CAMBRIA

SLIC 322

January 23, 1997

Ms. Susan Hugo
Alameda County Department
of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

Re: **Investigation Workplan Addendum**
Richard and Julia Becker
1300 Powell Street
Emeryville, CA

Dear Ms. Hugo:

On behalf of Mr. Richard Becker, Cambria Environmental Technology, Inc. (Cambria) has prepared this Investigation Workplan Addendum in response to your January 6, 1997 letter to Mr. Becker. As you requested, Cambria updated the proposed boring locations to include additional borings within ten ft down gradient of borings B-1, B-4, and B-5 (Figure 1). In addition we included a health and safety plan for your review as Attachment A.

Cambria appreciates this opportunity to provide environmental consulting services to Richard and Julia Becker. Please call David Elias at (510) 420-9176 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.

David Elias

David Elias, RG
Project Geologist

Attachments: A - Health and Safety Plan

cc: Mr. Dick Becker, Construction Services, 1300 Powell Street, Emeryville, CA 94608

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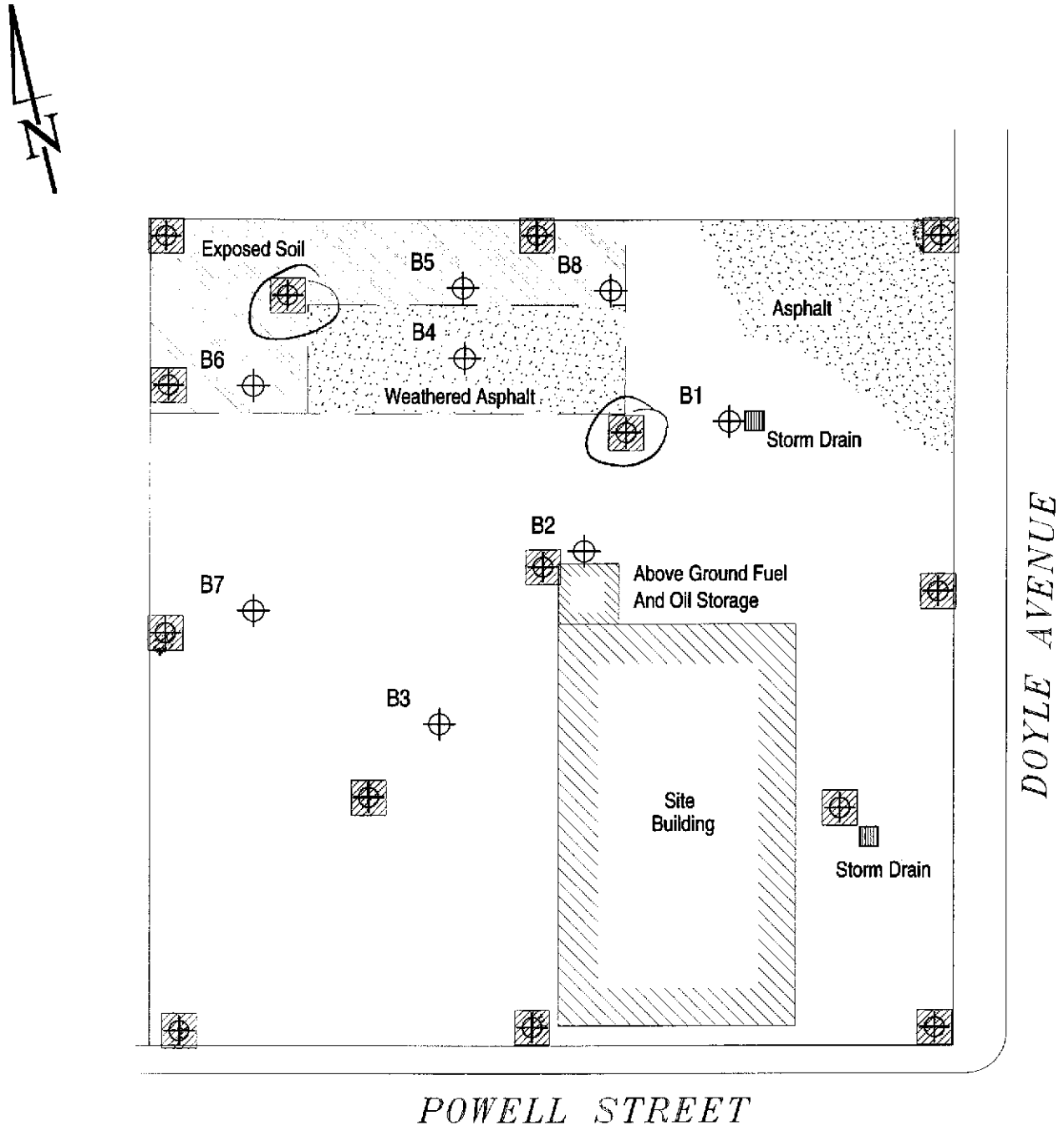

CAMBRIA
Environmental Technology, Inc.

Construction Services Facility
1300 Powell Street
Emeryville, CA

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Soil Boring Locations

FIGURE
1

CAMBRIA

ATTACHMENT - A

HEALTH AND SAFETY PLAN

SITE SAFETY PLAN

Date: January 16, 1997 Project Number: 95-423

A. SITE DESCRIPTION

Client: Richard and Julia Becker
Site Address: 1300 Powell Street, Emeryville, CA
Site Use/Conditions: Active Construction Equipment Rental Yard
Area Land Use: [X] Residential [X] Commercial [ ] Industrial [ ] Agricultural [ ] Other _____
Topography: [X] Flat [ ] Hilly [ ] Open Excavation [X] Paved [X] Unpaved [ ] Other _____
Weather Conditions: Possible Rain, 50-70 degrees Farenheit

B. WORK TO BE PERFORMED: Advance about 12 soil borings collecting soil and ground water samples.

C. ON SITE CONTROL: Site control area is marked off with cones and caution tape.

A safe perimeter has been established. The boundaries are defined by: [X] Tape [X] Cones [ ] fence [ ] Other _____
The Contamination Reduction Zone is designated as: The area immediately outside the work area.
The Support Zone is designated as: The area immediately outside the work area.

CHEMICAL HAZARD EVALUATION

Suspected or known concentrations of the following compounds are expected at the site:

Compound	Free Product (thickness)	Ambient Air Conc.	Soil Conc.	Water Conc.	TWA	IDLH
Gasoline						
Diesel						
Benzene						
Motor Oil	inches	0 ppm	up to 3,200	unknown	N/A	N/A

[X] Applicable material safety data sheets (MSDS) are attached.
[ ] Vapor-phase concentrations may exceed 10% of the lower explosive limit (LEL).
[ ] Vapor-phase concentrations may exceed OSHA PEL or 8-hour TWA for the following compounds: _____

PHYSICAL HAZARD EVALUATION

[X] Underground utilities and or process lines have been identified. An underground line detector survey is [ ], is not [ ] required.
[X] Personnel are aware of the safety hazards associated with lifting heavy objects, moving machinery and equipment, slipping, falling and operating or working near electrical equipment.
[ ] Confined space entry is [ ], is not [X] required. If required, a confined entry checklist is attached and proper confined space entry procedures will be followed.

AIR QUALITY MONITORING

	Instrument	**Monitoring Intervals**
[ ]	PID	_____
[ ]	FID	_____
[X]	LEL Meter	As needed
[ ]	Calorimetric tubes	_____

Substance	Concentration Ranges	Pump Strokes

PERSONAL PROTECTIVE EQUIPMENT

The required personal protective equipment level is: [ ] A, [ ] B, [ ] C, [X] D.

Specific protective equipment required: Steel toed boots and gloves
Protective clothing required: Long pants
Respiratory equipment required: None required, will be available on site if conditions change
Cartridge type: Organic vapor
This cartridge is expected to provide protection for __8___ hrs
[X] All site personnel have been trained in the use of protective equipment

DECONTAMINATION PROCEDURES

Personnel and equipment shall be decontaminated as follows: [X] Wash and rinse all exposed skin and equipment.
[ ] Other: _____

HEAT STRESS MONITORING

The anticipated air temperature is 70 degrees F.

[ ] A Health Alert Warning (temperature over 95 degrees F) has been issued by the weather service.
[X] Workers are trained to recognize and treat heat stress symptoms. The site safety officer will monitor pulse and temperature of workers showing signs of heat stress. No person shall work with a temperature exceeding 100 degrees F.
[X] Drinking water is available at: Site Safety Officers vehicle

EMERGENCY PROCEDURES

Injury: The Site Safety Officer and Project Team Leader should evaluate the injury and contact an ambulance and/or the designated medical facility as needed. An incident report form should be filed for any injury.

Fire/Explosion: All personnel should immediately move to a safe location away from threat of fire and/or explosion. Sound alarm if available and call fire department.

Emergency escape route and meeting place: Leave site through driveway and meet on Doyle Street, North of site

EMERGENCY MEDICAL FACILITIES

Hospital name and location: Summit Medical Center
Hospital phone number: 869-6600
A map to the hospital is attached. A first aid kit, eye wash and other emergency equipment is located in the Site Safety Officer's vehicle.

Police Number: __911_____ ***Fire Number:*** _911_____
Office Number: __911_____ ***Client Number:*** _(510)652-6800, _____

Any injury sustained while working are covered under Worker's Compensation insurance. Any injured Cambria employee should inform the medical care facility that this is a Worker's Compensation claim and that our insurance policy is R.L. Milsner. Copies of the doctor's report on the injury should be forwarded to our insurance carrier at 1676 N. California Boulevard #375, Walnut Creek, CA 94596. Cambria employees must notify David Elias on the same day so that we can properly file this claim.

Any injured sub-contractor or sub-contractor employee will be covered under their employer's policy.

Emergency medical treatment due to chemical exposure to compounds anticipated to be at the site is presented on the attached MSDS forms.

All site workers have read the plan and are familiar with and will abide by its provisions.

	Name	Signature
Project Team Leader		
Site Safety Officer		
Field Team Leader		
Field Team Member		
Field Team Member		

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BERKELEY
SAN ANTONIO
EMERYVILLE
OAKLAND
SITE
SUMMIT HOSP.
BERKELEY AQUATIC PARK
EAST SHORE HIGHWAY
SOUTHERN PACIFIC
Oakland City College
Technical High Sch
McClymonds High School
Emery High Sch
Golden Gate Jr High Sch
Longfellow School
Lincoln School
Washington School
Santa Fe School
Clawson School
Columbus School
Le Conte School
McKinley Sch
Peralta School
Emerson School
Durant School
Westlake Jr High Sch
Lafayette Sch
Willow Manor School
St Patrick School
Hawley Sch
St Columba Sch
Bella Vista Sch
MAC ARTHUR
ASHBY (V. AND D. PERALTA)
SAN PABLO AVE
SHATTUCK
TELEGRAPH
BROADWAY
FREEWAY
Mud
Piles
Pile
Radio Towers
Sewage Disposal

OILS, MISCELLANEOUS: MOTOR

OMT

Common Synonyms	Oily liquid	Yellow-brown	Lube oil odor
Crankcase oil Lubricating oil Transmission oil	Floats on water.		

Stop discharge if possible.
Call fire department.
Avoid contact with liquid.
Isolate and remove discharged material.
Notify local health and pollution control agencies.

Fire

Combustible.
Extinguish with dry chemical, foam or carbon dioxide.
Water may be ineffective on fire.
Cool exposed containers with water.

Exposure

CALL FOR MEDICAL AID.

LIQUID
Irritating to skin and eyes.
Harmful if swallowed.
Remove contaminated clothing and shoes.
Flush affected areas with plenty of water.
IF IN EYES, hold eyelids open and flush with plenty of water.
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.
DO NOT INDUCE VOMITING.

Water Pollution

Effect of low concentrations on aquatic life is unknown.
Floating to shoreline.
May be dangerous if it enters water intakes.

Notify local health and wildlife officials.
Notify operators of nearby water intakes.

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)

Mechanical containment
Should be removed
Chemical and physical treatment

2. LABEL

2.1 Category: None
2.2 Class: Not pertinent

3. CHEMICAL DESIGNATIONS

3.1 CG Compatibility Class: Miscellaneous Hydrocarbon Mixtures
3.2 Formula: Not applicable
3.3 IMO/UN Designation: 3.3/1270
3.4 DOT ID No.: 1270
3.5 CAS Registry No.: Data not available

4. OBSERVABLE CHARACTERISTICS

4.1 Physical State (as shipped): Liquid
4.2 Color: Yellow fluorescent
4.3 Odor: Characteristic

5. HEALTH HAZARDS

5.1 Personal Protective Equipment: Protective gloves; goggles or face shield.
5.2 Symptoms Following Exposure: INGESTION: minimal gastrointestinal irritation; increased frequency of bowel passage may occur. ASPIRATION: pulmonary irritation is normally minimal but may become more severe several hours after exposure.
5.3 Treatment of Exposure: INGESTION: do NOT lavage or induce vomiting. ASPIRATION: treatment probably not required; delayed development of pulmonary irritation can be detected by serial chest x-rays. EYES: wash with copious amounts of water. SKIN: wipe off oil and wash with soap and water.
5.4 Threshold Limit Value: Data not available
5.5 Short Term Inhalation Limits: Data not available
5.6 Toxicity by Ingestion: Grade 1; LD_{50} = 5 to 15 g/kg
5.7 Late Toxicity: Data not available
5.8 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.
5.9 Liquid or Solid Irritant Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
5.10 Odor Threshold: Data not available
5.11 IDLH Value: Data not available

6. FIRE HAZARDS

6.1 Flash Point: 275—600°F C.C.
6.2 Flammable Limits in Air: Data not available
6.3 Fire Extinguishing Agents: Dry chemical, foam, or carbon dioxide
6.4 Fire Extinguishing Agents Not to be Used: Water may be ineffective
6.5 Special Hazards of Combustion Products: Not pertinent
6.6 Behavior in Fire: Not pertinent
6.7 Ignition Temperature: 325—625°F
6.8 Electrical Hazard: Not pertinent
6.9 Burning Rate: 4 mm/min.
6.10 Adiabatic Flame Temperature: Data not available
6.11 Stoichiometric Air to Fuel Ratio: Data not available
6.12 Flame Temperature: Data not available

7. CHEMICAL REACTIVITY

7.1 Reactivity With Water: No reaction
7.2 Reactivity with Common Materials: No reaction
7.3 Stability During Transport: Stable
7.4 Neutralizing Agents for Acids and Caustics: Not pertinent
7.5 Polymerization: Not pertinent
7.6 Inhibitor of Polymerization: Not pertinent
7.7 Molar Ratio (Reactant to Product): Data not available
7.8 Reactivity Group: 33

8. WATER POLLUTION

8.1 Aquatic Toxicity: Data not available
8.2 Waterfowl Toxicity: Data not available
8.3 Biological Oxygen Demand (BOD): Data not available
8.4 Food Chain Concentration Potential: None

9. SHIPPING INFORMATION

9.1 Grades of Purity: Various viscosities
9.2 Storage Temperature: Ambient
9.3 Inert Atmosphere: No requirement
9.4 Venting: Open (flame arrester)

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)

A-T-U

11. HAZARD CLASSIFICATIONS

11.1 Code of Federal Regulations: Not listed
11.2 NAS Hazard Rating for Bulk Water Transportation: Not listed
11.3 NFPA Hazard Classification: Not listed

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 Physical State at 15°C and 1 atm: Liquid
12.2 Molecular Weight: Not pertinent
12.3 Boiling Point at 1 atm: Very high
12.4 Freezing Point: —29.9°F = —34.4°C = 238.8°K
12.5 Critical Temperature: Not pertinent
12.6 Critical Pressure: Not pertinent
12.7 Specific Gravity: 0.84—0.96 at 15°C (liquid)
12.8 Liquid Surface Tension: 36-37.5 dynes/cm = 0.036—0.0375 N/m at 20°C
12.9 Liquid Water Interfacial Tension: 33—54 dynes/cm = 0.033—0.054 N/m at 20°C
12.10 Vapor (Gas) Specific Gravity: Not pertinent
12.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent
12.12 Latent Heat of Vaporization: Not pertinent
12.13 Heat of Combustion: —18,486 Btu/lb = —10,270 cal/g = —429.98 X 10^3 J/kg
12.14 Heat of Decomposition: Not pertinent
12.15 Heat of Solution: Not pertinent
12.16 Heat of Polymerization: Not pertinent
12.25 Heat of Fusion: Data not available
12.26 Limiting Value: Data not available
12.27 Reid Vapor Pressure: Data not available

NOTES

OILS, MISCELLANEOUS: MOTOR

12.17 SATURATED LIQUID DENSITY		12.18 LIQUID HEAT CAPACITY		12.19 LIQUID THERMAL CONDUCTIVITY		12.20 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot (estimate)	Temperature (degrees F)	British thermal unit per pound-F (estimate)	Temperature (degrees F)	British thermal unit-inch per hour-square foot-F (estimate)	Temperature (degrees F)	Centipoise
50	52.430	50	.460	35	.920	100.42	275.000
52	52.430	52	.461	40	.919		
54	52.430	54	.462	45	.918		
56	52.430	56	.463	50	.917		
58	52.430	58	.464	55	.916		
60	52.430	60	.465	60	.915		
62	52.430	62	.466	65	.914		
64	52.430	64	.467	70	.913		
66	52.430	66	.468	75	.912		
68	52.430	68	.469	80	.911		
70	52.430	70	.470	85	.910		
72	52.430	72	.471	90	.909		
74	52.430	74	.472	95	.908		
76	52.430	76	.473	100	.907		
78	52.430	78	.474	105	.906		
80	52.430	80	.475	110	.905		
82	52.430	82	.476	115	.904		
84	52.430	84	.477	120	.903		
		86	.478				
		88	.479				
		90	.480				
		92	.481				
		94	.482				
		96	.483				
		98	.484				
		100	.485				

12.21 SOLUBILITY IN WATER		12.22 SATURATED VAPOR PRESSURE		12.23 SATURATED VAPOR DENSITY		12.24 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch (estimate)	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	I	70	.042		N		N
	N	75	.049		O		O
	S	80	.057		T		T
	O	85	.065				
	L	90	.076		P		P
	U	95	.087		E		E
	B	100	.100		R		R
	L	105	.114		T		T
	E	110	.131		I		I
		115	.149		N		N
		120	.170		E		E
		125	.193		N		N
		130	.218		T		T
		135	.247				
		140	.279				
		145	.314				
		150	.352				
		155	.395				
		160	.443				
		165	.495				
		170	.552				
		175	.615				
		180	.683				
		185	.758				
		190	.841				
		195	.930				