINEERING, INC. M1



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.		02/12/97

SOIL TECH ENGINEERING, INC.
1761 Junction Ave., SAN JOSE , CALIFORNIA 95112

File No. 8-90-421-SI

A P P E N D I X "C"

SOIL TECH ENGINEERING, INC.

File No. 8-90-421-SI

GROUNDWATER SAMPLING

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

Prior to purging the well, "Water Sampling Field Survey Forms" was 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.

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A P P E N D I X "D"

SOIL TECH ENGINEERING, INC.

PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

February 17, 1997 PEL # 9702018

SOIL TECH ENGINEERING

Attn: Noori Ameli

Re: Seven water sample for Gasoline/BTEX with MTBE analysis.

Project name: 400 San Pablo Ave., - Albany
Project number: 8-90-421-SI

Date sampled: Feb 12, 1997 Date submitted: Feb 13, 1997
Date extracted: Feb 13-15, 1997 Date analyzed: Feb 13-15, 1997

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	MTBE (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylene (ug/L)
STMW-1	42000	N.D.	210	190	60	190
STMW-2	23000	N.D.	110	28	48	140
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.
MW-2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW-3	15000	N.D.	43	9.0	20	41
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	98.9%	---	88.4%	95.1%	97.2%	99.3%
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

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PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

February 17, 1997 PEL # 9702018

SOIL TECH ENGINEERING Attn: Noori Ameli

Project name: 400 San Pablo Ave., - Albany Project number: 8-90-421-SI

Sample I.D.: MW-3

Date Sampled: Feb 12, 1997 Date Submitted: Feb 13, 1997
Date Analyzed: Feb 13-15, 1997

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.	-----
Bromomethane	N.D.	-----
Chloroethane	N.D.	-----
Trichlorofluoromethane	N.D.	-----
1,1-Dichloroethene	N.D.	-----
Methylene Chloride	N.D.	-----
1,2-Dichloroethene (TOTAL)	N.D.	102.6
1,1-Dichloroethane	N.D.	-----
Chloroform	N.D.	105.5
1,1,1-Trichloroethane	N.D.	-----
Carbon Tetrachloride	N.D.	-----
1,2-Dichloroethane	N.D.	-----
Trichloroethene	N.D.	99.8
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.	77.1
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
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PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

February 17, 1997 PEL # 9702018

SOIL TECH ENGINEERING Attn: Noori Ameli

Project name: 400 San Pablo Ave., - Albany Project number: 8-90-421-SI

Sample I.D.: STMW-5

Date Sampled: Feb 12, 1997 Date Submitted: Feb 13, 1997
Date Analyzed: Feb 13-15, 1997

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.	-----
Bromomethane	N.D.	-----
Chloroethane	N.D.	-----
Trichlorofluoromethane	N.D.	-----
1,1-Dichloroethene	N.D.	-----
Methylene Chloride	N.D.	-----
1,2-Dichloroethene (TOTAL)	N.D.	102.6
1,1-Dichloroethane	N.D.	-----
Chloroform	N.D.	105.5
1,1,1-Trichloroethane	N.D.	-----
Carbon Tetrachloride	N.D.	-----
1,2-Dichloroethane	N.D.	-----
Trichloroethene	N.D.	99.8
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.	77.1
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

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PEL

PROJ. NO. 8-90-421-ST

NAME 400 San Pablo Av. ALBANY

SAMPLERS: (Signature) N. Amal

PEL # 9702018

INV # 27550

NO.	DATE	TIME	SOIL	WATER	LOCATION	CONTAINER	ANALYSES REQUESTED (2) TPH G/BTEX	MTBE	601				
1	2/12/97		✓		STMW-1	1	✓	✓					
2			✓		STMW-2	1	✓	✓					
3			✓		STMW-3	1	✓	✓					
4			✓		STMW-4	1	✓	✓					
5			✓		STMW-5	2	✓	✓	✓				
6			✓		MW-2	1	✓	✓					
7			✓		MW-3	2	✓	✓	✓				

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Receive by: (Signature)
N. Amal	2/13/97 10:30				
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)	Date / Time	Remarks	
			2/13/97 10:30 AM		

SOIL TECH ENGINEERING

Environmental and Geotechnical Engineers

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