



**Treatment and Disposal of Affected Material:**

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment or Disposal w/destination)</u>	<u>Date</u>
Tank	2 Tanks	Disposed at Richmond by Erickson	8/6/96
Soil	28 cubic yards	Disposed at Forward Inc. Landfill, Manteca, CA	8/20/99
Groundwater	NA		
Barrels	NA		

**Maximum Documented Contaminant Concentrations - - Before and After Cleanup**

<u>Contaminant</u>	<u>Soil (ppm)</u>		<u>Water (ppb)</u>	
	<u>1 Before</u>	<u>2 After</u>	<u>3 Before</u>	<u>4 After</u>
TPH (Gas)	290	<1.0	< 50	<50
TPH (Diesel)	NA		NA	
Benzene	6.5	<0.005	< 0.5	<0.5
Toluene	17	<0.005	< 0.5	<0.5
Ethylbenzene	20	<0.005	< 0.5	<0.5
Xylenes	110	<0.005	< 0.5	<0.5
Oil & Grease	NA		NA	
Heavy metals	NA		NA	
Lead	78	39	<50 Total	430 Dissolved

1-Soil samples from south tank excavation in 8/6/96

3-Grab groundwater samples from tank excavation in 5/24/99.

2- Soil samples from soil boring advanced in 8/12/96.

4-Grab groundwater samples from soil borings advanced in 5/24/99.

**Comments (Depth of Remediation, etc.):**

The two 1,000 gallon gasoline tanks were last used in 1978 and were removed in 1996. No petroleum hydrocarbons were detected in the 1996 grab groundwater sample from the southern UST excavation, and none were detected in the five recent groundwater samples. No TPHg, BTEX, or MTBE were detected in soil and groundwater from five borings in the vicinity of the former tanks. Approximately 5 cubic yards of soil were overexcavated from the southern tank pit and disposed of at a class III landfill.

**IV. CLOSURE**

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan?

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? NA

Does corrective action protect public health for current land use? Yes

Site management requirements: Site safety plan is required if excavation is proposed in the vicinity of the

former UST.

Should corrective action be reviewed if land use changes? Yes

Monitoring wells Decommissioned: NA

Number Decommissioned: NA          Number Retained: NA

List enforcement actions taken: NA

List enforcement actions rescinded: NA

#### V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Amir K. Gholami

Title: Haz Mat Specialist


Signature: 

Date: 8/26/1999

#### Reviewed by

Name: Eva Chu

Title: Haz Mat Specialist

Signature: 

Date: 8/26/1999

Name: Thomas Peacock

Title: Supervisor

Signature: 

Date: 8-30-99

#### VI. RWQCB NOTIFICATION

Date Submitted to RB:

RB Response:

RWQCB Staff Name: Chuck Headlee

Title: AEG

Signature:

Date:

#### VII. ADDITIONAL COMMENTS, DATA, ETC.

The site was a former mechanical contractor facility. In August 1996 two USTs ( 1-10K tank north of building, and 1-10K tank south of building), which stored gasoline, were removed from the site. Groundwater was encountered in the southern tank excavation. Soil in this pit was stained and emitted a strong odor. Two soil samples were collected from the sidewall at about 8 ft bgs. A grab groundwater sample was also collected. The analytical results identified TPH-g and BTEX at the southern UST excavation at maximum concentrations of 290, 6.5, 17, 1.5 and 7.6 ppm respectively. However, no TPH-g or BTEX were detected in the grab groundwater samples.

The north tank excavation identified trace petroleum hydrocarbons in soil at 8 feet depth with a maximum TPH-g concentrations of 0.49ppm.

Additional subsurface investigations were conducted in May 1999 to further delineate the extent and severity of soil and groundwater contamination at the site. Five soil borings were advanced up to 24 feet depth. All

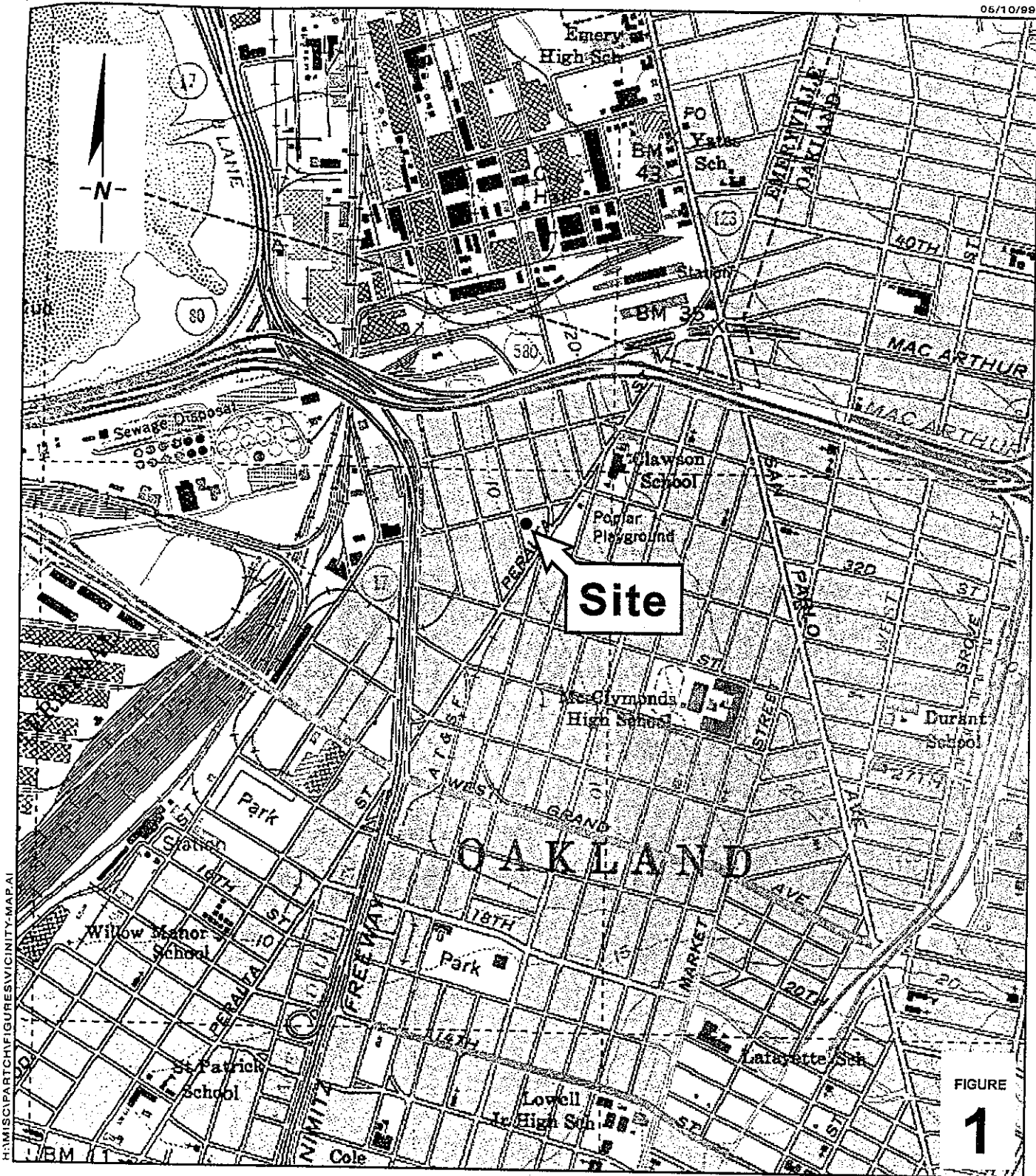
samples, soil and grab groundwater, were field-screened for the presence of contaminants. Select samples were submitted for laboratory analysis. No TPH-g, BTEX, or MTBE were identified in soil or groundwater samples.

The soil borings revealed presence of clayey silts through the entire explored depth of 24 feet.

Ground water was encountered at 9 feet (S-2sample) to 16.8 feet (N-1sample), and stabilized from 5.9 feet (S-1) to 10.4feet (N-1).

**In summary, case closure is recommended because:**

1. the leak and ongoing sources have been removed;
2. the site has been adequately characterized;
3. the dissolved plume is not migrating;
4. no water wells, surface water, or other sensitive receptors are likely to be impacted
5. the site presents no significant risk to human health or the environment.  
even though the dissolved lead is 430ppb in groundwater and the EPA established PRG level is 4.0ppb for "tap water". The absence of elevated lead levels in soil suggests that the dissolved lead may be due to a regional problem or it may be naturally occurring ( and not due to the fuel release). Shallow groundwater at the site is not a source of drinking water.



H:\MISC\PARTCH\FIGURES\VICINITY-MAP.A1

FIGURE 1

0 1/8 1/4 1/2 1  
SCALE 1:1/4 MILE

**W.T. Partch**  
2862 Helen Street  
Oakland, California



**Vicinity Map**

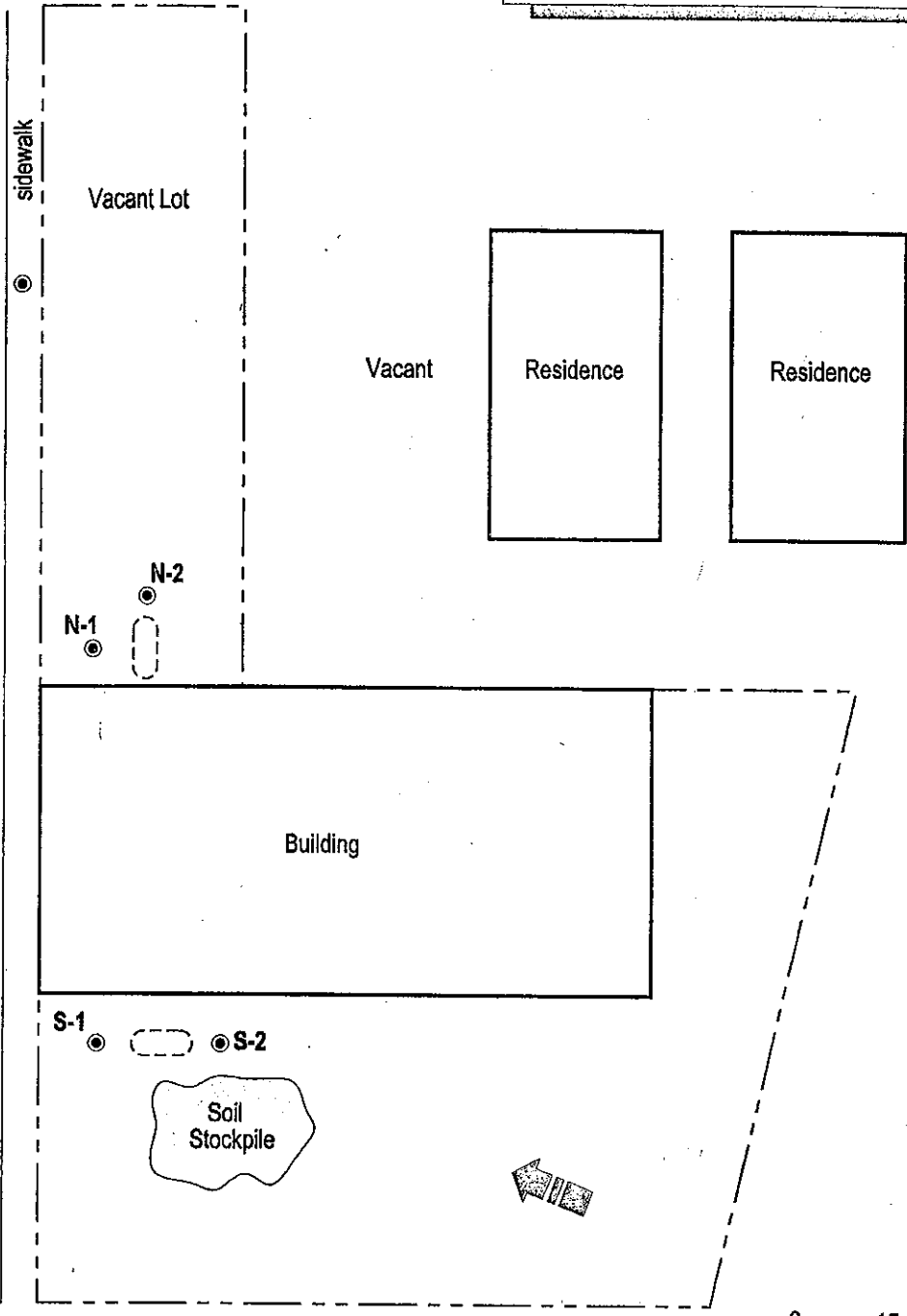
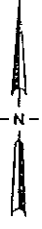
C A M B R I A

34th STREET

**EXPLANATION**

N-3 ● Geoprobe Boring Location

← Estimated Ground Water Flow Direction



HELEN STREET

sidewalk

Vacant Lot

Vacant

Residence

Residence

Building

Soil Stockpile

0 15 30

Scale (ft)

FIGURE

**2**

H:\MISC\PARTCH\FIGURES\BOR-LOC.DWG

**W.T. Partch**  
2862 Helen Street  
Oakland, California



C A M B R I A

**Geoprobe Boring Locations**

**Table 1. Soil Sample Analytical Data - 2856 Helen Street, Oakland California 94608**

Date	Sample ID	Sample Depth (ft)	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	TTLCLead
(All concentrations reported in milligrams per kilogram)									
<b>Southern former tank location, East end</b>									
8/6/96	#1	8.0	200	---	2.4	12.0	0.2	0.7	4.7
5/24/99	S-2, 5-6	5.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	5.2
5/24/99	S-2, 7-8	7.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	39
<b>Southern former tank location, West end</b>									
8/6/96	#2	8.0	290	---	6.5	17.0	1.5	7.6	4.8
8/6/96	#6	Stockpile Composite	10	---	0.14	0.88	0.29	0.61	11
5/24/99	S-1, 5-6	5.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	4.5
5/24/99	S-1, 10-11	10.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	4.0
5/24/99	S-1, 19-20	19.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	19
<b>Northern former tank location, North end</b>									
8/6/96	#3	8.0	0.43	---	< 0.1	< 0.1	20	110	32
5/24/99	N-1, 5-6	5.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	9.0
5/24/99	N-1, 9-10	9.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	5.4
<b>Northern former tank location, South end</b>									
8/6/96	#4	8.0	0.49	---	< 0.1	< 0.1	< 0.1	< 0.1	5.1
8/6/96	#5	Stockpile Composite	6.0	---	< 0.1	0.59	< 0.1	0.3	4.8
5/24/99	N-2, 7-8	7.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	4.0
<b>Northwest corner of property</b>									
5/24/99	N-3, 7-8	7.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	5.6
5/24/99	N-3, 23-24	23.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	6.6

**Abbreviations and Notes:**

--- = Not Analyzed  
 TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015  
 MTBE (Methyl tert-butyl ether) and BTEX by EPA Method 8020.  
 TTLCLead by EPA Method 6010 or 7420.  
 <x = Below detection limit of x milligrams per kilogram

**Table 2. Groundwater Analytical Data - 2856 Helen Street, Oakland California 94608**

Sample ID	Date	Depth to Water (ft)	TPHg	MTBE	All concentrations in µg/L (ppb)					Lead
					Benzene	Toluene	Ethylbenzene	Xylenes	Lead	
South Tank Pit	8/12/96	Surface of open pit	< 50	---	< 0.1	< 0.1	< 0.1	< 0.1	< 50 total	
S-1	5/24/99	5.9	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	46 dissolved	
S-2	5/24/99	7.2	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	<del>430 dissolved</del>	
N-1	5/24/99	10.4	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	71 dissolved	
N-2	5/24/99	9.2	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	210 dissolved	
N-3	5/24/99	9.0	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	120 dissolved	

**Abbreviations and Notes:**

--- = Not Analyzed

TPHg = Total Petroleum Hydrocarbons as gasoline by modified EPA Method 8015

MTBE = Methyl Tertiary Butyl Ether by EPA Method 8020

BTEX by EPA Method 8020

Total Lead by EPA Method 7420

Dissolved Lead by EPA Method 239.2

ppb = parts per billion equivalent to micrograms per liter

<x = Below detection limit of x micrograms per liter



Client: *Partch*  
 Address: *2856 Helen St, Oakland*

**SB-5-1**

**MW-**

Project Number: *143-1531-3*      Boring Location: *South Tank, West End*      Date: *5/24/99*  
 Geologist: *Eng. PLW*      Drilling Method: *Geoprobe, Vianex*      Time: *945*

Depth (ft)	Sample Interval	Time/Blow Cnt.	Well Const.	USC Class.	Soil Type and Comments	Color	Pen. Resist.	Moisture	Odor	Percentages				Plasticity	Permeability
										Clay	Silt	Sand	Gravel		
					<i>2" Asphalt Surface</i>										
				<i>FM</i>	<i>Black silty f. ll</i>	<i>Blk</i>	<i>Soft</i>	<i>damp</i>	<i>ND</i>		<i>20</i>	<i>20</i>		<i>60</i>	<i>None High</i>
				<i>MH</i>	<i>Clayey silt</i>	<i>Blk</i>	<i>Firm</i>	<i>damp</i>	<i>Slight</i>		<i>20</i>	<i>80</i>			<i>med Low</i>
<i>5</i>				<i>MH</i>	<i>Cl s.</i>	<i>Brown w/ grey green</i>									
<i>10</i>				<i>MH</i>	<i>Cl s.</i>	<i>Light</i>				<i>ND</i>	<i>15</i>	<i>80</i>	<i>5 fine</i>	<i>med med</i>	
<i>15</i>					<i>first water at 16'</i>	<i>Light orange</i>	<i>Soft</i>	<i>moist</i>	<i>moist</i>						
<i>20</i>							<i>Firm</i>	<i>Damp</i>							<i>Low</i>
<i>25</i>					<i>First water at 16'</i>										
					<i>Stabilized at 5.9'</i>										
<i>30</i>					<i>H<sub>2</sub>O sample collected from open hole</i>										
					<i>Note grouted w/ cement.</i>										
<i>35</i>															



Client: *Patch*  
 Address: *2856 Helen St., Oakland*

**SB- N-1 MW-**

Project Number: *193-1521-3* Boring Location: *North end, North end* Date: *5/24/99*  
 Geologist: *Engineer PW* Drilling Method: *Geoprobe, Vironex* Time: *1130*

Depth (ft)	Sample Interval	Time/Blow Cnt.	Well Const.	USC Class.	Soil Type and Comments	Color	Pen. Resist.	Moisture	Odor	Percentages				Plasticity	Permeability
										Clay	Silt	Sand	Gravel		
0-1				ML	<i>Silt - 1 s+g</i>	<i>Brn</i>	<i>firm</i>	<i>dry</i>	<i>ND</i>		<i>70</i>	<i>15</i>	<i>15</i>	<i>ND</i>	<i>Med</i>
1-5				ML	<i>cls: topsoil</i>	<i>Blk</i>	<i>soft</i>	<i>dry</i>	<i>ND</i>	<i>30</i>	<i>70</i>			<i>Med</i>	<i>Low</i>
5-10					<i>cls</i> <i>Brown w/black mottled</i>	<i>Brn</i> <i>blk</i>	<i>firm</i>	<i>damp</i>							
10-15															
15-20															
20-25					<i>gray w/orange and black mottled cls</i>			<i>moist</i>		<i>20</i>	<i>80</i>				
25-30								<i>damp</i>							
30-35					<i>First water at 16.8 ft</i> <i>stabilized at 10.4 ft</i> <i>No sample collected through</i> <i>temp. well screen 14-24 ft</i> <i>screen removed and</i> <i>hole grouted w/cement</i>										

Client: *Karich*  
 Address:

*SB-N-2*

MW-

Project Number: *193-1521-3*  
 Geologist: *Eng. DW*

Boring Location: *North Tank, west side*  
 Drilling Method: *Geoprobe, Viconex*

Date: *5/24/99*  
 Time: *12:30*

Depth (ft)	Sample Interval	Time/Blow Cnt.	Well Const.	USC Class.	Soil Type and Comments	Color	Pen. Resist.	Moisture	Odor	Percentages				Plasticity	Permeability
										Clay	Silt	Sand	Gravel		
-				ML	Silt w/ clay	Brn	firm	dry	ND		70	15	15	ND	Med
				MH	Clay top soil	Blk	soft	damp			30	70		med	low
5				ML	Clay w/ sand	gray/Brn					20	70	10	med	med
10				MH	Clay Brown w/ Black rubble	Brn/blk	firm				30	70			
15															
20				ML	Silt w/ sand	Brn/Orange	soft	wet			15	70	15	low/ND	med/High
											5	70	25		
				MH	Clay	gray/Brn	firm	damp			30	70		med	low
25					First water at 19 ft Stabilized at 9.2 ft No sample from open hole Grouted w/ cement.										
30															
35															

Client: *Karich*  
 Address: *2856 Helen St, Oakland*

**SB- N-3**      **MW-**

Project Number: *193-1531-3*      Boring Location: *NW corner of site*      Date: *5/24/99*  
 Geologist: *Engineer PW*      Drilling Method: *Geoprobe, Vironex*      Time: *13D*

Depth (ft)	Sample Interval	Time/Blow Cnt.	Well Const.	USC Class.	Soil Type and Comments	Color	Pen. Resist.	Moisture	Odor	Percentages				Plasticity	Permeability
										Clay	Silt	Sand	Gravel		
0				ML	<i>clsi top soil some rock &amp; brick frag</i>	<i>DK</i>	<i>soft</i>	<i>dry</i>	<i>ND</i>	<i>15</i>	<i>80</i>		<i>5</i>	<i>med</i>	<i>low</i>
5				ML	<i>clsi grey mottled black and brown occasional dry 2" sand &amp; gravel seams</i>	<i>gray</i>	<i>firm</i>	<i>damp</i>		<i>10</i>	<i>80</i>	<i>5 Fin</i>	<i>5</i>	<i>med</i>	<i>low</i>
10														<i>NO</i>	<i>med</i>
15				ML	<i>clsi</i>	<i>grey/orange</i>	<i>soft</i>	<i>wet</i>		<i>20</i>	<i>80</i>			<i>Low</i>	<i>med</i>
20				ML	<i>clsi w/ sand Grey/orange</i>	<i>orange</i>	<i>soft</i>	<i>wet</i>		<i>10</i>	<i>80</i>	<i>10 F</i>		<i>NO</i>	<i>med</i>
25				ML	<i>clsi</i>	<i>grey</i>	<i>firm</i>	<i>damp</i>		<i>30</i>	<i>70</i>			<i>med</i>	<i>low</i>
30					<i>First wet at 14 ft Stabilized at 9 ft The sample from open hole. Gouted w/ cement</i>										
35															

July 14, 1999

Mr. Amir Gholami  
Alameda County Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Re: **Risk Management Plan**  
2856 Helen Street  
Oakland, California 94608  
Cambria Project #193-1521-1  
STID: 170



Dear Mr. Gholami:

On behalf of W. Taylor Partch and Ms. Elizabeth McCune, Cambria Environmental Technology, Inc., (Cambria) is submitting this Risk Management Plan (RMP) for the site referenced above (Figure 1). The RMP was requested by Mr. Gholami of the Alameda County Department of Environmental Health (ACDEH) during his July 8, 1999 telephone conversations with Paul Waite of Cambria.

### SITE BACKGROUND

Site background information, investigation methods and all analytical results have been submitted by Cambria in previous reports to the ACDEH. All sampling locations are shown on the attached figures and historical analytical results are summarized on the attached tables.

On August 6, 1996, two 1,000-gallon underground storage tanks (USTs) were removed from the site by Bamer Construction of Castro Valley, California. The USTs were used for gasoline only and were last used in 1978. Soil and groundwater tests have shown that the site meets the California Regional Water Quality Control Board - San Francisco Bay Region (RWQCB) guidelines for low-risk soil cases for the following reasons:

- The leak has stopped and the hydrocarbon source has been removed;
- The site is adequately characterized;
- No water wells or other sensitive receptors are likely to be impacted;
- No groundwater impact currently exists and no contaminants are found at levels above established MCLs or other applicable water quality objectives;
- The site presents no significant risk to human health; and,
- The site presents no significant risk to the environment.

Oakland, CA  
Sonoma, CA  
Portland, OR  
Seattle, WA


**Cambria  
Environmental  
Technology, Inc.**

1144 65th Street  
Suite B  
Oakland, CA 94608  
Tel (510) 420-0700  
Fax (510) 420-9170

**RISK MANAGEMENT PLAN**

The Alameda County Department of Environmental Health requested that this Risk Management Plan be prepared for the property at 2856 Helen Street, Oakland, California, which was the subject of soil and groundwater investigations completed in July 1999.

1. Notice of change in land use for this property should be sent to:



Alameda County Health Care Services Agency  
Environmental Health Services  
Environmental Protection (LOP)  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

2. Petroleum hydrocarbons were not detected in soil and groundwater samples collected in 1999. However, due to the detection of petroleum hydrocarbons in soils at 8 ft depth in 1996, construction workers who may handle soils during future construction activities should take appropriate precautions. A health and safety plan should be prepared that requires Level D protection for all workers as per Occupational Health and Safety Administration (OSHA) rules (29 CFR 1910.120). Level D protection should include appropriate gloves, work clothes, boots, and hard hats, if required.
3. If soils are excavated during construction activities, a soil management plan governing sampling of those soils to determine disposal or reuse options should be developed and submitted to the ACDEH. If it becomes necessary to evacuate any groundwater during construction activities, such groundwater should be stored in temporary containers and analyzed for disposal options.
4. Although no petroleum hydrocarbons have been detected in groundwater, the shallow groundwater beneath the property should not be used for any purpose, unless analyzed and treated, if necessary. If water is proposed for use, appropriate notice should be given to the ACDEH.

Mr. Amir Gholami  
July 14, 1999

## CONCLUSIONS

As stated in Cambria's *Preliminary Risk Assessment* for this site, no petroleum hydrocarbons have been detected in groundwater or vadose zone soils at the site. The detection limits used during analysis, as shown on Tables 1 and 2, are below the ASTM 1527 Tier 1 look-up tables for all risk categories. Therefore, the risk results are below any selected target risk levels set forth for the site, and current site conditions do not pose a significant risk to human or environmental receptors in the area.



Thank you for your continued assistance with this project. If you require any additional information, please contact Cambria at (510) 420-0700.

Sincerely,  
**Cambria Environmental Technology, Inc.**

Bob Clark-Riddell, P.E.  
Principal Engineer

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Figures: 1 - Site Location Map  
2 - Soil and Groundwater Sampling Locations

Tables: 1 - Soil Analytical Data  
2 - Groundwater Analytical Data

cc: W. Taylor Partch, 2051 San Jose Avenue, Alameda, California 94501  
Elizabeth McCune, 20068 Summerridge Drive, Castro Valley, California 94552  
Chuck Headlee, RWQCB, 1515 Clay Street, Suite 1400, Oakland, California 94612