BANKER, MARKS & KIRK

1721 BROADWAY, SUITE 202
OAKLAND, CALIFORNIA 94612

REAL ESTATE INVESTMENTS
COMMERCIAL PROPERTY MANAGEMENT

TELEPHONE (510) 271-0600
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RECEIVED

2:23 pm, Apr 14, 2009

Alameda County
Environmental Health

April 6, 2009

Ms. Barbara Jakub
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Work Plan for Well Installation and Groundwater Assessment for 3800 San Pablo Avenue, Emeryville, California

Dear Ms. Jakub:

Enclosed for your consideration is a copy of the referenced Work Plan, dated April 2, 2009, prepared by Enviro Soil Tech Consultants, as consultants to the owners of the referenced property.

I declare, under penalty of perjury, that the information and/or recommendations contained in this report are true and correct to the best of my knowledge.

Very truly yours,

Elaine Kirk

Elaine Kirk

Enclosure
sp\04-02-09plan.xmt

File No. 4-02-742-ST

WORK PLAN FOR WELL INSTALLATION AND GROUNDWATER ASSESSMENT FOR THE PROPERTY LOCATED AT 3800 SAN PABLO AVENUE EMERYVILLE, CALIFORNIA

APRIL 2, 2009

PREPARED FOR:
MR. FILLMORE MARKS
C/O MS. ELAINE KIRK
MARKS MANAGEMENT COMPANY
1721 BROADWAY, SUITE 202
OAKLAND, CALIFORNIA 94612

BY:
ENVIRO SOIL TECH CONSULTATNS
131 TULLY ROAD
SAN JOSE, CALIFORNIA 95111

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ENVIRO SOIL TECH CONSULTANTS
Environmental & Geotechnical Consultants
131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111
Tel: (408) 297-1500 Fax: (408) 292-2116

April 2, 2009

File No. 4-02-742-ST

Mr. Filllmore Marks
c/o Ms. Elaine Kirk
Marks Management Company
1721 Broadway, Suite 202
Oakland, California 94612

SUBJECT: WORK PLAN FOR WELL INSTALLATION AND GROUNDWATER ASSESSMENT AT THE PROPERTY
Located at 3800 San Pablo Avenue, in
Emeryville, California

Dear Ms. Kirk:

Alameda County Health Care Services Agency (ACHCSA) has reviewed the Preliminary Investigation and Evaluation Report that Enviro Soil Tech Consultants (ESTC) submitted on your behalf in August 2007 and has requested further investigation to more fully delineate the extent of the soil and groundwater contamination that was identified in that report. ACHCSA has prepared a list of several tasks that the agency will require before making a determination of whether the contamination must be mitigated or can be left in place. These tasks are addressed in this work plan, which should be submitted before April 30, 2009.

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

Sincerely,

ENVIRO SOIL TECH CONSULTANTS

FRANK HAMEDI-FARD
GENERAL MANAGER

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

VICTOR B. CHERVEN, PH. D.
REGISTERED GEOLOGIST #3475

WORK PLAN
FOR WELL INSTALLATION AND GROUNDWATER ASSESSMENT
3800 SAN PABLO AVENUE
EMERYVILLE, CALIFORNIA

SITE LOCATION AND DESCRIPTION

The property is located in a commercial-industrial district in Emeryville, California. The site is bounded on the north by 39th Street, on the west by Adeline Street, on the southwest by San Pablo Avenue, and on the south by West MacArthur Boulevard and Apgar Street (Figure 1). The ground is relatively flat. A large building occupies the central part of the site, with a triangular-shaped parking lot adjacent to Adeline Street and two square parking lots east of the building.

PROPERTY OWNERSHIP

Prior to 1981, the property was occupied by a General Motors truck dealership. Marks Management Company purchased the property from GM in March 1981, and has leased it several tenants since that time. They include a billboard company (Adway, Inc.), an office supply company (JC Paper Co.), an auto dealership (H. Beck BMW), an auto detailing company (East Bay Sunroof/American Sunroof Co.), and a window installation company (MAZ Glass Co.).

PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Bay Excavators removed two 1000-gallon underground storage tanks from the site in 1981. The tanks locations were not recorded, but Marks Management suspects that they were located in the northeast parking lot (Figure 2). Two other tanks were removed by Alpha Geo Services (AGS) in May 2002. These tanks were located beneath the sidewalk adjacent to Adeline Street (Figure 2). One tank measured 550 gallons in capacity; the other tank measured 1000 gallons. All four tanks stored petroleum products.

There is no record of the condition of the soil during the 1981 tank removal, so it is uncertain whether petroleum was ever released from these tanks. When the other tanks were removed in 2002, soil beneath them appeared to be discolored and oily, and the excavation was deepened to 11 feet. Approximately 40 cubic yards of contaminated soil were removed, stockpiled on visquine, and sampled. Three additional samples were collected from the tank pit, and all five pit samples were transmitted to a state-certified analytical laboratory for hydrocarbon analysis.

When the samples were analyzed, hydrocarbons in the gasoline and diesel ranges, along with oil and grease, were detected in all five of the samples from that tank pit. Fortunately, the concentrations were low and declined downward, at least beneath the 550-gallon tank (Table 1).

Groundwater did not enter the excavation at any time during the tank removal activities, and the depth to groundwater was unknown.

ACHCSA requested further investigation to determine whether groundwater had been impacted by the petroleum release. ESTC drilled seven borings at the property in 2007 to address that concern. Hydrocarbons were detected in 5 of 7 water samples, but only 4 of the 28 soil samples were impacted. All of the hydrocarbons were within the gasoline range; no diesel fuel or oil was detected (Tables 2 and 3).

REQUESTED SCOPE OF WORK

ACHCSA has requested a work plan for additional investigation. The principal objectives of the investigation are to define the vertical and lateral extent of soil contamination and to begin mapping the plume of contaminated groundwater. An additional objective is to collect samples in the suspected vicinity of the older tanks in the northeast parking lot to determine whether they were a source of contamination.

ACHCSA has listed the following specific tasks as part of their requirements:

- Review the available literature on the local and regional geology.
- Obtain information about nearby underground utilities and wells to identify potential receptors of contaminated groundwater.
- Define the extent of soil contamination in the vicinity of both sets of underground storage tanks.
- Install monitor wells to determine the groundwater flow direction and extent of impacted groundwater.
- Assess the potential for hydrocarbon vapors to enter the building.

GEOLOGIC SETTING

As defined by the California Department of Water Resources, the site lies within the San Francisco Bay Hydrologic Region (DWR, 2003). DWR has subdivided this region into several groundwater basins and subbasins based on their geology. In most cases, the basins are separated by structural uplifts, some of which are bounded by faults. The portion of the hydrologic region that underlies the site has been named the East Bay

Plain subbasin of the Santa Clara Valley Basin. The subbasin is bounded on the east by the Berkeley Hills, on the west by San Francisco Bay, and on the north by San Pablo Bay. On the south, the subbasin is adjacent to the Niles Cone Basin, but the boundary is not clearly defined and may be somewhat arbitrary.

The subbasin is underlain by at least 1000 feet of water-bearing sediment and sedimentary rocks. These deposits have been divided into an upper zone of unconsolidated late Pleistocene deposits (Alameda Formation) and a lower zone of unconsolidated to partially consolidated early Pleistocene deposits (Santa Clara Formation). The deposits range from fine-grained bay mud to coarse-grained alluvial fan channel deposits, both vertically and laterally. Groundwater within these strata flows westward from recharge areas in the Berkeley Hills toward San Francisco Bay.

Bay mud is prevalent in the Alameda Formation in the western portions of the Plain near San Francisco Bay and was the principal lithology encountered in the borings drilled at the site in our 2007 investigation. The mud is mostly clay but contains varying amounts of silt, sand, and gravel. Color differences and slight changes in grain size revealed that the bay mud is bedded, but no distinct marker beds, such as coarse-grained channel deposits, were identified, and it was difficult to correlate beds from boring to boring. Core samples were damp to moist but not saturated in all of the borings, indicating that the mud has fairly low permeability and does not yield water to wells rapidly.

PREFERENTIAL FLOW PATHWAYS

ESTC visited the site to map out the locations of sewer mains, storm drains, and above-ground features that could impact access and/or create preferential pathways for contaminant migration. We also obtained older maps from the County Assessor's office and the County Planning Department, and information from those maps was incorporated in Figure 2.

A sewer line runs along the middle of 39th Street, and there are sewer manholes in Adeline Street that imply that a sewer line is present there as well, although the exact location is somewhat questionable. The sewer line for the building runs beneath the front parking lot to connect to the sewer manhole on the east side of Adeline. A storm drain line is also present in Adeline Street.

There are a number of above-ground access inhibitors, including telephone poles, traffic lights, and fire hydrants. Most of these border the Adeline Street property boundary, but there are telephone and PG&E lines and connections on the 39th Street property boundary.

PROPOSED SCOPE OF WORK

In light of the various tasks listed by ACHCSA as requirements, ESTC proposes a phased investigation in which successive tasks are based on the results of the previous tasks. In most cases, results of one task reveal new data that can be incorporated into the design of the next task for more efficient investigation. A general description of the various phases is presented below, followed by a more detailed methodology in the next section of this plan.

PHASE 1

We recommend starting the investigation with the soil vapor survey requested by ACHCSA. Collecting vapor data over the entire site area will enable us to identify the most highly impacted areas that need more detailed investigation. Identifying the highly impacted areas may also reveal the source(s) of the contamination. The vapor survey will utilize a grid of shallow borings to collect samples of subsurface soil vapor for laboratory analysis. The analytical results will be used to produce a contour map of vapor concentration. This survey will yield an interim report that will contain specific recommendations for the next phase of the investigation.

PHASE 2

In Phase 2, a drilling rig will be used to collect soil samples in selected locations. The exact number and location of these borings will depend on the results of the vapor survey. It is assumed that borings will be more closely spaced in areas that were identified as impacted in the soil vapor study and farther apart in areas with lower or no vapor concentrations. Primary areas of concern are the two potential hydrocarbon sources (underground storage tanks in the northeast parking lot and beneath the Adeline Street sidewalk). Because the main goal in this phase is to verify the soil vapor study and obtain “hard” data on soil concentrations, this phase will utilize a direct-push drilling rig (Geoprobe®) capable of obtaining continuous core samples. With the more closely spaced borings drilled in this phase, it may be possible to identify and correlate permeable stratigraphic units and develop a preliminary map of natural preferential pathways.

The second objective of this phase is to obtain additional groundwater data with which to better assess the extent of groundwater contamination, so the Geoprobe® borings will also be used to collect grab samples of the groundwater.

PHASE 3

The third phase of the investigation will attempt to provide a better understanding of the subsurface hydrogeology than might be attained in Phase 2. This phase will utilize cone penetrometer testing (CPT) equipment in selected locations to improve the correlation of stratigraphic units between borings and develop more detailed maps of potential groundwater flow pathways. The number and locations of CPT borings will be determined after the results of Phase 2 have been analyzed and reported to ACHCSA. Additional water samples will be collected in this phase, and may include samples from more than one depth interval in some borings to determine whether contamination is restricted to only the shallowest water-bearing zone or extends to deeper horizons.

PHASE 4

At the present time, it would be premature to recommend locations for monitoring wells. However, after the CPT borings have been drilled and sampled, it should be possible to present a fairly rigorous interpretation of the site's hydrogeology and identify suitable well locations. It is probable that at least five or six wells will be needed as long-term monitoring points. Some of these will likely be off site, because our previous investigation indicated that groundwater is impacted on the south and west margins of the site.

When Phase 4 has been completed, ESTC will compile all of the data and develop an interpretation that is compatible with all lines of evidence. The analysis will be presented in a comprehensive report (Site Conceptual Model). The report will include a discussion of possible mitigation measures and will include recommendations.

INVESTIGATION PROCEDURES

The procedures that will be used during each phase of the investigation are discussed below.

PHASE 1

- Obtain the necessary drilling permit from ACHSCA and request an underground utility clearance.

- Mobilize a direct-push drilling rig (Geoprobe®) to the site and advanced 45 soil borings on 10-foot centers (Figure 3) in the front parking lot along Adeline Street and 15 soil borings on 20-foot centers (Figure 4) in the rear parking lot. Each boring will be advanced to a depth of approximately 4 feet and a temporary steel probe will be driven approximately 2 feet into native soil. The probe will have perforations in the lower 2 feet to allow soil vapor to enter. A vacuum pump will be attached to the top end of the probe and will be left in place for approximately 15 minutes to allow vapors to accumulate. The pump will then be turned on to evacuate the probe and a sample will be collected in a Summa canister or Tedlar bag, which will be sealed and immediately analyzed with an on-site mobile laboratory.

- Analyze the samples for TPHg and BTEX.

- Prepare a report of findings, including recommendations for drilling locations for Phase 2.

PHASE 2

- Mobilize a direct-push drilling rig (Geoprobe®) to the site and drill an unspecified number of borings at locations to be determined after completion of Phase 1. The borings will be continuously sampled in clear plastic liners and the cores will be logged and described by ESTC personnel under the supervision of a registered California geologist or engineer.

- Screen the sample core for evidence of petroleum contamination and take samples at selected depths for later laboratory analysis. Place the samples into a cooled ice chest for preservation.

- Insert a temporary length of PVC casing into each boring and allow groundwater to accumulate inside the casing. Collect a water sample in a new disposable bailer and decant the sample into 40-ml glass vials. Label and place in a cooled ice chest for later transport to the laboratory.

- Analyze the soil and groundwater samples for TPHg by EPA Method 8015 and BTEX and oxygenates by EPA Method 8260B.

- Prepare a report of findings, along with recommendations for drilling locations in Phase 3.

PHASE 3

- Mobilize a CPT drilling rig to the site and drill an unspecified number of borings to a minimum depth of 40 feet at locations to be determined after completion of Phase 2.

- Examine the CPT log and identify water-bearing zones.

- Drill an adjacent boring and collect discrete water samples in clean stainless-steel bailer from each water-bearing interval identified on the CPT log. Decant the sample into 40-ml glass vials and label and place in a cooled ice chest for later transport to the laboratory.

- Analyze the samples for TPHg by EPA Method 8015 and BTEX and oxygenates by EPA Method 8260B.

- Prepare a report of findings, along with recommendations for drilling locations for Phase 4.

PHASE 4

- Mobilize a direct-push drilling rig (Geoprobe®) to the site and drill an unspecified number of borings at locations to be determined after completion of Phase 3. The borings will be continuously sampled in clear plastic liners and the cores will be logged and described by ESTC personnel under the supervision of a registered California geologist or engineer. The depth of most borings will probably be no more than 10 feet below the static water level at the time of drilling, unless data from Phase 3 indicate that deeper water-bearing zones are impacted.

- Screen the sample core for evidence of petroleum contamination and take samples at selected depths for later laboratory analysis. Place the samples into a cooled ice chest for preservation.

- Re-enter each boring with hollow-stem augers and ream out the hole. Convert the borings to monitor wells according to the diagram in Figure 5.

- Place drill cuttings in 55-gallon drums for later disposal.

- Analyze soil samples for TPHg, BTEX, and gasoline oxygenates according to the procedures listed in Phase 2.

- Develop each well by purging several well volumes of water and sediment from the casing.

- Survey the elevation of the top of the casing for all wells and measure the static water depth. Bail or pump three well volumes from each well, and then collect a sample in a clean bailer. Decant the sample into 40-ml glass vials.

- Analyze water samples for TPHg, BTEX, and oxygenates according to the procedures listed in Phase 2.

- Prepare a comprehensive Site Conceptual Model report, including recommendations regarding any remedial pilot studies that should be considered.

File No. 4-02-742-ST
April 2, 2009

A P P E N D I X "A"

TABLES

ENVIRO SOIL TECH CONSULTANTS

TABLE 1
SUMMARY OF SOIL SAMPLES ANALYTICAL RESULTS FROM REMOVED UST

Date	Sample No.	Depth feet	TPHg mg/Kg	TPHd mg/Kg	TOG mg/Kg	B µg/Kg	T µg/Kg	E µg/Kg	X µg/Kg	MTBE µg/Kg	EPA 8270 µg/Kg	PNA µg/Kg	Creosote µg/Kg
5/02/02	T1-7-1	7	440	280**L**	304**LY**	ND <130	ND <130	ND <130	ND <130	ND <130	ND <330	ND <12	ND <3300
	T1-10-2	10	26	97**L**	106.9**LY**	ND <23	ND <23	ND <23	ND <23	ND <23	ND <340	ND <12	ND <3400
	T2-6.5-1	6.5	46	29**L**	29**L**	ND <25	ND <25	57	ND <25	ND <25	ND <330	ND <12	ND <3300
	T2-8.5-2	8.5	370	24**L**	24**L**	ND <130	ND <130	3200	480	ND <130	ND <330	ND <12	ND <3300
	T2-11-3	11	59	18**L**	18**L**	ND <13	ND <13	69	ND <13	ND <13	ND <330	ND <12	ND <3300

TPHg – Total Petroleum Hydrocarbons as gasoline
BTEX – Benzene, Toluene, Ethylbenzene, Total Xylenes
TOG – Total Oil & Grease
EPA 8270 – Semi-Volatile Organic Compounds
mg/Kg – Milligram per Kilogram
ND – Not Detected (Below Laboratory Detection Limit)
Y – Sample exhibits fuel pattern which does not resemble standard

TPHd – Total Petroleum Hydrocarbons as diesel
MTBE – Methyl Tertiary Butyl Ether
EPA 8260 – Fuel Hydrocarbons Oxygenated Compounds
PNA (EPA 8280) – Dioxins & Furans
µg/Kg – Microgram per Kilogram
L – Lighter hydrocarbons contributed to the quantitation

TABLE 1 CONT'D
SUMMARY OF SOIL SAMPLES ANALYTICAL RESULTS FROM REMOVED UST

EPA 8260 and CAM Metals Results in Microgram per Kilogram (μg/Kg)

Date	Sample No.	EPA 8260		CAM Metals	
5/02/02	T1-7-1	Isopropylbenzene	260	Cadmium	0.85
		Propylbenzene	910	Chromium	26
		n-Butylbenzene	490	Nickel	37
				Lead	4.7
				Zinc	35
	T1-10-2	Isopropylbenzene	37	Cadmium	0.96
		Propylbenzene	140	Chromium	29
		n-Butylbenzene	67	Nickel	38
				Lead	7.4
				Zinc	47
	T2-6.5-1	Ethylbenzene	57	Cadmium	0.95
		Isopropylbenzene	130	Chromium	28
		Propylbenzene	640	Nickel	37
		sec-Butylbenzene	150	Lead	4.2
		para-Isopropyl Toluene	130	Zinc	44
		n-Butylbenzene	670		
	T2-8.5-2	Ethylbenzene	3200	Cadmium	0.86
		m,p-Xylenes	480	Chromium	25
		Isopropylbenzene	650	Nickel	36
		Propylbenzene	2800	Lead	5.3
		1,3,5-Trimethylbenzene	370	Zinc	34
		sec-Butylbenzene	380		
		para-Isopropyl Toluene	510		
		n-Butylbenzene	1900		
		Naphthalene	250		
	T2-11-3	Acetone	59	Cadmium	1
		2-Butanone	36	Chromium	29
		Ethylbenzene	69	Nickel	54
		Propylbenzene	39	Lead	5.7
		n-Butylbenzene	19	Zinc	42

TABLE 2
SUMMARY OF SOIL SAMPLES ANALYTICAL RESULTS FROM BOREHOLES

Date	Sample No.	Depth Ft.	TPHg mg/Kg	TPHd mg/Kg	B µg/Kg	T µg/Kg	E µg/Kg	X µg/Kg	MTBE µg/kg	Ethanol µg/Kg	Other VOCs (EPA 8260B) µg/Kg	Total Pb mg/Kg
5/21/07	B-1-5	5	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	5.3
	B-1-10	10	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	5.6
	B-1-15	15	ND<0.5	ND<5**a**	30	ND<5	22	ND<10	ND<5	ND<500	n-Propylbenzene 10 Naphthalene 6.2	6.2
	B-1-20	20	7.7	ND<5**a**	85	ND<5	26	15	ND<5	ND<500	1,2,4-Trimethylbenzene 19 1,3,5-Trimethylbenzene 7.1 n-Propylbenzene 5.5 Naphthalene 14	6.3
5/22/07	B-2-5	5	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	6.7
	B-2-10	10	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	6
	B-2-15	15	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	8.4
	B-2-20	20	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	5.6
	B-3-5	5	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	4.4
	B-3-10	10	ND<0.5	ND<4.9	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	7.5
	B-3-15	15	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	7.4
	B-3-20	20	7.5	ND<5**b**	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	Acetone 110	4.9
	B-4-5	5	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	4.2
	B-4-10	10	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	5.6
	B-4-15	15	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	4.5
	B-4-20	20	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	4.7
5/24/07	B-5-5	5	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	3.5
	B-5-10	10	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	6.2
	B-5-15	15	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	4.5
	B-5-20	20	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	5.6
	B-6-5	5	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	4.3
	B-6-10	10	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	7.1
	B-6-15	15	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	n-Propylbenzene 8.6	8.2
	B-6-20	20	1.1	ND<5	7.1	ND<5	68	ND<10	ND<5	ND<500	1,2,4-Trimethylbenzene 8.2 1,3,5-Trimethylbenzene 6 Isopropylbenzene 8.3 n-Propylbenzene 13 Naphthalene 5.5	6

TABLE 2 CONT'D
SUMMARY OF SOIL SAMPLES ANALYTICAL RESULTS FROM BOREHOLES

Date	Sample No.	Depth Ft.	TPHg mg/Kg	TPHd mg/Kg	B µg/Kg	T µg/Kg	E µg/Kg	X µg/Kg	MTBE µg/kg	Ethanol µg/Kg	Other VOCs (EPA 82060B) µg/Kg	Total Pb mg/Kg
5/24/07	B-7-5	5	ND<0.5	ND<5**c**	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	3.9
	B-7-10	10	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	5.9
	B-7-15	15	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	5.7
	B-7-20	20	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<5	ND<500	None Detected<5	6.2

TPHg – Total Petroleum Hydrocarbon as gasoline
BTEX – Benzene, Toluene, Ethylbenzene, Total Xylenes
VOCs – Volatile Organic Compounds
mg/Kg – Milligram per Kilogram
ND – Not Detected (below laboratory detection limit)
a Hydrocarbon (C9-C32)
c Motor oil

TPHd – Total Petroleum Hydrocarbon as diesel
MTBE – Methyl Tertiary Butyl Ether
Total Pb – Total Lead
µg/Kg – Microgram per Kilogram

b Hydrocarbons (C9-C14). No diesel pattern present

TABLE 3
SUMMARY OF WATER SAMPLES ANALYTICAL RESULTS FROM BOREHOLES

Date	Sample No.	TPHg µg/L	TPHd µg/L	B µg/L	T µg/L	E µg/L	X µg/L	MTBE µg/L	Ethanol µg/L	Other VOCs (EPA 8260B) µg/L	Total Pb mg/L
5/21/07	B-1-W	54000	NA	6700	120	3000	2300	ND<100	ND<20000	1,2,4-Trimethylbenzene 2800 1,3,5-Trimethylbenzene 910 Isopropylbenzene 110	5.4
5/22/07	B-2-W	ND<50	ND<96**a**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<200	None Detected<0.5	0.014
	B-3-W	4500	ND<54**b**	7.5	ND<2.5	2.7	ND<2.5	ND<5	ND<1000	1,2-Dichloroethane 2.6 Isopropylbenzene 55 n-Butylbenzene 31 n-Propylbenzene 71	0.013
	B-4-W	ND<100**a**	ND<120**a**	ND<0.5	ND<0.5	0.55	ND<0.5	ND<1	ND<200	None Detected<5	0.11
5/24/07	B-5-W	780000	ND<490**c**	240	ND<50	1400	640	ND<100	ND<20000	1,2,4-Trimethylbenzene 1100 Isopropylbenzene 150 n-Propylbenzene 610	0.12
	B-6-W	44000	ND<490**c**	3000	120	2200	1200	ND<100	ND<20000	1,2,4-Trimethylbenzene 2200 1,3,5-Trimethylbenzene 720 Isopropylbenzene 110 n-Propylbenzene 520	0.0079
	B-7-W	ND<50	ND<56	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1	ND<200	1,2-Dichloroethane 3.2	ND<0.005

TPHg – Total Petroleum Hydrocarbon as gasoline
BTEX – Benzene, Toluene, Ethylbenzene, Total Xylenes
VOCs – Volatile Organic Compounds
mg/L – Milligram per Liter
ND – Not Detected (below laboratory detection limit)
TPHd – Total Petroleum Hydrocarbon as diesel
MTBE – Methyl Tertiary Butyl Ether
Total Pb – Total Lead
µg/L – Microgram per Liter
NA – Not Analyzed
a The reporting limit is raised due to limited sample volume
b Higher boiling gasoline compounds (C9-C24). No diesel pattern present
c Hydrocarbon (C9-C26). No diesel pattern present

File No. 4-02-742-ST
April 2, 2009

A P P E N D I X "B"

FIGURES

ENVIRO SOIL TECH CONSULTANTS

File No. 4-02-742-ST

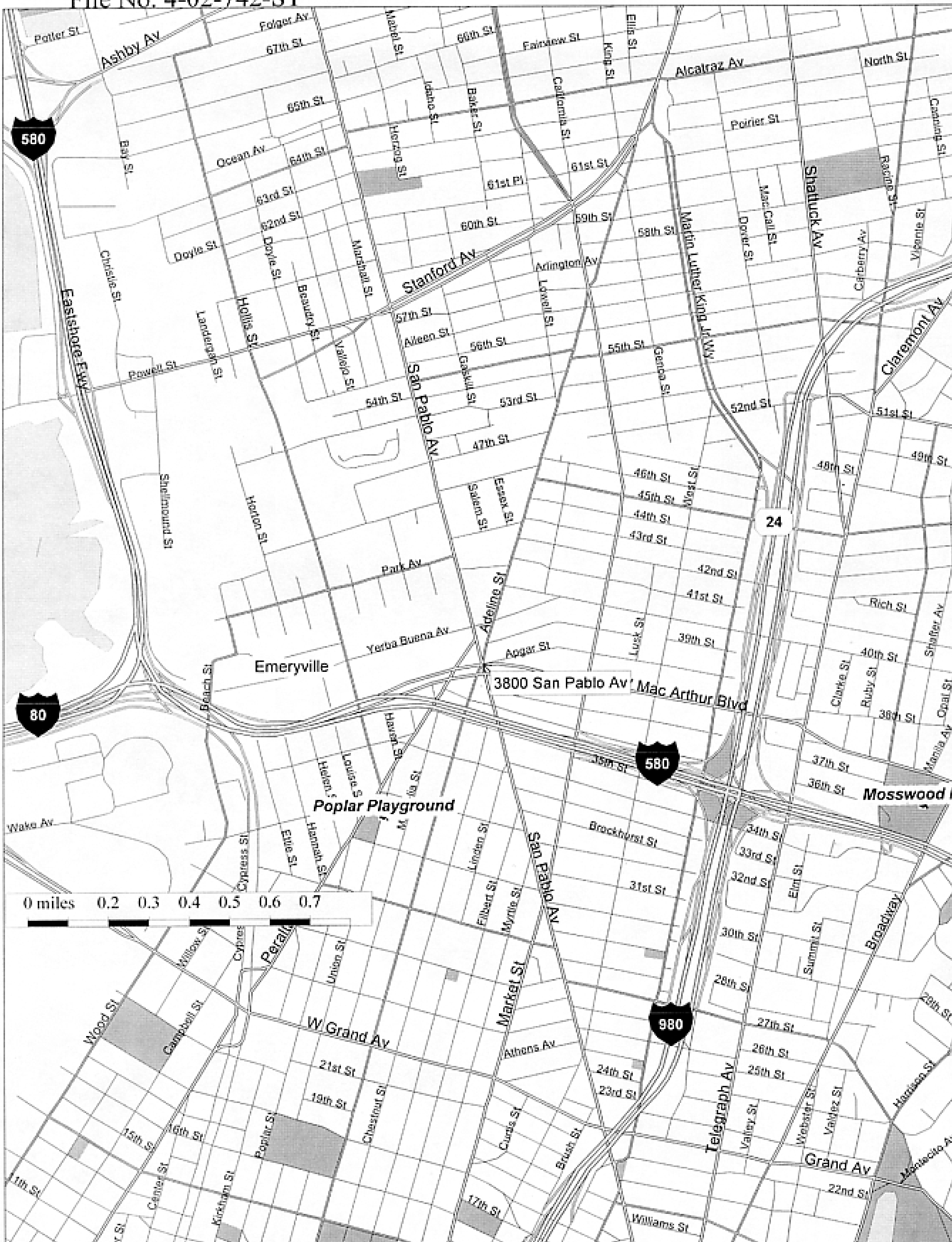

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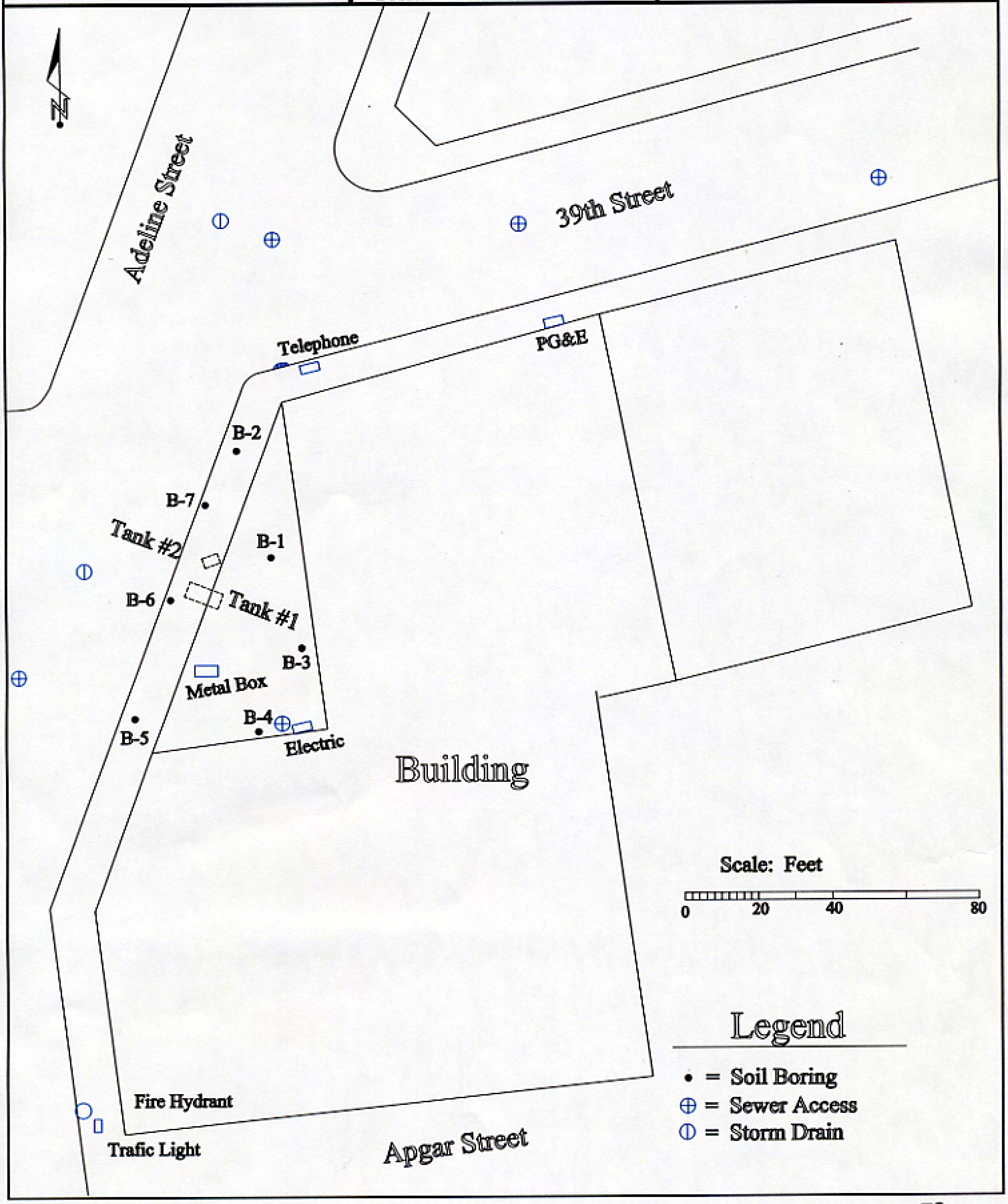
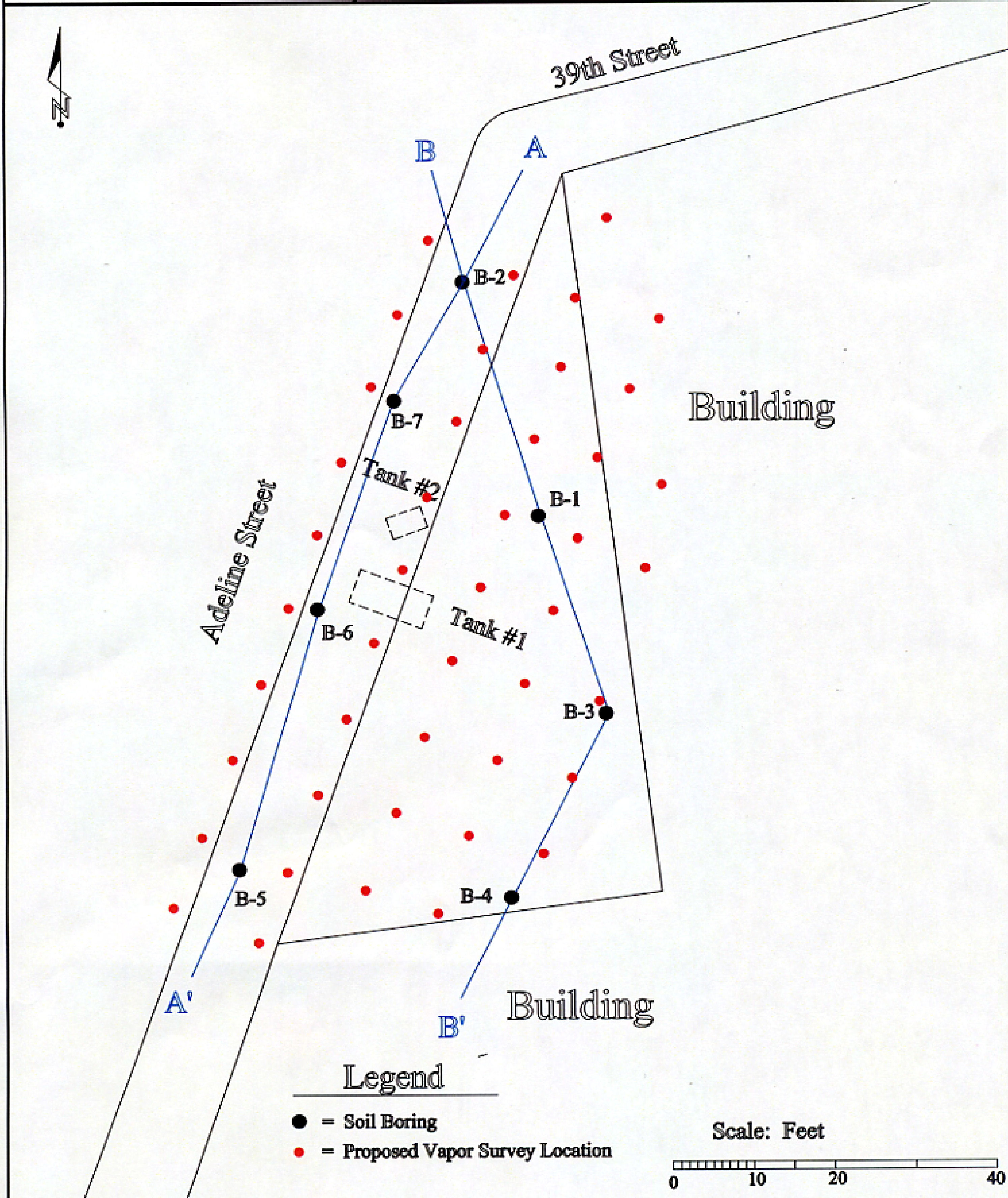
Figure 1

F1

Enviro Soil Tech Consultants 131 Tully Road San Jose, CA 95112	PROJECT 3800 San Pablo Ave. Emeryville, California PROJECT # 4-02-742-ST DATE: 3/18/2009	Figure 2 Site Map

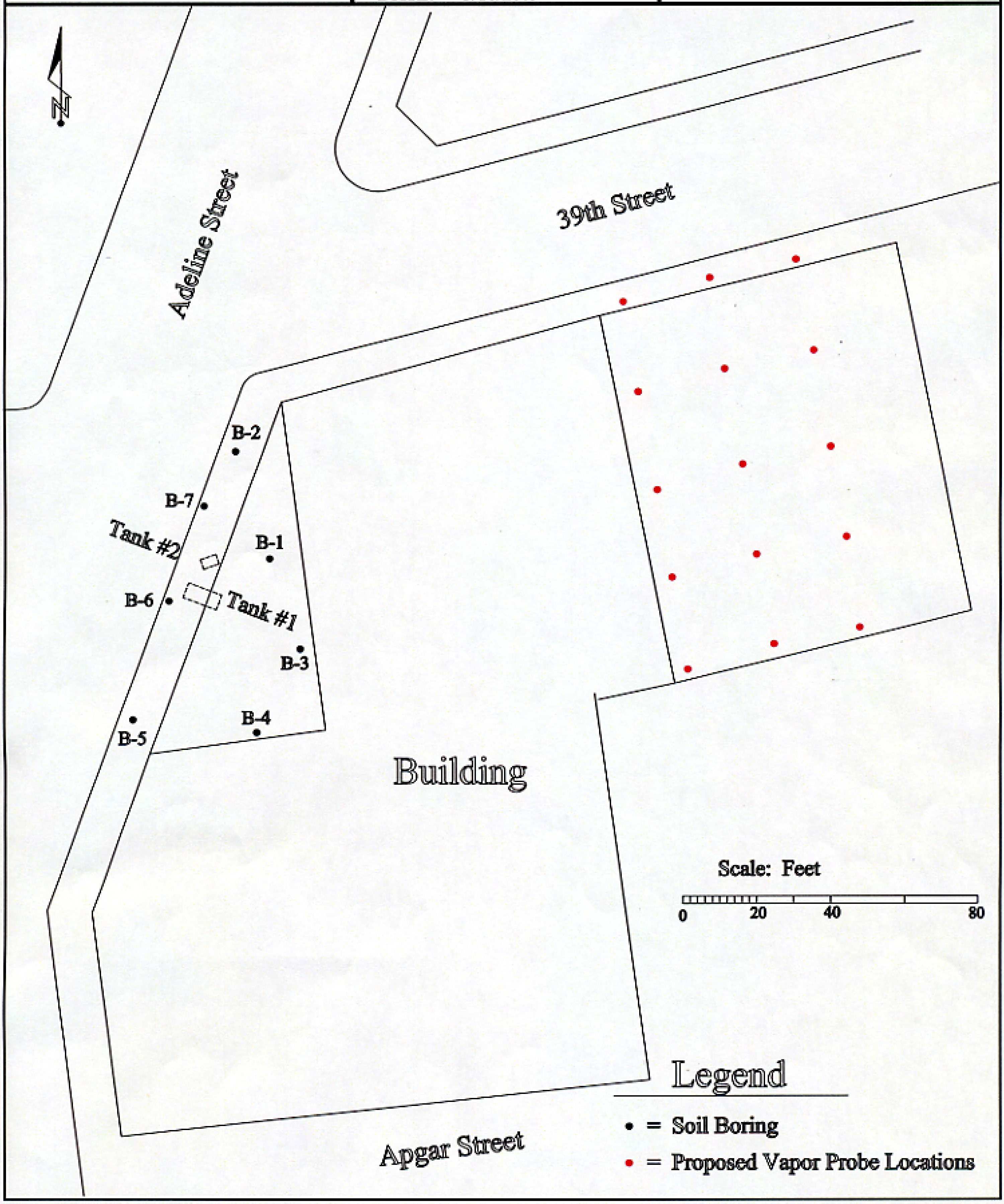


Enviro Soil Tech Consultants 131 Tully Road San Jose, CA 95112	PROJECT 3800 San Pablo Ave. Emeryville, California PROJECT # 4-02-742-ST DATE: 3/31/2009	Figure 3 Proposed Soil Vapor Survey

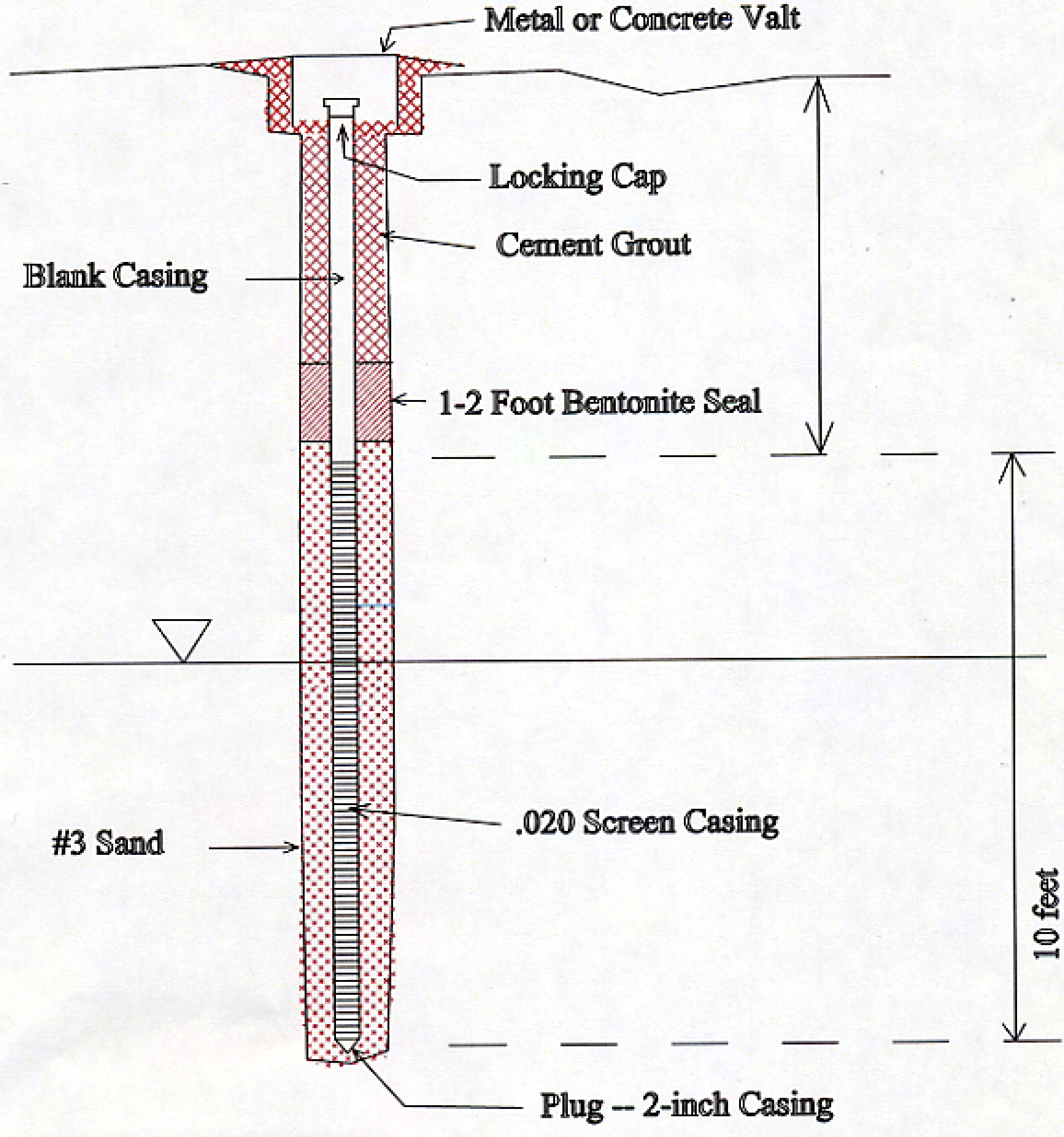


F3

Enviro Soil Tech Consultants 131 Tully Road San Jose, CA 95112	PROJECT 3800 San Pablo Ave. Emeryville, California PROJECT # 4-02-742-ST DATE: 3/18/2009	Figure 4 Proposed Soil Vapor Survey - N.E. Parking Lot



Enviro Soil Tech Consultants 131 Tully Road San Jose, CA 95112	PROJECT 3800 San Pablo Ave. Emeryville, California PROJECT # 4-02-742-ST DATE: 3/18/2009	Figure 5 Monitor Well Contruction



File No. 4-02-742-ST
April 2, 2009

A P P E N D I X "C"

STANDARD OPERATION PROCEDURES

ENVIRO SOIL TECH CONSULTANTS

DRILLING AND SOIL SAMPLING PROCEDURE

A direct push technology (Geoprobe) tool will be used in drilling the soil borings to the desired depths.

Prior to drilling, all drilling equipment will be thoroughly steam-cleaned to minimize the possibility of cross-contamination and/or vertical migration of possible contaminants.

In addition, sampling equipment will be washed between samples with Tri-sodium Phosphate (TSP) solution or an equivalent EPA-approved detergent followed by a rinse in distilled water.

During the drilling operation, undisturbed soil samples will be taken from the required depth by forcing a 2-inch sampler lined with polyethylene or brass tubes driven into undisturbed sediments at the bottom of the borehole by means of hydraulic push technologies.

The selected sampling tubes will be immediately trimmed, the ends covered tightly with aluminum foil and plastic caps, sealed with tape labeled, placed in a plastic bag and stored in a cold ice chest in order to minimize the escape of any volatile present in the samples. Soil samples will be sent to a state-certified hazardous waste laboratory for analysis accompanied by a chain-of-custody record.

Soil samples collected at each sampling interval will be inspected for any possible contamination (odor or peculiar colors). Soil vapor concentrations will be measured in the field by using a Photoionization Detector (PID), Photovac Tip Air Analyzer. The soil sample will be sealed in a Zip-Loc plastic bag and placed in the sun to enhance volatilization of the hydrocarbons from the sample. The purpose of this field analysis is to qualitatively determine the presence or absence of hydrocarbons and to establish which soil samples will be analyzed at the laboratory. The data will be recorded on the drilling log at the depth corresponding to the sampling point.

Other soil samples may be collected to document the stratigraphy and estimate relative permeability of the subsurface materials.

Soil tailings that are obtained during drilling will be stored at the site, pending the analytical test results to determine proper disposal.

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Environmental & Geotechnical Consultants
131 TULLY ROAD, SAN JOSE, CALIFORNIA 95111
Tel. (408) 297-1500 Fax: (408) 292-2116

File No.____________________

Date____________________

By____________________

Job____

Site Description________________________________ (continued on reverse side)

Type of Drill Rig________________________________ Hole Diameter________________

(NOTE: WATER LEVEL, TIME, DATE AT END OF LOG, CAVING, ETC…)

Sample Quality	Blows/6-inch	Sample Loc. No.	Depth		Soil Classification	Penetrometer
			1			
			2			
			3			
			4			
			5			
			6			
			7			
			8			
			9			
			0			
			1			
			2			
			3			
			4			
			5			
			6			
			7			
			8			
			9			
			0			
			1			
			2			

MONITORING WELL INSTALLATION

The boreholes for the monitoring wells were hand augered with a diameter of at least two inches larger than the casing outside diameter (O.D.).

The monitoring wells will be cased with threaded, factory-perforated and blank, schedule 40 PVC. The perforated interval consisted of slotted casing, generally 0.010 to 0.040 inch wide by 1.5-inch long slot size, with 42 slots per foot (slots which match formation grain size as determined by field grain-size distribution analysis). A PVC cap will be fastened to the bottom of the casing (no solvents, adhesive, or cements were used), the well casing will be thoroughly washed and steam-cleaned.

After setting the casing inside the borehole, kiln-dried sand or gravel-filter material will be poured into the annular space to fill from the bottom of the boring to two feet above the perforated interval. A one to two feet thick bentonite plug will be placed above this filter material to prevent grout from infiltrating down into the filter material. Approximately one to two gallons of distilled water will be added to hydrate the bentonite pellets. Then the well will be sealed from the top of the bentonite seal to the surface with concrete or neat cement containing about 5% bentonite (see Well Construction Detail).

To protect the well from vandalism and surface water contamination, Christy box with a special type of Allen screw will be installed around the wellhead, (for wells in parking lots, driveways and building areas). Steel stove pipes with padlocks will be usually set over wellheads in landscaped areas.

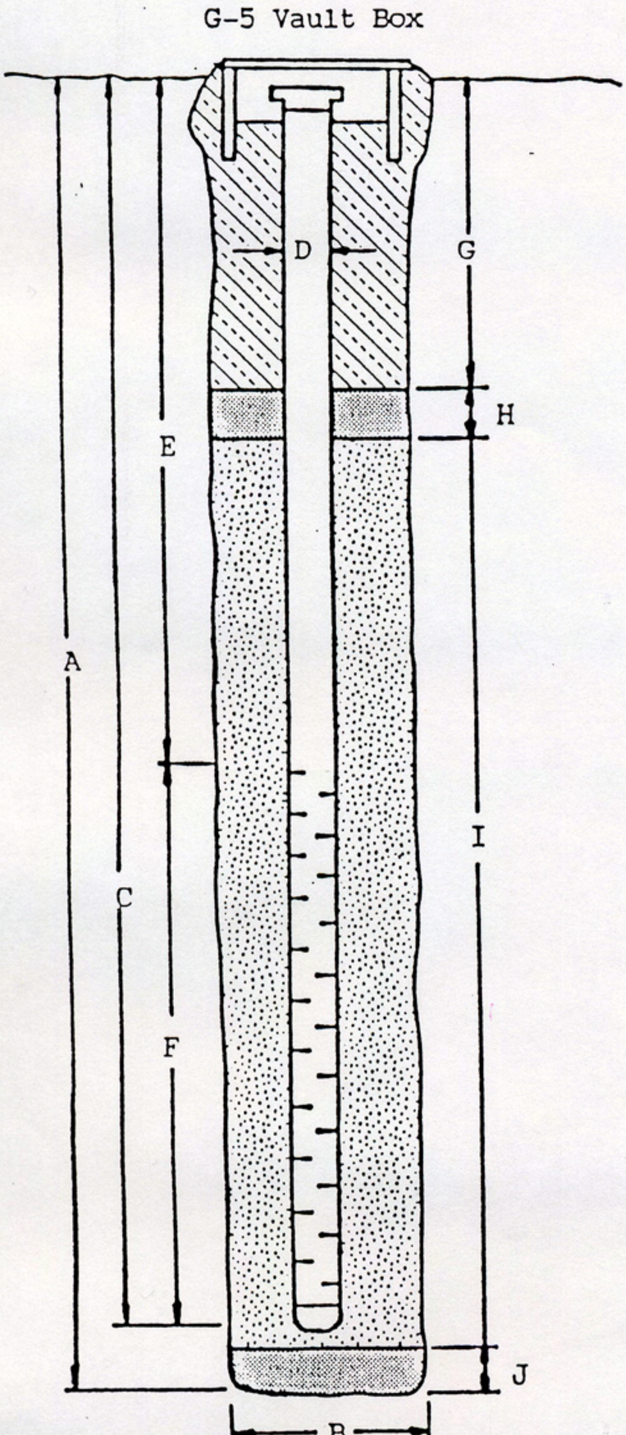
In general, groundwater monitoring wells extend to the base of the upper aquifer, as defined by the consistent (less than 5 feet thick) clay layer below the upper aquifer, or at least 10 to 15 feet below the top of the upper aquifer, whichever is shallower. The wells do not extend through the laterally extensive clay layer below the upper aquifer. The wells are terminated one to two feet into such a clay layer.

WELL DETAILS

PROJECT NAME: ______________________ BORING/WELL NO. ________

PROJECT NUMBER: ______________________ CASING ELEVATION: ________

WELL PERMIT NO.: ______________________ SURFACE ELEVATION: ________



A. Total Depth: ______________

B. Boring Diameter: ______________

Drilling method: ______________

C. Casing Length: ______________

Material: ______________

D. Casing Diameter: ______________

E. Depth to Perforations: ______________

F. Perforated Length: ______________

Perforated Interval: ______________

Perforation Type: ______________

Perforation Size: ______________

G. Surface Seal: ______________

Seal Material: ______________

H. Seal: ______________

Seal Material: ______________

I. Gravel Pack: ______________

Pack Material: ______________

Size: ______________

J. Bottom Seal: ______________

Seal Material: ______________

WELL DEVELOPMENT

For all newly installed groundwater monitoring wells, the well casing, filter pack and adjacent formations were cleared of disturbed sediment and water.

Well development techniques including pumping, bailing, surging, swabbing, jetting, flushing or air lifting by using a stainless steel or Teflon bailer, a submersible stainless steel pump, or air lift pump. The well development will continued until the discharged water appeared to be relatively free of all turbidity.

All water and sediment generated by well development will be collected in 55-gallon steel drums (Department of Transportation approved), closed head (17-H) for temporarily storage, and then will be disposed of properly, depending on analytical results.

To assure that cross-contamination did not occur between wells, all well development tools will be steam-cleaned or thoroughly washed in a Trisodium Phosphate (TSP) solution followed by a rinse in distilled water before each well development.

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MONITORING WELL SURVEY SHEET

NAME: ____________________ **DATE:** ____________________

FACILITY NAME AND ADDRESS: ______________________________

____

PROJECT NO.: ______________________________

FIELD ACTIVITIES

WELL NUMBER	ROD READING	RIM ELEVATION	WATER ELEVATION
______	______	______	______
______	______	______	______
______	______	______	______
______	______	______	______
______	______	______	______
______	______	______	______
______	______	______	______
______	______	______	______
______	______	______	______
______	______	______	______
______	______	______	______

WARNING: HAVE YOU SURVEYED ALL WELLS? LOCATED ALL WELLS?

HAVE YOU CHECKED FOR & SURVEYED EXISTING MONITORING WELLS ON ADJACENT PROPERTIES OR PROPERTIES ACROSS THE STREET?

DO WE HAVE ACCURATE SKETCHES AT 1"=30' (AND 1"=100' IF NECESSARY)? IF NOT, MAKE THEM.

GROUNDWATER SAMPLING

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

Prior to purging, the well "Water Sampling Field Survey Forms" will be filled out (depth to water and total depth of water column will be measured and recorded). The well then will be 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 will be collected when the water level in the well recovered to 80% of its static level.

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

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Tel: (408) 297-1500 **Fax: (408) 292-2116**

FILE NO.:________________________ **WELL NO.:**________________________

DATE:__________________________ **SAMPLER:**________________________

DEPTH TO WELL:________________ **1 WELL VOLUME:**________________

DEPTH TO WATER:________________ **5 WELL VOLUME:**________________

HEIGHT OF WATER COLUMN:______ **ACTUAL PURGED VOLUME:**________

CASING DIAMETER: ___________2" ___________4"

CALCULATIONS:

2" x 0.1632____

4" x 0.653____

PURGE METHOD:______**BAILER** ______**DISPLACEMENT PUMP** ______**OTHER**

SAMPLE METHOD:_____**BAILER** ______**OTHER**

SHEEN:______**NO** ______**YES, DESCRIBE:**____

ODOR:_______**NO** ______**YES, DESCRIBE:**____

FIELD MEASUREMENTS

TIME	VOLUME	Ph	TEMP.	E.C.

VOLUME OF WATER IN CASING OR HOLE

Diameter of Casing or Hole (inch)	Gallon per Foot of Depth	Cubic Feet per Foot of Depth	Liter per Meter of Depth	Cubic Meter per Meter of Depth
1	0.041	0.0055	0.509	0.509×10^{-3}
1½	0.092	0.0123	1.142	1.142×10^{-3}
2	0.163	0.0218	2.024	2.024×10^{-3}
2½	0.255	0.0341	3.167	3.167×10^{-3}
3	0.367	0.0491	4.558	4.558×10^{-3}
3½	0.500	0.0668	6.209	6.209×10^{-3}
4	0.653	0.0873	8.110	8.113×10^{-3}
4½	0.826	0.1104	10.26	10.26×10^{-3}
5	1.020	0.1364	12.67	12.67×10^{-3}
5½	1.234	0.1650	15.33	15.33×10^{-3}
6	1.469	0.1963	18.24	18.24×10^{-3}
7	2.000	0.2673	24.84	24.84×10^{-3}
8	2.611	0.3491	32.43	32.43×10^{-3}
9	3.305	0.4418	41.04	41.04×10^{-3}
10	4.080	0.5454	50.67	50.67×10^{-3}
11	4.937	0.6600	61.31	61.31×10^{-3}
12	5.875	0.7854	72.96	72.96×10^{-3}
14	8.000	1.069	99.35	99.35×10^{-3}
16	10.44	1.396	129.65	129.65×10^{-3}
18	13.22	1.767	164.18	164.18×10^{-3}
20	16.32	2.182	202.68	202.68×10^{-3}
22	19.75	2.640	245.28	245.28×10^{-3}
24	23.50	3.142	291.85	291.85×10^{-3}
26	27.58	3.687	342.52	342.52×10^{-3}
28	32.00	4.276	397.41	397.41×10^{-3}
30	36.72	4.909	456.02	456.02×10^{-3}
32	41.78	5.585	518.87	518.87×10^{-3}
34	47.16	6.305	585.68	585.68×10^{-3}
36	52.88	7.069	656.72	656.72×10^{-3}

CHAIN OF CUSTODY RECORD

PROJ. NO.	NAME

SAMPLERS: *(Signature)*

NO.	DATE	TIME	SOIL	WATER	LOCATION	CONTAINER	ANALYSES REQUESTED (2)						REMARKS

Relinquished by: *(Signature)*	Date / Time	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)*	Date / Time	Remarks	

SOP12

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SAMPLE MANAGEMENT

Sample Type: Soil, Oil Solvents, Solids, Highly Contaminated Liquid (c)

General Composition	***Sample Volume***	***Sample Container***	***Preservative***	***Holding Time*** **(recommended/regulatory)**
Weak Acids and Bases		plastic or glass		
Photosensitive materials		amber glass		
Volatile Organic		40 ml glass vial with TFE lined septum		
Non-Volatile Organic		glass with TFE lined cap		
Measurement – General Chemical Categories, Inorganic				
Inorganic, general		plastic or glass		
Metals, total		plastic or glass		
Measurement – General Chemical Categories, Organic				
Acid extractables		glass with TFE lined cap		
Base/neutral extractables		glass with TEF lined cap		
Measurement Specified Chemicals – Inorganic				
Hydrofluoric Acid		plastic		
Phosphoric Acid		plastic		

SAMPLE MANAGEMENT

Sample Type: Waste

General Composition	***Sample Volume***	***Sample Container***	***Preservative***	***Holding Time*** **(recommended/regulatory)**
Measurement – General Chemical Categories, Inorganic				
Ammonia			add 1 ml conc H_3PO_4	24 hours
Arsenic			add 6 ml conc HNO_3/L	6 months
Chlorine			cool 4°C	24 hours
Chromium VI			add 6 ml conc H_2SO_4/L	24 hours
Cyanide, total			add 2.5 ml of 50% NaOH/L, cool 4°C	24 hours
Fluoride			cool 4°C	7 days
Mercury, total			add 5 ml conc HNO_3L	28 days
Mercury, dissolved			filter, add 5 ml conc HNO_3/L	38 days
Selenius			add 5 ml conc HNO_3/L	
Sulfide			add 2 ml conc HCl/l	
Zinc			add 2 ml conc HC1/1	

Sample Type: Soil, Oil, Solvents, Solids, Highly Contaminated Liquids (c)

Strong acids, pH<2		glass		
Strong bases, pH>12.5		plastic		

SAMPLE MANAGEMENT

Sample Type: Water and Wastewater

General Composition	***Sample Volume***	***Sample Container***	***Preservative***	***Holding Time*** **(recommended/regulatory)**
Sulfate	50 ml	plastic or glass	cool 4°C	7 days/28 days
Sulfide	500 ml	plastic or glass	cool 4°C, add 4 drops 2N Zn acetate/100 ml	24 hours/28 days
Sulfite	50 ml	plastic or glass lined septum	determine on site	No Holding
Measurement – Specific Chemicals Organic				
NTA	50 ml	plastic or glass waterline & center	cool 4°C	24 hours
Measurement – Physical Properties				
Acidity			cool 4°C	24 hours
Alkalinity			cool 4°C	24 hours
pH			determine on site cool 4°C	6 hours
Measurement – General Chemical Categories, Inorganic				
Metals, dissolved			filter on site, add 5 ml conc HNO_3/L	6 months
Metals, total			add 5 ml conc HNO_3/L	6 months
Measurement – General Chemical Categories, Organic				
Phenolics			add H_2PO_4 to pH 4 & 1 g $CuSO_4$/L, cool 4°C	24 hours

SAMPLE MANAGEMENT

Sample Type: Water and Wastewater

General Composition	***Sample Volume***	***Sample Container***	***Preservative***	***Holding Time*** **(recommended/regulatory)**
Measurement – Specific Chemicals, Inorganic				
Ammonium	50 ml	plastic or glass	cool 4°C, add H_2SO_4 To pH<2	24 hours/28 days
Boron	100 ml	plastic	None Required	28 days/28 days
Chlorine	200 ml	plastic or glass	determine on site	No Holding
Chromium VI	300 ml	plastic or glass rinse with 1:1 HNO_3	cool 4°C	24 hours/28 days
Cyanide, total	500 ml	plastic or glass add NaOH to pH>12	cool 4°C	24 hours/14 days
Cyanide, amenable to chlorination	50 ml	plastic or glass	add 100 mg NaS_2O_3	
Fluoride	300 ml	plastic	None Required	7 days/28 days
Iodide	100 ml	plastic or glass	cool 4°C	24 hours/-
Iodine	500 ml	plastic or glass	determine on site	½ hour/-
Mercury, total	500 ml	plastic or glass rinsed with 1:1 HNO_3	cool 4°C add HNO_3 to pH<2	28 days/28 days
Mercury, dissolved	100 ml	plastic or glass	filter on site add HNO_3 to pH<1	glass: 38 days hard plastic: 13 days
Nitrate	100 ml	plastic or glass	cool 4°C add H_2SO_4	24 hours/48 hours
Nitrate & nitrate	200 ml	plastic or glass	cool 4°C add H_2SO_4	24 hours//28 days
Nitrate	100	plastic or glass	cool 4°C or freeze	

SAMPLE MANAGEMENT

Sample Type: Water and Wastewater

General Composition	***Sample Volume***	***Sample Container***	***Preservative***	***Holding Time*** **(recommended/regulatory)**
Measurement – General Chemical, Organic				
Acid extractables		2 liter glass with TFE lined cap		
Base//neutral extractable		2 liter glass with TFE lined cap		
MBA's	250 ml	plastic or glass	cool 4°C	24 hours
Oil and Grease	1000 ml	glass, wide mouthed, calibrated	cool 4°C H_2SO_4 to pH<2	24 hours/28 days
Organic		glass rinsed with organic solvents, TFE cap		
Phenolics	500 ml	glass		24 hours/28 days
Purgeables by purge	50 ml	glass with TFE cap		

SAMPLE MANAGEMENT

Sample Type: Water and Wastewater (a, b, c)

General Composition	***Sample Volume***	***Sample Container***	***Preservative***	***Holding Time*** **(recommended/regulatory)**
Non-Volatile Organic		2 liter glass with TFE with lined cap		
Photosensitive materials		1 liter amber glass		
Volatile Organic		40 ml glass vial with TFE lined cap (collect in duplicate)		
Volatile	100 ml		cool 4°C	7 days
Measurement – Physical Properties				
Acidity	100 ml	plastic or borosilioate glass	cool 4°C	24 hours/14 days
Alkalinity	200 ml	plastic or glass	cool 4°C	24 hours/14 days
pH	25 ml	plastic or glass	determine on site	2 hours/2 hours
Temperature	1000 ml	plastic or glass	determine on site	No Holding
Measurement – General Chemical Categories, Inorganic				
Metals, dissolved	200 ml	plastic(g) or glass	filter on site (f)	6 months(e)
Metals, total	100 ml	plastic(g) or glass rinsed with 1:1 HNO_3	HNO_3 to pH<2 (g)	6 months/6 months (e)

File No. 4-02-742-ST
April 2, 2009

A P P E N D I X "D"

ATTACHMENT A

ENVIRO SOIL TECH CONSULTANTS

ATTACHMENT A
STANDARD FIELD PROCEDURES
FOR GEOPROBE@ SAMPLING

DECRIPTION:

This document describes ESTC's standard field methods for Geoprobe soil and groundwater sampling. These procedures are designed to comply with Federal, State and Local regulatory guidelines. Specific field procedures are summarized below:

OBJECTIVE:

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor odor or staining, estimate groundwater depth and quality and to submit samples for chemical analysis.

SOIL CLASSIFICATION/LOGGING:

All soil samples are classified according to the Unified Soil Classification System by a trained geologist or engineer working under the supervision of a California Registered Geologist (RG) or Civil Engineer (CE). The following soil properties are noted for each soil sample:

- Principal and secondary grain size category (i.e. sand silt, clay or gravel).
- Approximate percentage of each grain size category.
- Color.
- Approximate water or separate-phase hydrocarbon saturation percentage.

- Observed odor and/or discoloration.
- Other significant observation (i.e. concentration, presence of marked horizon, mineralogy) and estimated permeability.

SOIL SAMPLING:

Geoprobe soil samples are collected from borings driven using hydraulic push technologies. A minimum of one and one-half feet of the soil column is collected for every five feet of drilled depth. Additional soil samples can be collected near the water table and at lithologic changes. Samples are collected using samplers lined with polyethylene or brass tubes driven into undisturbed sediments at the bottom of the borehole. The ground surface immediately adjacent to the boring is used as a datum to measure sample depth. The horizontal location of each boring is measured in the field relative to a permanent on-site reference using a measuring wheel or tape measure.

Drilling and sampling equipment is steam-cleaned or washed prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

SAMPLE STORAGE, HANDLING AND TRANSPORT:

Sampling tubes chosen for analysis are trimmed off excess soil and capped with aluminum foil, Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4° C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

FIELD SCREENING:

After a soil sample has been collected, soil from the remaining tubing is placed inside a sealed plastic bag and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable GasTech or photoionization detector measures volatile hydrocarbon vapor concentrations in the bag's headspace, extracting the vapor through a slit in the plastic bag. The measurements are used along with the field observations, odors, stratigraphy and groundwater depth to select soil samples for analysis.

GRAB GROUNDWATER SAMPLING:

Groundwater samples are collected from the open borehole using bailers, advancing disposable Tygon tubing into the borehole and extracting groundwater using a diaphragm pump, or using a hydro-punch style sampler with a bailer or tubing. The groundwater samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory.

DUPLICATES AND BLANKS:

Blind duplicate water samples are usually collected only for monitoring well sampling programs, at a rate of one blind sample for every 10 wells samples. Laboratory supplied trip blanks accompany samples collected for all sampling programs to check for cross-contamination caused by sample handling and transport. These trip blanks are analyzed if the internal laboratory quality assurance/quality control (QA/QC) blanks contain the suspected field contaminants. An equipped blank may also be analyzed if non-dedicated sampling equipment is used.

GROUTING:

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

A P P E N D I X "E"

OUTLINE OF DRUM HANDLING PROCEDURES

**OUTLINE OF DRUM HANDLING PROCEDURES
FOR THE PROPERTY
LOCATED AT 3800 SAN PABLO AVENUE
EMERYVILLE, CALIFORNIA**

1. Test material per site-specific test requirements.
2. Classify Material as: Clean/Non-Hazardous.
3. Labeling of Drums:

   * Pending Label: Used to describe material pending final analytical testing. Labels must be immediately affixed to drum during field work.

   * Non-Hazardous Label: Required within 24 hours after analytical results are received.

   * Hazardous Label: Required within 24 hours after analytical results are received.

   * For Pick-Up Label: Must be affixed to drum prior to arranged pick-up date by certified hauler.

4. Remove within 21 days of generation. Empty drums, where material was disposed in bulk, must be removed the same day they are emptied.

5. Disposal of Material:

   * Clean: Any local landfill.

   * Non-Hazardous: Class III Landfill.

   * Hazardous: Class I landfill.

6. Manifests may be signed by the on-site contractor or consultant, owner, or other authorized representatives. The transporter should not sign the manifest.

   It is the responsibility of the contractor, consultant and owner to arrange for a person to sign the manifest on the day of pick-up.

7. Reporting:

   Reports shall include the following:

   * Completed soil and water work sheets.

   * Copy of the analytical results.

   * State how and where material was disposed.

   * If drums are emptied and material was disposed of in bulk, state how empty drums were handled.

   * The signed blue and yellow copies of the hazardous waste manifest.

SOIL:

1. Test Requirements and Methods: Per STE site-specific test requirements.

   * TPH: EPA Method 8015.

   * BTEX: EPA Method 8020.

   * TOG: 503 D&E.

   * Lead:

     - Total Lead - EPA Method 7421.

     - Inorganic (soluble) Lead: DOS Title 22, Waste Extraction Test, 22-66700.

     - Organic - EPA Method 8240.

   * Ignitable:

2. Classification:

   * Clean: TPH, BTEX, TOG, VOC and non-detectable (<100 ppm).

   * Non-Hazardous if any are true:

     - TPH less than 1,000 ppm.

     - Lead - Inorganic (soluble) Lead less than 5 ppm (STLC) or less than 100 ppm (TTLC).

       - Organic Lead less than 13 ppm (TTLC).

   * Hazardous if any are true:

     - TPH greater than 1,000 ppm.

     - Lead - Inorganic (soluble) Lead greater than 5 ppm (STLC) or greater than 1,000 ppm (TTLC).

       - Organic Lead greater than 13 ppm (TTLC).

     - Ignitable - If TPH>1,000 ppm, then conduct Bunsen Burner Test.
       - If soil bums vigorously and persistently soils are RCRA D001.

   * VOC - less than 1,000 ppm.

3. Responsibility for Disposal:

   * Clean: Consultant, contractor or owner.

   * Non-Hazardous: Consultant, contractor or owner.

4. Types of Drums: DOT-17H for a solid, solidified, or sludge material.

5. Disposal Facility:

   * Clean: Any local landfill.

   * Non-Hazardous: Class III or II landfill.

* Hazardous: Class I landfill.

WATER:

1. Test Requirements and Methods: Per site-specific test requirements.

   * TPH: EPA Method 8015.

   * BTEX: EPA Method 602.

2. Classification:

   * Clean Water: TPH and BTEX non-detectable.

   * Hazardous:

     - Water with dissolved product and detectable TPH and BTEX.

     - Water with free product.

     - Free product only.

3. Responsibility for Disposal:

   * Clean: Consultant/Contractor.

   * Non-Hazardous: Consultant, contractor or owner.

4. Types of Drums: DOT-17C or DOT-17E for liquid or slurry.

5. Disposal Facility:

   * Clean Water: Into sanitary sewer per Local Sewer District approval or into storm sewer with proper approval from Water Board.

   * Non-Hazardous:

     - Water with TPH and BTEX only.

- Water with free product.

- Arrange certified waste hauler to pick and dispose.

* Hazardous:

  - Free product only.

  - Arrange disposal by a certified hazardous waste hauler.

File No. 4-02-742-ST
April 2, 2009

A P P E N D I X "F"

HEALTH AND SAFETY PLAN

ENVIRO SOIL TECH CONSULTANTS

HEALTH AND SAFETY PLAN FOR THE PROPERTY LOCATED AT 3800 SAN PABLO AVENUE EMERYVILLE, CALIFORNIA

GENERAL:

This Health and Safety Plan (HSP) contains the minimum requirements for the subject site field work. The field activities include drilling, soil sampling and/or water sampling. All personnel and contractors will be required to strictly adhere with HSP requirements.

The objective of the HSP plan is describe procedures and actions to protect the worker, as well as unauthorized person, from inhalation and ingestion of and direct skin contact with potentially hazardous materials that may be encountered at the site. The plan describes (1) personnel responsibilities and (2) protective equipment to be used as deemed when working on the site. At a minimum, all personnel working at the site must read and understand the requirements of this HSP. A copy of this HSP will be on-site that easily accessible to all staff and government field representatives.

HAZARD ASSESSMENT:

The major contaminants expected to be encountered on the project are gasoline and its hydrocarbon constituents. The anticipated contaminants and their exposure standards are listed in Table 1. It is not anticipated that the potential levels of exposure will reach the permissible exposure limits (PEL) or threshold limit values (TLV). Inhalation and dermal contact are the potential exposure pathways. Protective clothing will be mandatory for field personnel specified in this Plan. In addition, respiratory protective devices are required to be worn by each person on-site or to be within easy reach should irritating odors be detected or irritation of the respiratory tract occur.

TABLE 1
EXPOSURE LIMITS OF ANTICIPATED CHEMICAL CONTAMINANTS IN PARTS PER MILLION (ppm)

Contaminant	PEL	EL	ED	CL	TWA	STEL
Benzene*[skin] & [carc]	1	---	---------	---	10	5
Ethylbenzene	100	---	---------	---	100	125
Toluene [skin]	100	200	10 min per 8 hours	500	100	150
Xylene (o, m & p isomers) [skin]	100	200	30 min per 8 hours	300	100	150

PEL - permissible exposure limit: 8 hours, time-weighted average, California Occupational Safety and Health Administration Standard (CAL-OSHA).

EL - excursion limit: maximum concentration of an airborne contaminant to which an employee may be exposed without regard to duration provided the 8 hours time-weighted average for PEL is not exceeded (CAL-OSHA).

ED - excursion duration: maximum time period permitted for an exposure above the excursion limit but not exceeding the ceiling limit (CAL-OSHA).

CL - Ceiling limit: maximum concentration of airborne contaminant which employees may be exposed permitted (CAL-OSHA).

TWA - time-weighted average: 8 hours, [same as threshold limit value (TLV)], American Conference of Governmental Industrial Hygienists (ACGIH).

STEL - Short-term exposure limit: 15 minutes time-weighted average (ACGIH).

[carc] - substance identified as a suspected or confirmed carcinogen.

[skin] - substance may be absorbed into the bloodstream through the skin, mucous membranes or eyes.

* - Federal OSHA Benzene limits given for PEL and STEL; STEL has a 50 minutes duration limit.

A brief description of the physical characteristics, incompatibilities, toxic effects, routes of entry and target organs has been summarized from the NIOSH Pocket Guide to Chemical Hazards for the contaminants anticipated to be encountered. This information is used in on-site safety meetings to alert personnel to the hazards associated with the expected contaminants.

Benzene:

Benzene is a colorless, aromatic liquid. Benzene may create an explosion hazard. Benzene is incompatible with strong oxidizers, chlorine and bromine with iron. Benzene is irritating to the eyes, nose and respiratory system. Prolonged exposure may result in giddiness, headache, nausea, staggering gait, fatigue, bone marrow depression or abdominal pain. Routes of entry include inhalation, absorption, ingestion and skin or eye contact. The target organs are blood, the central nervous system (CNS), skin, bone marrow, eyes and respiratory system. Benzene is carcinogenic.

Ethylbenzene:

Ethylbenzene is a colorless, aromatic liquid. Ethylbenzene may create an explosion hazard. Ethylbenzene is incompatible with strong oxidizers. Ethylbenzene is irritating to the eyes and mucous membranes. Prolonged exposure may result in headache, dermatitis, narcosis or coma. Routes of entry include inhalation, ingestion and skin or eye contact. The target organs are the eyes, upper respiratory system, skin and the CNS.

Toluene:

Toluene is a colorless, aromatic liquid. Toluene may create an explosion hazard. Toluene is incompatible with strong oxidizers. Prolonged exposure may result in fatigue, confusion, euphoria, dizziness, headache, dilation of pupils, lacrimation, insomnia, dermatitis or photophobia. Routes of entry are inhalation, absorption, ingestion and skin or eye contact. The target organs are the CNS, liver, kidneys and skin.

Xylene Isomers:

Xylene is a colorless, aromatic liquid. Xylene may create an explosion hazard. Xylene is incompatible with strong oxidizers. Xylene is irritating to the eyes, nose and throat. Prolonged exposure may result in dizziness, excitement, drowsiness, staggering gait, corneal vacuolization, vomiting, abdominal pain or dermatitis. Routes of entry are inhalation, absorption, ingestion and skin or eye contact. The target organs are the CNS, eyes, gastrointestinal tract, blood, liver, kidneys and skin.

GENERAL PROJECT SAFETY RESPONSIBILITIES:

Key personnel directly involved in the investigation will be responsible for monitoring the implementation of safe work practices and the provisions of this plan are (1) the drilling project supervisor and (2) Enviro Soil Tech Consultants *(ESTC)* project field engineer. These personnel are responsible for knowing the provisions of the plan, communicating plan requirements to workers under their supervision and regulatory agencies inspectors and for enforcing the plan.

The personnel-protective equipment will be selected to prevent field personnel from exposure to fuel hydrocarbons that may be present at the site. To prevent direct skin contact, the following protective clothing will be worn as appropriate while working at the site:

1. Tyvek coveralls.
2. Butyl rubber or disposable vinyl gloves.
3. Hard hat with optional face shield.
4. Steel toe boots.
5. Goggles or safety glasses.

The type of gloves used will be determined by the type of work being performed. Drilling personnel will be required to wear butyl rubber gloves because they may have long duration contact with the subsurface materials. *ESTC* sampling staff will wear disposable gloves when handling any sample. These gloves will be changed between each sample.

Personnel protective equipment shall be put on before entering the immediate work area. The sleeves of the overalls shall be outside of the cuffs of the gloves to facilitate removal of clothing with the least potential contamination of personnel. If at any time protective clothing (coveralls, boots and gloves) become torn, wet or excessively soiled, it will be replaced immediately.

Total organic vapors will be monitored at the site with a portable PID. should the total organic vapor content approach that of the threshold limit value (TLV) for any of the substances listed in Table 1, appropriate safety measures will be implemented under the supervision of the site project engineer. These precautions include, but are not limited to, the following: (1) donning of respirators (with appropriate cartridges) by site personnel, (2) forced ventilation of the site, (3) shutdown of work until such time as appropriate safety measures sufficient to insure the health and safety of site personnel can be implemented.

No eating, drinking or smoking will be allowed in the vicinity of the drilling operations. *ESTC* will designate a separate area on site for eating and drinking. Smoking will not be allowed at the vicinity of the site except in designated areas. No contact lenses will be worn by field personnel.

WORK ZONES AND SECURITY MEASURES:

The project engineer will call Underground Service Alert (USA), and the utilities will be marked before any drilling is conducted on-site, and the borings will be drilled at safe distances from the utilities. The client will also be advised to have a representative on-site to advise us in selecting locations of borings with respect to utilities or underground structures. Enviro Soil Tech Consultants assumes no responsibility to utilities not so located. The first 5 feet will be hand augered before any drilling equipment is operated.

Each of the areas where the borings will be drilled will be designated as Exclusion Zones. Only essential personnel will be allowed into an Exclusion Zone. When it is practical and local topography allows, approximately 25 to 75 feet of space surrounding those Exclusion Zones will be designated as Contamination Reduction Zones.

Cones, wooden barricades or a suitable alternative will be used to deny public access to these Contamination Reduction Zones. The general public will not be allowed close to the work area under any conditions. If for any reason the safety of a member of the public (e.g. motorist or pedestrian) may be endangered, work will cease until the situation is remedied. Cones and warning signs will be used when necessary to redirect motorists or pedestrians.

LOCATION AND PHONE NUMBERS OF EMERGENCY FACILITIES:

For emergency reasons, the closest facilities addresses and phone numbers are listed below:

City of Emeryville Fire Department	911
Kaiser Foundation Hospital 280 West Mac Arthur Blvd., Oakland, CA	(510) 596-1000

ADDITIONAL CONTINGENCY TELEPHONE NUMBERS:

Poison Control Center. . . . .(800) 523-2222

Enviro Soil Tech Consultants Administrative Office. . . . . . . (408) 297-1500

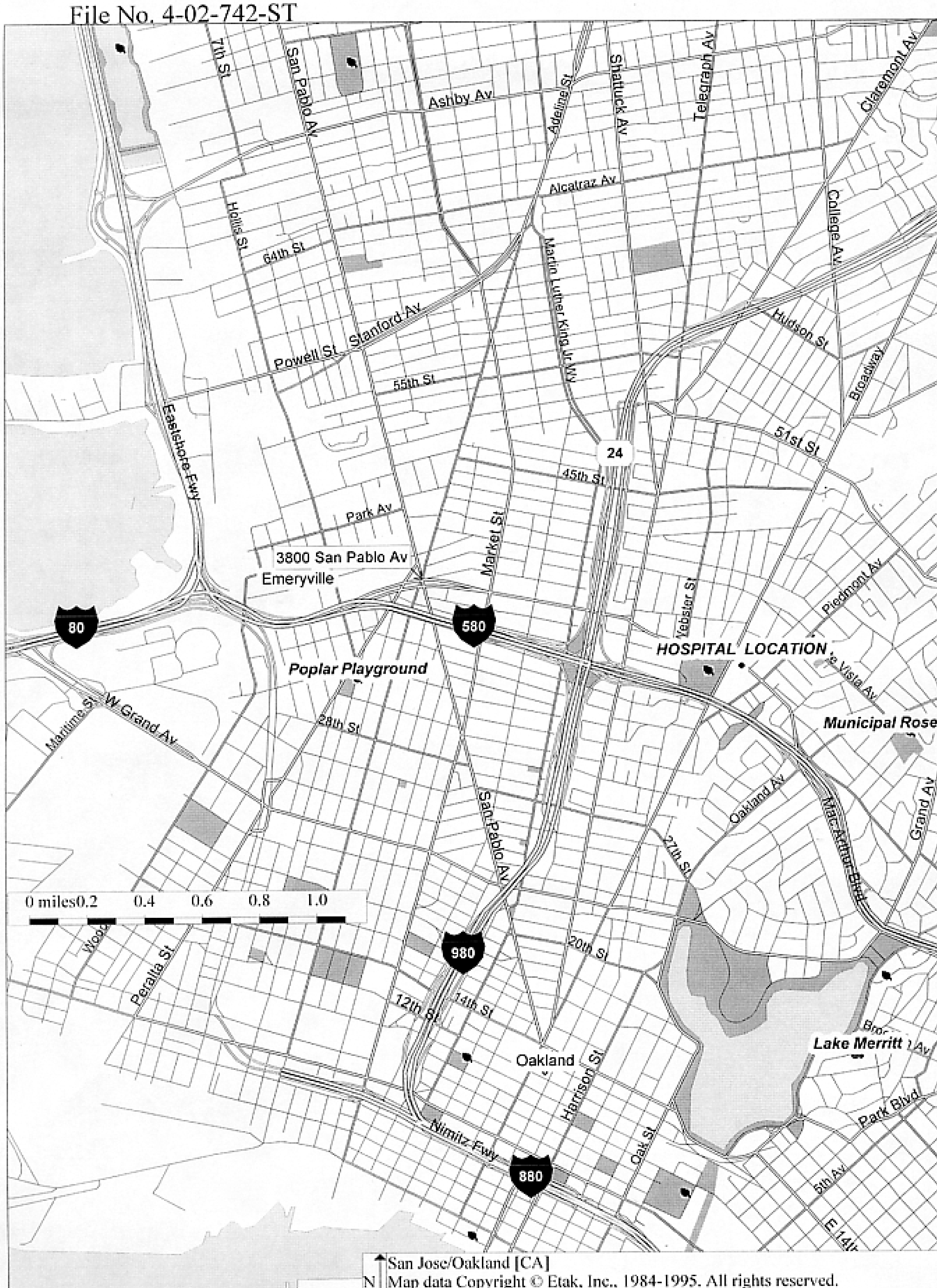
CHEMTREC. . . . .(800) 424-9300

NOTE: Only call CHEMTREC stands for Chemical Transportation Emergency Center, a public service of the Chemical Manufacturer's Association. CHEMTREC can usually provide hazard information, warnings and guidance when given identification number or the name of the product and the nature of the problem. CHEMTREC can also contact the appropriate experts.

This Site Safety Plan has been reviewed by the project engineer, *ESTC*'s field personnel and all subcontractors.

Amendments or modifications to this Plan may be written on a separate page and attached to this Plan. Any amendments or modifications must be reviewed and approved by the personnel name above.

File No. 4-02-742-ST



ENVIRO SOIL TECH CONSULTANTS

File No. 4-02-742-ST
April 2, 2009

A P P E N D I X "G"

TYPES OF PROTECTIVE CLOTHING AND RESPIRATION SHOULD BE USED

ENVIRO SOIL TECH CONSULTANTS

TYPES OF PROTECTIVE CLOTHING AND RESPIRATION THAT SHOULD BE USED AT HAZARDOUS WASTE SITES LOCATED AT 3800 SAN PABLO AVENUE EMERYVILLE, CALIFORNIA

The degree of hazard is based on the waste material's physical, chemical, biological properties and anticipated concentrations of the waste. The level of protective clothing and equipment worn must be sufficient to safeguard the individual. A four category system is described below.

LEVEL A:

Level A consists of pressure-demand SCBA (air supplying respirator with back mounted cylinders), fully encapsulated resistant suit, inner and outer chemical resistant steel safety boots (toe, shank and metatarsal protection), and hard hat. Optional equipment might include cooling systems, abrasive resistant gloves, disposable oversuit and boot covers, communication equipment and safety line. Level A is worn when the highest level of respiratory, skin, and eye protection is required. Most samplers will never wear Level A protection.

LEVEL B:

Level B protection is utilized in areas where full respiratory protection is warranted, but a lower level of skin and eye protection is sufficient (only a small area of head and neck is exposed). Level B consists of SCBA, splash suit (one or two piece) or disposal chemical resistant coveralls, inner and outer chemical resistant gloves, chemical resistant safety boots, and hard hat with face shield. Optional items include glove and boot covers and inner chemical resistant fabric coveralls.

LEVEL C:

Level C permits the utilization of air-purifying respirators. Level B body, foot and hand protection is normally maintained. Many organizations will permit only the use of approved full-face masks equipped with a chin or harness-mounted canister. However, many sites are visited by personnel wearing a half-mask cartridge respirator.

LEVEL D:

Level D protection consists of a standard work uniform of coveralls, gloves, safety shoes or boots, hard hat and goggles or safety glasses.

Two basic types of respirators are air-purifying and air-supplying. Air-purifying respirators are designed to remove specific contaminants by means of filters and/or sorbents. Air-purifying respirators come in various sizes, shapes and models, and can be outfitted with a variety of filters, cartridges and canisters. Each mask and cartridge or canister is designed for protection against certain contaminant concentrations. Just because a cartridge says it is for use against organic vapors does not mean that it is good for all organic vapors.

Air-supplying respirators are utilized in oxygen-deficient atmospheres (less than 19.5 percent) or when an air-purifying device is not sufficient. air is supplied to a face-mask from an uncontaminated source of air via and air line from stationary tanks, from a compressor or from air cylinders worn on the back (SCBA). Rated capacities of the

SCBA's are normally between 30 and 60 minutes. Only positive pressure (pressure demand) respirators should be used in high concentration hazardous environments.

Respirators often malfunction during cold weather or after continued use. Only NIOSH (National Institute for Occupational Safety and Health) and MSHA (Mine Safety and Health Administration) approved respirators should be used.

Contact lenses are not permitted for use with an respirator. Contact lenses should not be worn at any site since they tend to concentrate organic materials around the eyes; soft plastic contact lenses can absorb chemicals directly. In addition, rapid removal of contact lenses may be difficult in an emergency. Since eye glasses can prevent a good seal around the temple when wearing goggles or full face masks, spectacle adapters are available for masks and goggles.