File No. 2-00-706-ST

Responded to 8/14/2000 per 4097

PROPOSED WORK PLAN FOR
PRELIMINARY SITE ASSESSMENT
FOR THE PROPERTY
LOCATED AT 20570 STANTON AVENUE
CASTRO VALLEY, CALIFORNIA
MAY 18, 2000

PREPARED FOR:
MR. SEAN KAPOOR
STOP & SAVE, INC.
25064 VIKING STREET
HAYWARD, CALIFORNIA 94545

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

ENVIRO SOIL TECH CONSULTANTS

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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**

May 18, 2000

File No. 2-00-706-ST

Mr. Sean Kapoor
Stop & Save, Inc.
25064 Viking Street
Hayward, California 94545

SUBJECT: PROPOSED WORK PLAN FOR PRELIMINARY SITE ASSESSMENT FOR THE PROPERTY
Located at 20570 Stanton Avenue, in
Castro Valley, California

Dear Mr. Kapoor:

As required by the Alameda County Health Care Services Agency-Environmental Health Services (ACHCSA-EHS) for fuel leak site, the enclosed work plan for your property has been prepared in accordance with State and Local Regulatory Agency requirement(s) for fuel leak site(s).

The work plan consist of the tasks required by the agency in order to define the extent of contamination at the site.

Please submit the work plan to ACHCSA-EHS and Regional Water Quality Control Board-San Francisco Bay Region (RWQCB-SFBR) for their comments and directives.

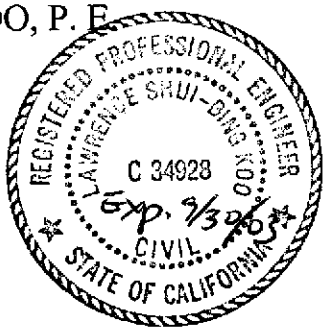
Should you have any questions or require additional information, please feel free to contact our office at (408) 297-1500.

Sincerely,

ENVIRO SOIL TECH CONSULTANTS

FRANK HAMEDI-FARD
GENERAL MANAGER

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



INTRODUCTION:

A proposed work plan for preliminary site assessment at the subject site was required by Alameda County Health Care Services Agency-Environmental Health Services (ACHCSA-EHS) for fuel leak sites.

There is evidence of elevated dissolved petroleum hydrocarbons in the soil at the location of the former removed underground fuel storage tanks and the associated piping. Soil sampling was conducted by Enviro Soil Tech Consultants (ESTC) after removal of tanks and associated piping. This work plan proposes a scope of work to assess the distribution of petroleum hydrocarbons in subsurface soil and describes future remediation activities.

GENERAL SITE DESCRIPTION:

The site is located at southeast of Stanton Avenue, in Castro Valley, California (Figure 1). The site is currently used as a quick stop mini mart. The site is relatively flat, and the properties surrounding are primarily residential and light commercial businesses. Figure 2 shows the locations of building, former storage tanks, stockpiled soil and proposed borehole(s)/monitoring well(s).

BACKGROUND:

On February 24, 2000, two 10,000 gallon underground storage gasoline tanks were removed by Johnson Tank Testing and Maintenance.

During tanks removal activities, ESTC was retained by Mr. Randy Johnson of Johnson Tank Testing and Maintenance to conduct soil sampling from the tank excavation. In addition, at the request of Mr. Barney Chan of ACHCSA-EHS, soil sampling was also conducted on the stockpiled soil and between the two removed underground storage tanks areas.. All soil sampling activities were conducted under the supervision of Mr. Barney Chan of ACHCSA-EHS.

The soil samples from the tanks and between the tanks areas were collected at approximately 2 feet below the excavation areas.

The four soil samples from the two 10,000 gallon UST excavation area detected TPHg concentration upto 11 milligram per kilogram (mg/Kg), and the maximum levels detected of BTEX was (0.07 mg/Kg; 0.26 mg/Kg; 0.15 mg/Kg and 1.1 mg/Kg), respectively. MTBE concentrations in this area ranged between 0.11 mg/Kg to a maximum of 3.8 mg/Kg.

The soil sample between two UST area detected TPHg concentration at 71 mg/Kg; BTEX concentrations at (0.22 mg/Kg; 0.47 mg/Kg; 0.49 mg/Kg and 3.7 mg/Kg, respectively) and MTBE level at 1.2 mg/Kg.

The stockpiled soil samples detected TPHg upto 1,100 mg/Kg; BTEX at (4.2 mg/Kg; 22 mg/Kg; 12 mg/Kg and 110 mg/Kg); MTBE at 12 mg/Kg and Total Lead at 11 mg/Kg.

The details of soil sampling is described in ESTC's report entitled "Soil Sampling Beneath Removed UST at the Property...", dated March 8, 2000.

The soil from the removed UST and stockpiled soil with elevated hydrocarbons were stored on-site for treatment/bio-remediation and proper disposal.

SCOPE OF WORK:

The scope of work is to assess the extent of dissolved petroleum hydrocarbons beneath the site and to determine whether or not the shallow groundwater beneath the site has been impacted. The proposed tasks are as follow:

A) Prepare a site Health and Safety Plan.

B) Obtain the necessary drilling permit(s).

C) Drill 3 to 5 exploratory boring(s) around the tank areas in accordance with Sate and Local Regulatory Agency requirement(s).

D) Install 3 to 4 groundwater monitoring well(s).

E) Develop, sample and survey the monitoring well(s).

F) Analyze the soil and groundwater samples for Total Petroleum Hydrocarbons as gasoline (TPHg); Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX); Methyl Tertiary Butyl Ether (MTBE) and Volatile Organic Compounds (VOC's) per EPA Method 82060B.

G) Over-excavation of former UST area(s).

H) Conduct an on-site remediation of the stockpiled soil for a proper disposal.

I) Analyze the field data and laboratory results.

J) Prepare a technical report.

METHODS AND PROCEDURES:

The methods and procedures for drilling, installing and sampling of soil borings and groundwater are described in this section of the work plan. The preliminary investigation approached will be consistent with (1) Regional Water Quality Control Board (RWQCB) "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites" dated August 1990, (2) Alameda County Health Care Services Agency-Environmental Health Services (ACHCSA-EHS) guidelines for such fuel tank sites, and ESTC's Standard Operation Procedures (SOP) "B".

TASK A. SITE HEALTH AND SAFETY PLAN:

A site Health and Safety Plan has been prepared and will be available on-site at the time the field work is conducted (Appendix "D").

TASK B. OBTAIN NECESSARY PERMIT(S):

Following this work plan approval by the state and local agencies, ESTC will acquire drilling permit(s), schedule field activities and locate underground utility lines prior to beginning field work.

TASK C. CONDUCT EXPLORATORY SOIL BORING(S):

In order to assess the vertical and lateral extent of hydrocarbons at the site, 3 to 5 soil borings will be drilled to the depth of first groundwater encounter. The drilling procedures will be in accordance with ACHCSA and RWQCB guidelines as described in

the attached Standard Operating Procedures (Appendix "B"). Soil samples will be collected from each boring at 5-foot intervals and at significant lithologic changes, using a California split-spoon sampler or brass sample sleeves. The samples recovered for chemical analysis will be retained in the sleeve, covered with aluminum foil and plastic caps, wrapped with tape, labeled and placed immediately into an iced-cool chest.

TASK D. INSTALL GROUNDWATER MONITORING WELL(S):

Three to four of the exploratory borings will be converted into groundwater monitoring wells to depths of approximately 30 feet below the top of the saturated zone. The boring(s) will be drilled using 8-inch diameter hollow-stem augers. Each monitoring well will be constructed of 2-diameter, clean, flush-threaded, Schedule 40 PVC blank and screened (0.020-inch slot size) casing and the required filter pack. Well installation will follow the standard procedures and requirements of the RWQCB and ACHCSA (see SOP in Appendix "B").

The top of each monitoring well will be secured with a water-tight locking cap and utility box finished flush with the ground surface.

TASK E. DEVELOP, SAMPLE AND SURVEY MONITORING WELL(S):

The monitoring wells will be properly developed, purged and sampled in accordance with applicable regulations and guidelines of the ACHCSA and RWQCB.

All wells will be surveyed as to location and elevation in reference to an established benchmark to within 0.01 foot. Depth-to-water in each well will be measured from the top of the casing using an electronic sounder. Wells will be monitored prior to sampling for presence or absence of any sheen and/or odor.

TASK F. ANALYZED SOIL AND GROUNDWATER SAMPLES:

Soil and groundwater samples will be transported to a California certified laboratory for analysis, following proper chain-of-custody procedures. Soil and water samples will be analyzed for TPHg using EPA Methods 5030/8015, BTEX, MTBE and VOC's using EPA Method 8260B.

TASK G. OVER-EXCAVATION OF FORMER TANK AREA(S):

ESTC's staff will supervise the over-excavation of soil from the former UST area(s). The approximate extent of excavation will depend on visual observation and the use of a photoionization detector (PID). The maximum depth of the excavation will be determined by the field engineer.

Prior excavation begins, a cyclone fence, cones, barriers and/or signs will be installed to mark field work areas.

Excavated soil will be separated into two groups: clean soil and contaminated soil. The PhotoVac TIP 1 (PID) will be used to screen the soil for segregation. Any soil that exceeds 50 parts per million (ppm) will be classified as contaminated soil.

During excavation, soil with obvious petroleum odor or visual staining will be segregated and stockpiled in a designated area. This soil will be placed on and covered with plastic liners to minimize infiltration of rain water and potential contaminated run-off. The clean soil will be stockpiled in a similar manner.

During excavation, ESTC's staff will obtain soil samples by partially filling a sample tube with excavated soil and then using the PID to detect volatile components. This process will involve capping and agitating the tube to allow volatilization of petroleum hydrocarbons from the soil, then piercing the sample cap with the PID and collecting headspace readings.

The excavation will be expanded until PID readings show Volatile Organic Vapor concentrations of less than 10 parts per million (ppm), or until further excavation is not feasible due to building foundations and/or adjacent utilities. We estimate approximately 100 to 200 yards of soil will be excavated.

Following removal of the contaminated soil, discrete soil samples will be taken from the base of the excavation and/or excavation wall(s). Clearance samples will be taken in brass tubes from a backhoe bucket or using a hand held sampling device. The ends of the brass liner will be covered tightly with aluminum foil and plastic caps, sealed with tape, logged and stored in a cooled ice chest for transport to a state-certified analytical laboratory.

TASK H. ON-SITE REMEDIATION OF STOCKPILED SOIL:

Approximately 150 to 200 cubic yards of excavated fuel-affected soil are currently stockpiled on-site. Average hydrocarbon concentrations in the fuel impacted stockpiled soil indicated that it can be effectively aerated. Thus, the impacted soil will be aerated on-site in accordance with Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 40. The treated soil will be disposed to Class III landfill once the concentrations are at or below the acceptable levels for proper disposal.

TASK I. ANALYZED DATA AND LABORATORY RESULTS:

Upon completion of the soil and groundwater sample analysis, a detailed analysis of the results and available information will be conducted to define the extent and nature of hydrocarbons in the soil and/or groundwater, if any, at the site. This analysis will include interpretation of geologic and hydrogeologic information and assessment of the potential short- and long-term impacts of contamination, if any, on the beneficial uses of local ground and surface water.

TASK J. PREPARE REPORT:

A report presenting the results and findings of the exploratory soil borings and monitoring wells installation, including the boring logs and laboratory reports, will be prepared and submitted to Mr. Sean Kapoor of Stop and Save, Inc. for review. A copy of this report should be submitted to CRWQCB and ACHCSA.

SCHEDULE:

ESTC will start scheduling work within one week following ACHCSA and your approval of this proposed work plan. All regulatory agencies will be notified prior to starting excavation. The report of our findings will be prepared within six to eight weeks following the receipt of laboratory results and will include field activities, soil lithology, soil and groundwater analytical results, conclusions and recommendations.

File No. 2-00-706-ST

A P P E N D I X "A"

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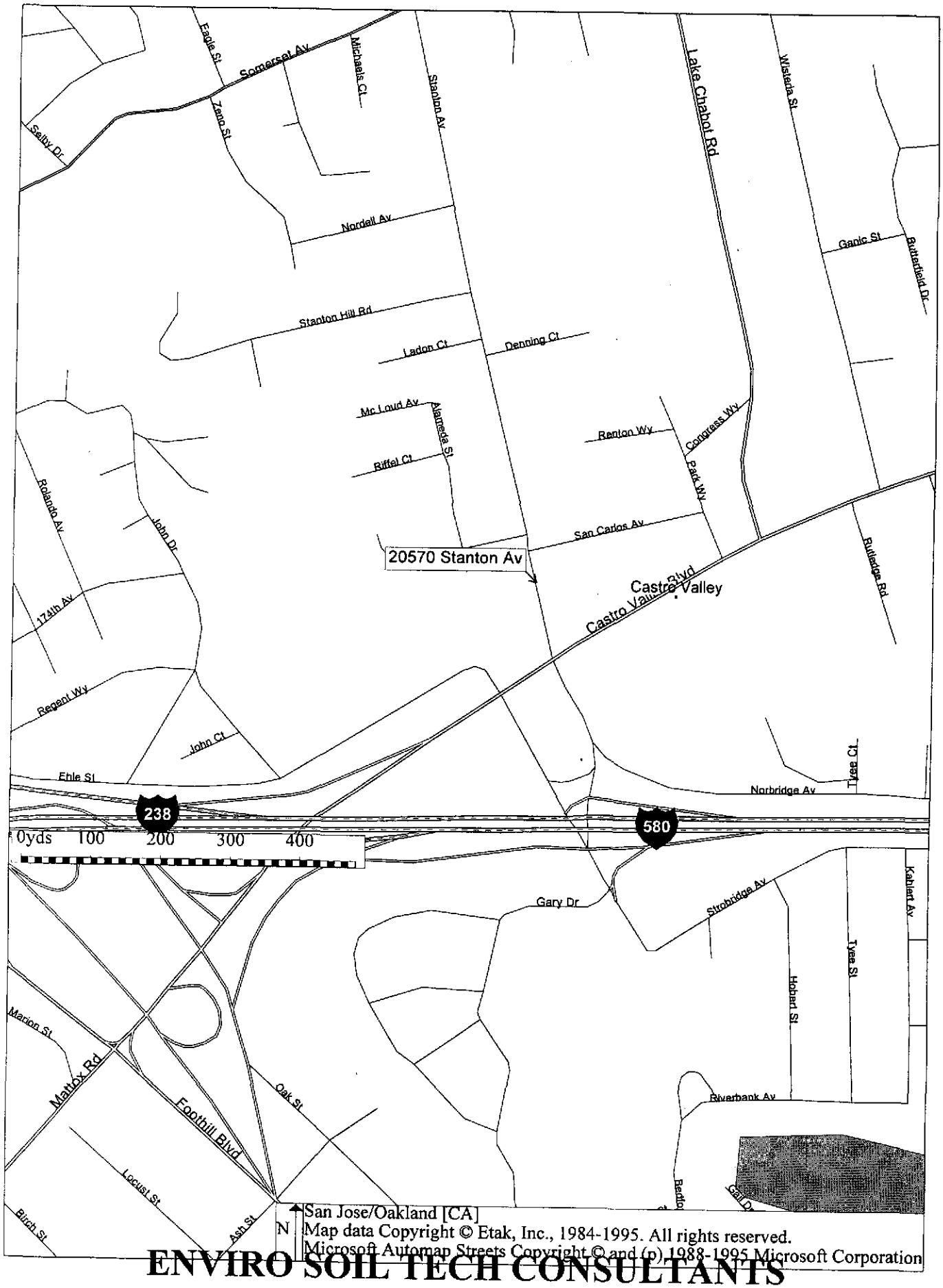
File No. 2-00-706-ST



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M1

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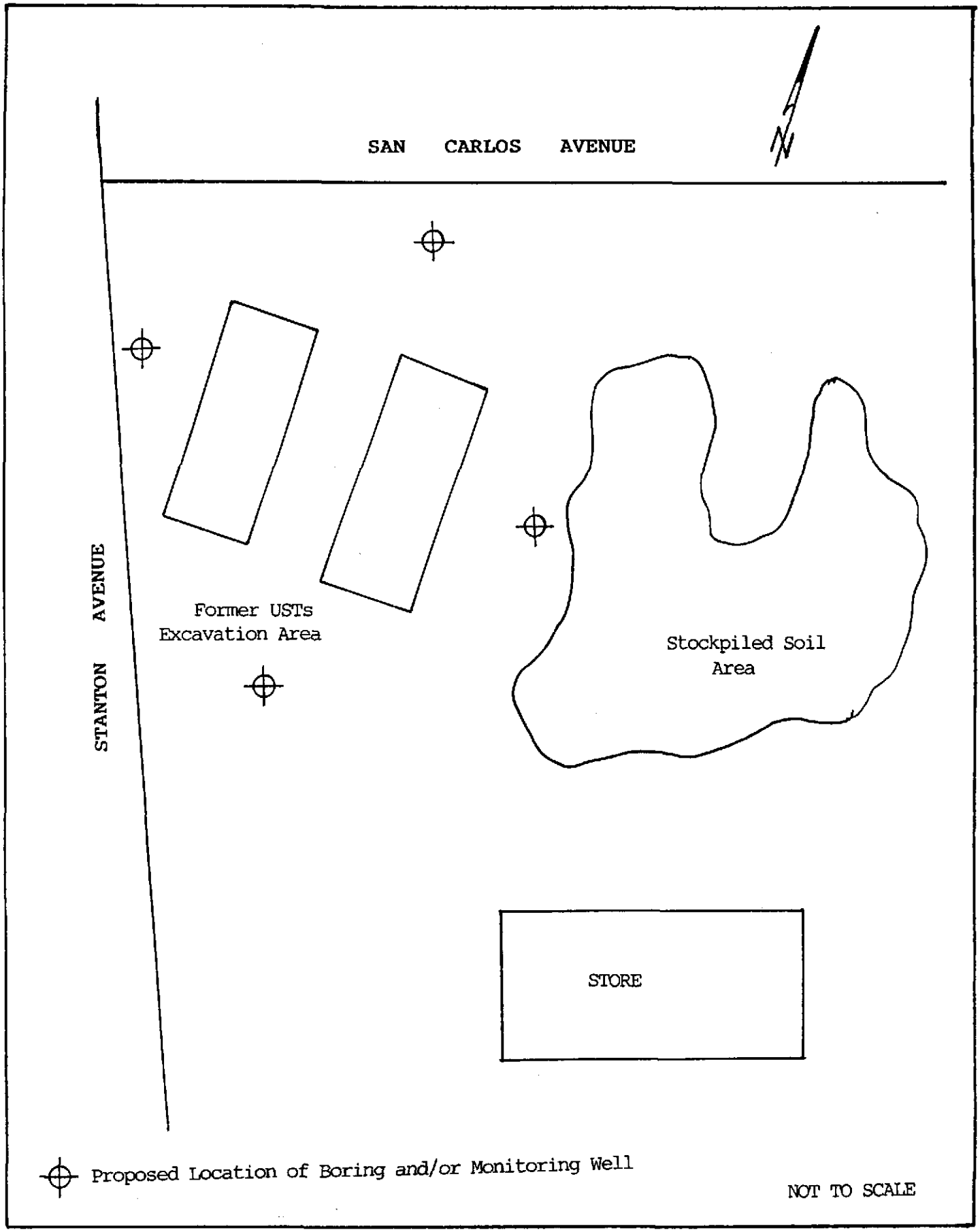

Figure 2

M2

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File No. 2-00-706-ST

A P P E N D I X "B"

ENVIRO SOIL TECH CONSULTANTS

DRILLING AND SOIL SAMPLING PROCEDURE

Mobile drill rig B-40L, using a continuous, solid-flight, hollow stem auger will be used in drilling the soil borings to the desired depths.

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

In addition, prior to obtaining each individual soil sample, all sampling tools, including the split-spoon sampler and brass liners will be thoroughly washed in a Tridsodium Phosphate (TSP) solution followed by a rinse in distilled water.

During the drilling operation, relatively undisturbed soil samples will be taken from the required depth by forcing a 2-inch I.D. split-spoon sampler insert with a brass liner into the ground at various depths by means of a 140 lb. hammer falling 30-inches or by hydraulic forces.

The samplers will contain relatively undisturbed soil. In general, the first section of soil from the sampler (shoe) will be used in the field for lithologic inspection and evidence of contamination. The selected brass liner will be immediately trimmed, the ends of the brass liner will be 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 for analysis will then be sent to a state-certified hazardous waste laboratory accompanied by a chain-of-custody record.

Soil samples collected at each sampling interval will be inspected for 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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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 well head, (for wells in parking lots, driveways and building areas). Steel stove pipes with padlocks will be usually set over well-heads 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.

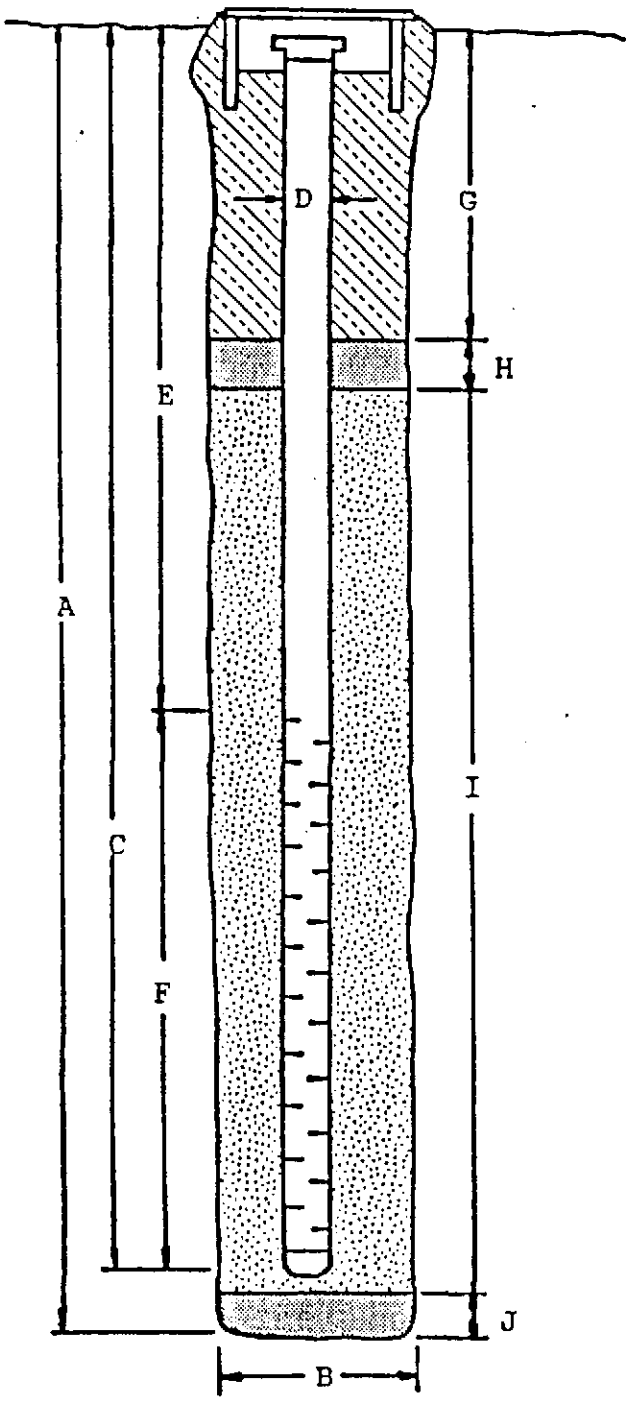
WELL DETAILS

PROJECT NAME: _____ BORING/WELL NO. _____

PROJECT NUMBER: _____ CASING ELEVATION: _____

WELL PERMIT NO.: _____ SURFACE ELEVATION: _____

G-5 Vault Box



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 & ADDRESS:_____

_____

PROJECT NO.:_____

FIELD ACTIVITIES

WELL NO.	ROD READING	RIM ELEVATION	WATER ELEVATION

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

HAVE YOU CHECKED FOR AND 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.

Forty milliliter (ml.) glass volatile organic analysis (VOA) vials 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 is 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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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	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

ENVIRO SOIL TECH CONSULTANTS

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SAMPLE MANAGEMENT

Sample Type: Soil, Oil, Solvents, Polids, 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 TFE 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 (d)* (recommended/regulatory)
Measurement - Specific Chemicals, Inorganic				
Ammonia			add 1 ml conc H_3PO_4	24 Hrs.
Arsenic			add 6 ml conc HNO_3/L	6 months
Chlorine			cool 4°C	24 Hrs.
Chromium VI			add 6 ml conc H_2SO_4/L	24 Hrs.
Cyanide, total			add 2.5 ml of 50% NaOH/L, cool 4°C	24 Hrs.
Fluoride			cool 4°C	7 days
Mercury, total			add 5 ml conc HNO_3L	38 days
Mercury, dissolved			filter, add 5 ml conc HNO_3/L	38 days
Selenius			add 5 ml conc HNO_3/L	6 months
Sulfide			add 2 ml conc HC1/1	24 Hrs.
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 (d)* (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 Hrs./28 days
Sulfite	50 ml	plastic or glass	determine on site	No Holding
Measurement - Specific Chemicals, Organic				
NTA	50 ml	plastic or glass waterline & center	cool 4°C	24 Hrs.
Measurement - Physical Properties				
Acidity			cool 4°C	24 Hrs.
Alkalinity			cool 4°C	24 Hrs.
pH			determine on site cool 4°C	6 Hrs.
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_3PO_4 to pH 4 & 1 g $CuSO_4$/L, cool 4°C	24 Hrs.

SAMPLE MANAGEMENT

Sample Type: Water and Wastewater

General Composition	*Sample Volume*	*Sample Container*	*Preservative*	*Holding Time (d)* (recommended/regulatory)
Measurements - Specific Chemicals, Inorganic				
Ammonium	500 ml	plastic or glass	cool 4°C, add H_2SO_4 to pH<2	24 Hrs./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 Hrs./28 days
Cyanide, total	500 ml	plastic or glass add NaOH to pH>12	cool 4°C, dark	24 Hrs./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 Hrs./-
Iodine	500 ml	plastic or glass	determine on site	½ Hr./-
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 to pH<2	24 Hrs./48 Hrs.
Nitrate & nitrate	200 ml	plastic or glass	cool 4°C add H_2SO_4	24 Hrs./28 days
Nitrate	100 ml	plastic or glass	cool 4° C or freeze	

SAMPLE MANAGEMENT

Sample Type: Water and Wastewater

General Composition	*Sample Volume*	*Sample Container*	*Preservative*	*Holding Time (d)* (recommended/regulatory)
Measurements - 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 Hrs.
Oil and Grease	1000 ml	glass, wide mouthed, calibrated	cool 4°C H_2SO_4 to pH<2	24 Hrs./28 days
Organic		glass rinsed with organic solvents, TFE cap		
Phenolics	500 ml	glass		24 Hrs./28 days
Purgeables by purge and trap	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 (d)* (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	plastic or glass	cool 4°C	7 days
Measurement - Physical Properties				
Acidity	100 ml	plastic or borosilioate glass	cool 4°C	24 Hrs./14 days
Alkalinity	200 ml	plastic or glass	cool 4°C	24 Hrs./14 days
pH	25 ml	plastic or glass	determine on site	2 Hrs./2 Hrs.
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. 2-00-706-ST

A P P E N D I X "C"

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File No. 2-00-706-ST

OUTLINE OF DRUM HANDLING PROCEDURES FOR THE PROPERTY LOCATED AT 20570 STANTON AVENUE CASTRO VALLEY, 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.

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ODH1

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. 2-00-706-ST

A P P E N D I X "D"

ENVIRO SOIL TECH CONSULTANTS

HEALTH AND SAFETY PLAN
FOR THE PROPERTY
LOCATED AT 20570 STANTON AVENUE
CASTRO VALLEY, 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 this 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 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 Castro Valley Fire Department	911
Eden Hospital 20103 Lake Chabot Road, Castro Valley, CA	(510) 537-1234

ADDITIONAL CONTINGENCY TELEPHONE NUMBERS:

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

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

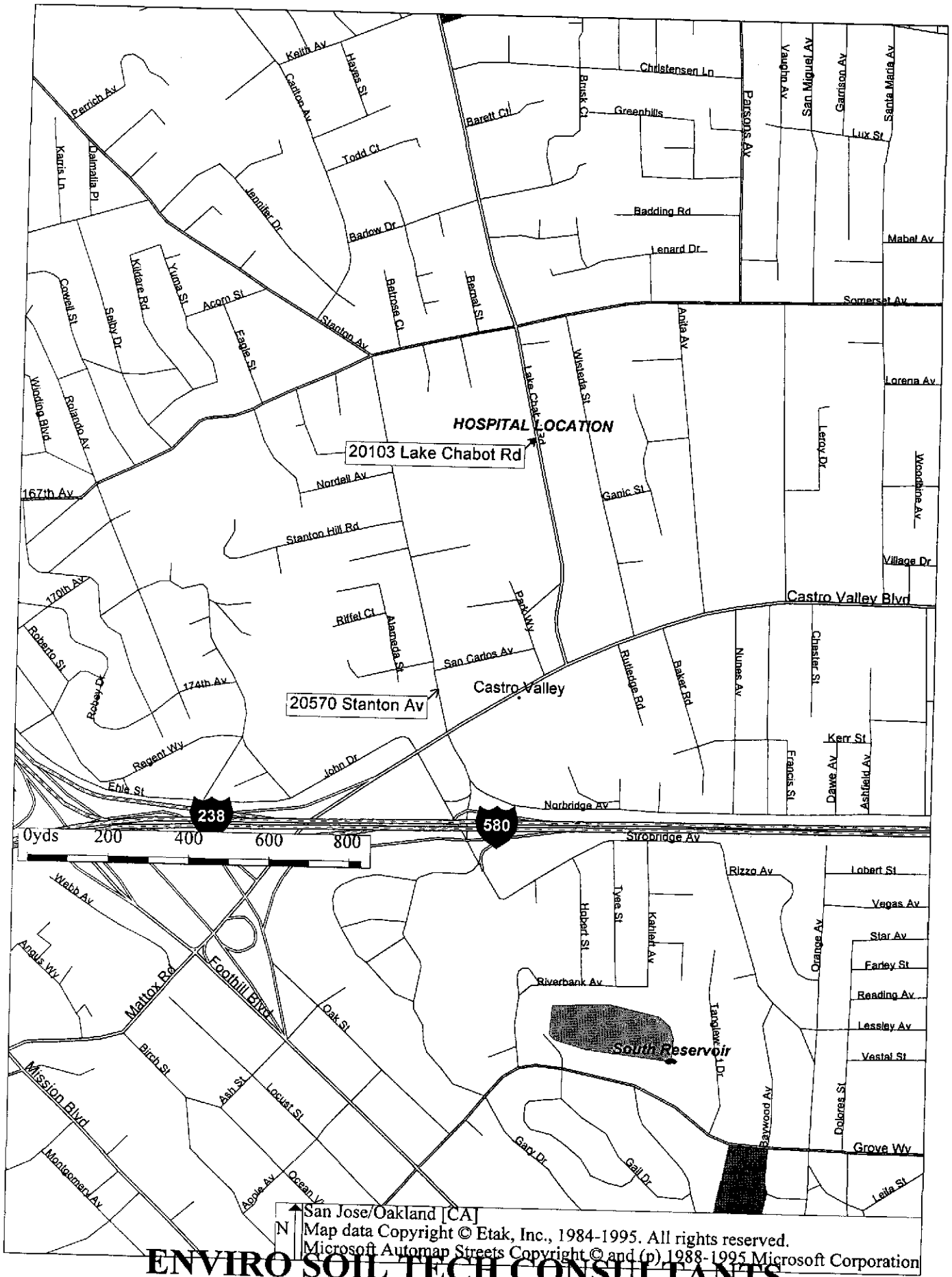
CHEMTREC. . . . . .(800) 424-9300

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. 2-00-706-ST



ENVIRO SOIL TECH CONSULTANTS

HSP9

TYPES OF PROTECTIVE CLOTHING AND RESPIRATION THAT SHOULD BE USED AT HAZARDOUS WASTE SITES LOCATED AT 20570 STANTON AVENUE CASTRO VALLEY, 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 disposable 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.