



# HORIZON ENVIRONMENTAL INC.

Specialists in Site Assessment, Remedial Testing, Design and Operation

September 23, 1998

Mr. Mike Fuller  
Fuller Excavating and Demolition, Inc.  
3283 Luyung Drive  
Rancho Cordova, California 95742

Subject: **Soil Sampling Report**  
Former Minami Nursery site  
Penny Lane, San Lorenzo, California

Mr. Fuller:

At the request of Fuller Excavating and Demolition, Inc. (FE&DI), Horizon Environmental Inc. (Horizon) conducted soil sampling activities for the above-referenced site (Figure 1). We understand that the work was requested by your client, Mr. Jay Woidtke, attorney for the estate of Mr. George Minami Jr., in order to facilitate the disposal of the remaining soil stockpiled at the site. We understand that FE&DI intends to dispose of the soil at the Browning Ferris Industries (BFI) landfill on North Vasco Road outside of Livermore, California.

## Site Description

The former Minami Nursery site is currently located on Penny Lane in San Lorenzo, California. The city of San Lorenzo is located in west-central Alameda County, California, as shown on the Site Vicinity Map (Figure 1). The site is currently a vacant lot of approximately 1/2-acre in size that originally was a portion of the 7 1/2-acre Minami Nursery property, which has since been largely developed as a residential subdivision. A large stockpile of soil presently occupies the central area of the site. The site is relatively flat, lies at an elevation of approximately 40 feet above mean sea level (MSL). Residential properties are located to the north, south, and east of the site, while commercial businesses are located to the west of the site. Hesperian Boulevard is located about 200 feet west of the site. The site boundaries and approximate locations of pertinent site features are shown on the Site Plan (Figure 2).

## Previous Work

Previous work has been performed at the site since 1988 by Horizon and others. A detailed summary of the previous work performed at the site since 1988 was included in Horizon's Soil and Groundwater Sampling Report for the Second Quarter 1998 (Horizon, May 1998). A brief summary of the work related to the generation of the stockpiled soil at the site is provided below.

In 1988 there were three underground fuel storage tanks (USTs) located at the site: a 1,000-gallon gasoline UST (Tank #1), a 2,000-gallon fuel oil UST (Tank #2), and an estimated 1,000-gallon fuel oil UST (Tank #3). Results of laboratory analyses of soil and groundwater samples collected at the site between 1988 and 1998 have indicated the presence of petroleum hydrocarbons in the subsurface soil and groundwater in the areas of former Tank #1 and former Tank #2 beneath the site. In November 1989, Engineering Science Inc. (ESI) of Alameda, California, excavated and removed Tank #1 and Tank #2 from the site (ESI, August 1990).

In February 1996, FE&DI personnel visited the site to examine and estimate the amount of stockpiled soil at the site. Field measurements suggested that as much as 2,500 cubic yards of soil was stockpiled at the site. In May 1996, FE&DI collected 10 composite soil samples from the stockpiled soil at the site, then transported approximately 500 cubic yards of soil from the site to the Landfill Management facility in Hayward, California (FE&DI, 1996).

In April 1998, at the request of FE&DI, a Horizon geologist collected five composite soil samples from the stockpiled soil. Based upon rough measurements made at the site, the Horizon geologist estimated that approximately 1,500 cubic yards of soil were stockpiled at the site in two mounds. The smaller stockpile (SP#1) contained approximately 500 cubic yards of soil, while the larger stockpile (SP#2) contained approximately 1,000 cubic yards of soil. The soil samples were analyzed for the following compounds: Total Oil and Grease (TOG), Total Petroleum Hydrocarbons as diesel (TPHd), Total Petroleum Hydrocarbons as gasoline (TPHg), the volatile gasoline constituents Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), and the fuel oxygenate methyl tertiary butyl ether (MTBE).

The analytical results for the smaller soil stockpile SP#1 indicated detectable concentrations of TOG (up to 96 ppm) and TPHd (up to 2.6 ppm), and nondetectable concentrations of TPHg (less than 1.0 ppm), BTEX (less than 0.005 ppm), and MTBE (less than 0.05 ppm). The analytical results for the larger soil stockpile SP#2 indicated detectable concentrations of TOG (up to 570 ppm) and TPHd (up to 53 ppm), and nondetectable concentrations of TPHg (less than 1.0 ppm), BTEX (less than 0.005 ppm), and MTBE (less than 0.05 ppm). In 1998, FE&DI transported approximately 500 cubic yards of soil in SP#1 from the site to the Landfill Management facility in Hayward, California.

### Soil Stockpile Sampling

On August 26, 1998, Horizon personnel arrived at the site to collect two composite soil samples from the soil stockpile SP#2. Four discrete soil samples were collected for each composite soil sample, with a total of eight discrete soil samples being collected from the stockpiled materials. The soil samples were collected by removing approximately one foot of soil from randomly selected locations at the surface of the stockpile and driving a brass sample sleeve into the stockpile at that location. Horizon Field Methods and Procedures for Soil Stockpile Sampling are included as Attachment A

After collecting the soil stockpile samples (8080-SP2 and 8150-SP2), each brass sample container was labeled in the field, placed in an ice chest, and transported under chain-of-custody to McCampbell Analytical in Pacheco, California (Certificate No. 1644). The discrete soil samples were composited by the laboratory prior to analysis. The requested analyses were for the metals Cadmium, Chromium, Lead, Nickel and Zinc by the Leaking Underground Fuel Tank (LUFT) method, pesticides by Environmental Protection Agency (EPA) Method 8080, and herbicides by EPA Method 8150. The analytical results for the composite soil samples are compiled in Table 1. The laboratory analytical data sheets and the chain-of-custody report are included as Attachment B.

### Summary of Results

The results of the laboratory analyses for the sampling work performed on soil stockpile SP#2 on August 26, 1998 indicated the following:

- Detectable concentrations for four of the five LUFT metals. The analytical results indicated no detectable concentrations of Cadmium (less than 0.5 parts per million [ppm]), and detectable concentrations of Chromium (at 40 ppm), Lead (between 18 and 26 ppm), Nickel (between 48 and 49 ppm), and Zinc (between 80 and 88 ppm).
- No detectable concentrations of various pesticide or herbicide compounds.

The cumulative results of the laboratory analyses performed in 1998 on the stockpiled soil are summarized in Table 1 of this report.

### Report Distribution

We recommend a copy of this report be forwarded to:

Mr. Brian Oliva, Hazardous Materials Specialist  
Department of Environmental Health  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Room #250  
Alameda, California 94502 - 6577

Ms. Judy Erladson, Profiling Department  
Browning Ferris Industries Inc.  
Vasco Road Sanitary Landfill  
4001 North Vasco Road  
Livermore, California 94550

Former Minami Nursery site  
Penny Lane, San Lorenzo, California

September 23, 1998  
Soil Stockpile Sampling Report

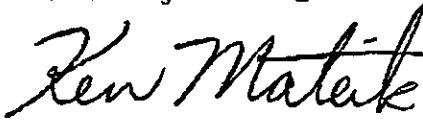
If you have any questions, please contact Horizon at (916) 939 - 2170.

Sincerely,

**HORIZON ENVIRONMENTAL INC.**

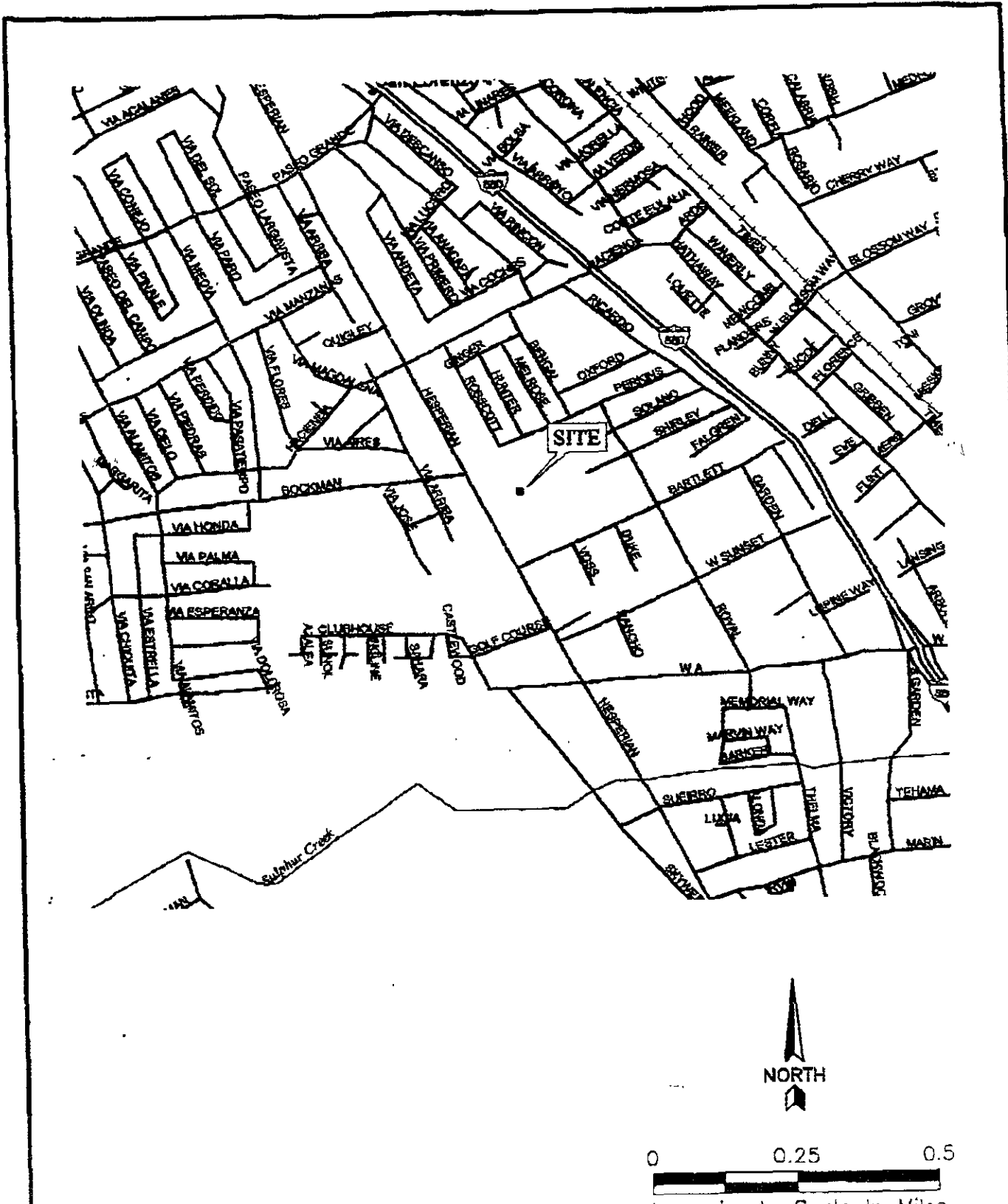


Gary D. Barker  
Senior Project Manager




Kenny B. Mateik  
Registered Geologist  
C.E.G. No. 1935

Attachments: Figure 1	Site Vicinity Map
Figure 2	Site Map
Table 1	Soil Stockpile Sampling Data
Attachment A	Horizon Field Methods and Procedures
Attachment B	Laboratory Data Sheets and Chain-of-Custody Reports

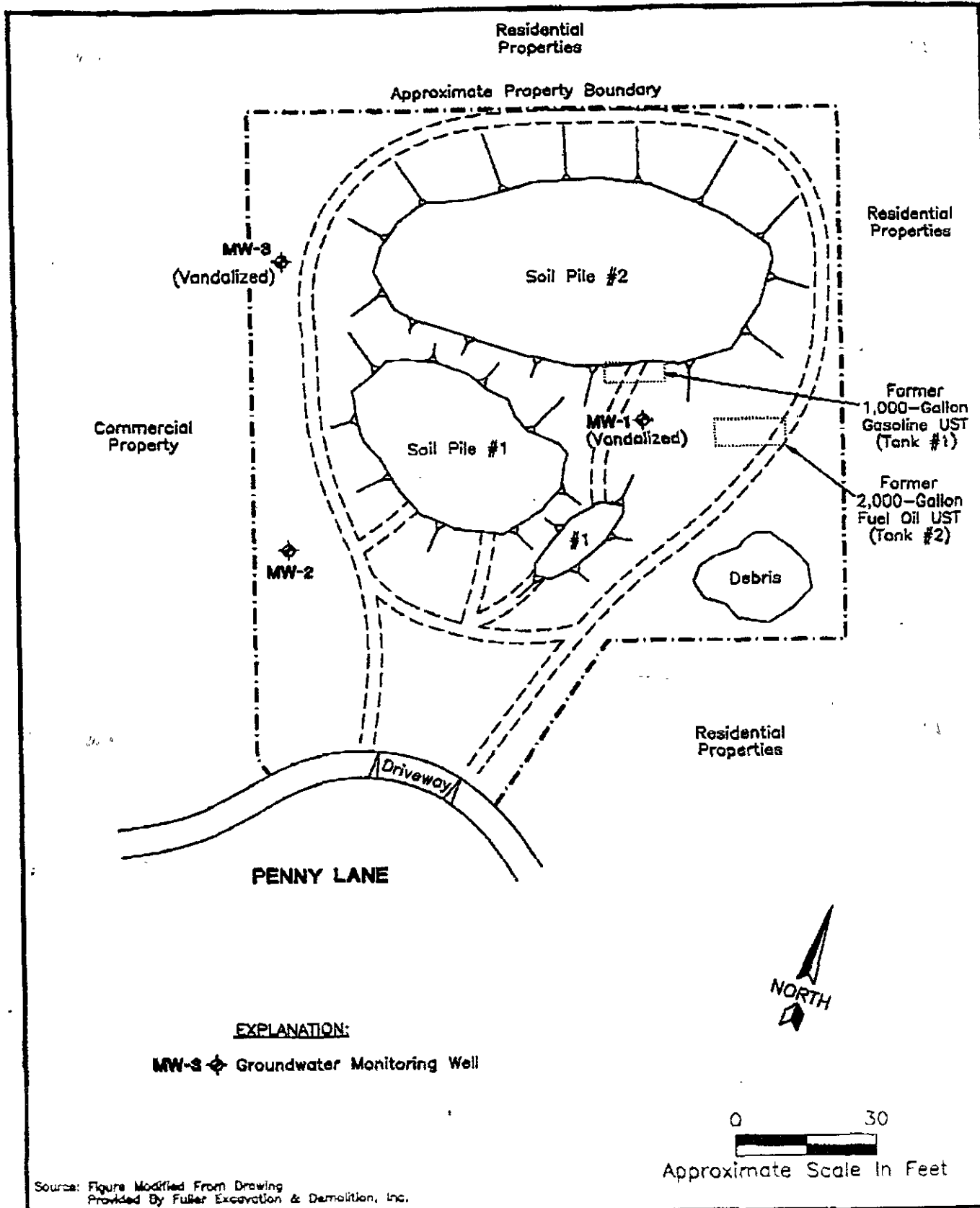


Source: Figure Modified From Street Atlas USA, Delorme (1995).

 <b>HORIZON ENVIRONMENTAL INC.</b>	
Project Number: 16001.41 Prepared By: K. Mateik Reviewed By: G. Barker	Drawn By: D. Alston Date: 05/98 Revised Date:

**SITE VICINITY MAP**  
 FORMER MINAMI NURSERY SITE  
 PENNY LANE  
 SAN LORENZO, CALIFORNIA


**FIGURE**  
 1



**EXPLANATION:**

**MW-S**  Groundwater Monitoring Well

Source: Figure Modified From Drawing  
 Provided By Fuller Excavation & Demolition, Inc.

 <b>HORIZON ENVIRONMENTAL INC.</b>		<b>SITE PLAN</b> FORMER MINAMI NURSERY SITE PENNY LANE SAN LORENZO, CALIFORNIA	<b>FIGURE</b>
			<b>2</b>
Project Number: 16001.41 Prepared By: K. Matalk Reviewed By: G. Barker	Drawn By: D. Alston Date: 05/98 Revised Date:		

**TABLE 1**  
**SOIL STOCKPILE SAMPLING DATA**

Former Minami Nursery Site  
Penny Lane  
San Lorenzo, California

*Handwritten notes:*  
former nursery site  
Stockpile only

Sample Number	Date	Pesticides ppm	Herbicides ppm	Cadmium ppm	Chromium ppm	Lead ppm	Nickel ppm	Zinc ppm
8080-SP2	08/26/98	ND	ND	<0.5	40	26	49	88
8150-SP2	08/26/98	ND	ND	<0.5	40	18	48	80

All measurements are in parts per million (ppm).  
ND: Not Detected = Less than the laboratory detection limit (refer to laboratory data sheet for specific detection limits).

*Handwritten notes:*  
Cadmium  
TABLE  
R4000

Sample Number	Date	TOG ppm	TPH-d ppm	TPH-g ppm	Benzene ppm	Toluene ppm	Ethylbenzene ppm	Xylenes ppm	MTBE ppm
SP-1 A,B,C,D	04/18/98	<50	1.9	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
SP-1 E,F,G,H	04/18/98	96	2.6	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
SP-2 A,B,C,D	04/18/98	210	15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
SP-2 E,F,G,H	04/18/98	570	51	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
SP-2 I,J,K,L	04/18/98	500	53	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050

All measurements are in parts per million (ppm).

- TPHd: Total Petroleum Hydrocarbons as diesel analyzed by EPA Methods 3550/M8015
- TPHg: Total Petroleum Hydrocarbons as gasoline analyzed by EPA Methods 5350/M8015
- Benzene, toluene, ethylbenzene and xylenes (BTEX) analyzed by EPA Methods 5030/M602
- MTBE: Methyl tertiary butyl ether analyzed by modified EPA Method 602 (M602)
- TOG: Total Oil and Grease analyzed by EPA Standard Method 5520 C, D, and F
- <: Less than the laboratory detection limit

# **ATTACHMENT A**

## **FIELD METHODS AND PROCEDURES**

Job No 16001.11

**HORIZON ENVIRONMENTAL INC.**



**HORIZON ENVIRONMENTAL INC.  
FIELD METHODS AND PROCEDURES**

The following section describes field procedures that will be utilized by Horizon Environmental Inc. (Horizon) personnel in performance of the tasks involved with this project.

**1.0 HEALTH AND SAFETY PLAN**

Field work performed by Horizon and subcontractors at the site will be conducted according to guidelines established in a Site Health and Safety Plan (SHSP). The SHSP is a document that describes the hazards that may be encountered in the field and specifies protective equipment, work procedures, and emergency information. A copy of the SHSP will be at the site and available for reference by appropriate parties during work at the site.

**2.0 SOIL SAMPLING**

Soil samples collected from stockpiled soil will be collected by selecting random locations accessible around the soil pile, removing approximately six inches of soil and driving a clean brass sleeve into the soil pile at this location. The number of samples collected will be based on the amount of samples required for characterization depending on the disposal facility requirements. A composite sample is normally four sample locations (as discrete samples) per composite. All samples collected will be transported utilizing appropriate chain of custody protocol to a laboratory certified to perform the requested analyses.

**ATTACHMENT B**

**LABORATORY DATA SHEETS**

**AND**

**CHAIN OF CUSTODY RECORD**

Job No. 1600111

HORIZON ENVIRONMENTAL INC.

**McCAMBELL ANALYTICAL, INC.**

110 2<sup>nd</sup> AVENUE SOUTH, #D7  
PACIFICCO, CA 94553-5960

Telephone: (925) 798-1620

Fax: (925) 798-1622

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME

RUSH 24 HOUR 48 HOUR 5 DAY

Report To: Ken Matek Bill To:  
Company: Horizon Environmental  
501 Golden Foothill Parkway, #7  
El Dorado Hills, CA 95762  
Tele: (916) 939-2170 Fax: (916) 939-2172  
Project #: 16001-11 Project Name: Mimami  
Project Location: Penny Lane, San Lorenzo  
Sampler Signature:

SAMPLE ID	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED			Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO <sub>3</sub>			
8050 SP2		8/26		2		X										
8150 SP2		8/26		4		X										94201 94202

ICE     
 COND CONTAINERS     
 HEAD SPACE ABSENT     
 VIALS/CAPS/NEEDLES/OTHER     
 PRESERVATION APPROPRIATE     
 CONTAINERS

Relinquished By: *[Signature]* Date: 8/26/05 Time: 10:10 Received By: *[Signature]* MAF  
 Relinquished By: Date: Time: Received By:  
 Relinquished By: Date: Time: Received By:

Remarks: Bill To: Fuller Excavating  
Rancho Cordova, CA  
(916) 858-8300

Jun. 05 1998 08:29AM P12

FAX NO. : 9168583301

FROM :



McCAMPBELL ANALYTICAL INC.

110 2nd Ave. South, #D7, Pacheco, CA 94553-5560  
Telephone : 925-798-1620 Fax : 925-798-1622  
http://www.mccampbell.com E-mail: main@mccampbell.com

Horizon Environmental Inc. 5011 Golden Foothill Parkway, Suite 7 El Dorado Hills, CA 95762	Client Project ID: #16001-11; Minami	Date Sampled: 08/26/98
	Client Contact: Ken B. Mateik	Date Received: 08/26/98
	Client P.O:	Date Extracted: 08/26/98
		Date Analyzed: 08/27/98

LUFT Metals\*

EPA analytical methods 6010/200.7, 239.2<sup>1</sup>

Lab ID	Client ID	Matrix	Extraction <sup>2</sup>	Cadmium	Chromium	Lead	Nickel	Zinc	% Recovery Surrogate
94201	8080-SP2	S	TTLIC	ND	40	26	49	88	105
94202	8150-SP2	S	TTLIC	ND	40	18	48	80	105
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	S	TTLIC	0.5 mg/kg	0.5	3.0	2.0	1.0		
	W	TTLIC	0.005 mg/l	0.005	0.005	0.05	0.05		
	—	STLC, TCLP	0.01 mg/L	0.05	0.2	0.05	0.05		

\* water samples are reported in mg/L, soil and sludge samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / SPLP extracts in mg/l.  
<sup>1</sup> Lead is analyzed using EPA method 6010 (ICP) for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples  
<sup>2</sup> EPA extraction methods 1311 (TCLP), 3010/3020 (water, TTLIC), 3040 (organic matrices, TTLIC), 3050 (solids, TTLIC); STLC - CA Title 22  
<sup>3</sup> surrogate diluted out of range; N/A because surrogate not applicable to this analysis  
<sup>4</sup> reporting limit raised due to matrix interference  
 1) liquid sample that contains greater than ~2 vol. % sediment, this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations

DHS Certification No 1644

Edward Hamilton, Lab Director



McCAMPBELL ANALYTICAL INC.

110 2nd Ave. South, #D7, Pacheco, CA 94553-5560  
Telephone: 925-798-1620 Fax: 925-798-1622  
http://www.mccampbell.com E-mail: main@mccampbell.com

Horizon Environmental Inc. 3011 Golden Foothill Parkway, Suite 7 El Dorado Hills, CA 95762	Client Project ID: #16001-11: Minami	Date Sampled: 08/26/98
	Client Contact: Ken B. Mateik	Date Received: 08/26/98
	Client P.O.	Date Extracted: 08/27/98
		Date Analyzed: 08/27/98

Chlorinated Pesticides (including PCBs)

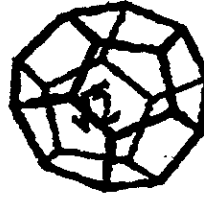
EPA Method 808 and 3510 or 8140 and 3550

Compound	Lab ID	Client ID	Matrix	Concentration*	Reporting Limit	
					ug/kg	ug/l.
	94201	8080-SP2	S		S	W. STLC PCIP
Aldrin	ND				S	0.075
α-BHC	ND<5				1	0.01
β-BHC	ND				S	0.05
γ-BHC (Lindane)	ND				S	0.2
α-BHC	ND				S	0.05
Chlordane	ND				S	0.1
p,p'-DDD <sup>(a)</sup>	ND<5				1	0.02
p,p'-DDE <sup>(a)</sup>	ND<5				1	0.01
p,p'-DDT <sup>(a)</sup>	ND<5				1	0.02
Dieldrin	ND<5				1	0.01
Endosulfan I	ND<5				1	0.01
Endosulfan II	ND<5				S	0.05
Endosulfan Sulfate	ND				S	0.1
Endrin	ND				S	0.05
Endrin Aldehyde	ND				1	0.01
Heptachlor	ND<5				1	0.01
Heptachlor Epoxide	ND<5				50	10
p,p'-Methoxychlor <sup>(b)</sup>	ND<250				50	0.5
PCB-Total <sup>(c)</sup>	ND<250				100	1
Toxaphene	ND<500					
% Recovery Surrogate	98					
Comments	J					

\* water and vapor samples are reported in ug/L, oils in mg/L, soil and sludge samples in ug/kg, wipes in ug/wipe and all TCE, PCE, NPEP extracts in ug/l  
 ND means not detected above the reporting limit, N/A means analyze not applicable to this analysis  
 † surrogate diluted out of range or surrogate coelutes with another peak  
 (a) PCB analyzer 1016, (b) PCB analyzer 1221, (c) PCB analyzer 1222, (d) PCB analyzer 1242, (e) PCB analyzer 1248, (f) PCB analyzer 1254, (g) PCB analyzer 1260, (h) a lighter than water immiscible sheen is present (i) liquid sample that contains >= 5 vol % sediment, (j) sample diluted due to high organic content, (k) p,p'- is the same as 4,4'-, (l) Aroclor (EPA 3620) cleanup, (m) silica-gel (EPA 3630) cleanup

DHS Certification No 1644

Edward Hamilton, Lab Director



**NORTH COAST  
LABORATORIES LTD.**

Date: 09/11/98

REPORT

Page 1 of 3

REPORT McCampbell Analytical  
TO 110 2nd Avenue, #D7  
Pacheco, CA 94553


WORK ORDER 98-08-652

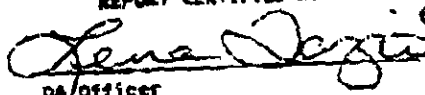
INVOICE # 60068765


Attn: Ed Hamilton

WORK ID: 12179/horizon

REPORT CERTIFIED BY

  
\_\_\_\_\_  
Laboratory Supervisor(s)

  
\_\_\_\_\_  
QA Officer

  
\_\_\_\_\_  
Ed E. Chaney, Jr.  
Laboratory Director

**SAMPLE IDENTIFICATION**

Fraction	Sample Description
Q1	94202/B150 SP2
Q2	Method Blank
Q3	Lab. Control Sample

Comments:

EPA 8151: The surrogate recovery for sample Q1A was below the acceptable range. However, the data were accepted because the quality control surrogates were within range.

Notes and Definitions:

Limit = Reporting Limit	ND = Not Quantifiable
NR = None Detected	NR = Not Reported

REPORT

Date: 09/11/98  
 Work Order: 98-08-652  
 Phone #: 60068945

SAMPLE ID: 94202/8150 SP2 FRAC.: D1A COLLECTED: 09/26/98 RECEIVED: 09/28/98

PARAMETER	RESULT	LIMIT	UNITS	DIL. FACTOR	EXTRACTED	RUN	METHOD
EPA 8151/Soil							EPA 8151
Dalapon	ND	1.0	ug/g	1.0	09/02/98	09/05/98	EPA 8151
Dicamba	ND	0.20	ug/g	1.0	09/02/98	09/05/98	EPA 8151
MCPP	ND	100	ug/g	1.0	09/02/98	09/05/98	EPA 8151
MCPA	ND	100	ug/g	1.0	09/02/98	09/05/98	EPA 8151
Dichlorprop	ND	1.0	ug/g	1.0	09/02/98	09/05/98	EPA 8151
2,4-D	ND	1.0	ug/g	1.0	09/02/98	09/05/98	EPA 8151
2,4,5 - TP	ND	0.10	ug/g	1.0	09/02/98	09/05/98	EPA 8151
2,4,5 - T	ND	0.10	ug/g	1.0	09/02/98	09/05/98	EPA 8151
2,4-DB	ND	1.0	ug/g	1.0	09/02/98	09/05/98	EPA 8151
Dinoseb	ND	0.20	ug/g	1.0	09/02/98	09/05/98	EPA 8151
Surrogate: 2,3-D	32.0	N/A	% Rec	1.0	09/02/98	09/05/98	EPA 8151

SAMPLE ID: Method Blank FRAC.: D2A COLLECTED: N/A RECEIVED: 09/28/98

PARAMETER	RESULT	LIMIT	UNITS	DIL. FACTOR	EXTRACTED	RUN	METHOD
EPA 8151/Soil							EPA 8151
Dalapon	ND	1.0	ug/g	1.0	09/02/98	09/05/98	EPA 8151
Dicamba	ND	0.20	ug/g	1.0	09/02/98	09/05/98	EPA 8151
MCPP	ND	100	ug/g	1.0	09/02/98	09/05/98	EPA 8151
MCPA	ND	100	ug/g	1.0	09/02/98	09/05/98	EPA 8151
Dichlorprop	ND	1.0	ug/g	1.0	09/02/98	09/05/98	EPA 8151
2,4-D	ND	1.0	ug/g	1.0	09/02/98	09/05/98	EPA 8151
2,4,5 - TP	ND	0.10	ug/g	1.0	09/02/98	09/05/98	EPA 8151
2,4,5 - T	ND	0.10	ug/g	1.0	09/02/98	09/05/98	EPA 8151
2,4-DB	ND	1.0	ug/g	1.0	09/02/98	09/05/98	EPA 8151
Dinoseb	ND	0.20	ug/g	1.0	09/02/98	09/05/98	EPA 8151
Surrogate: 2,3-D	62.9	N/A	% Rec	1.0	09/02/98	09/05/98	EPA 8151

SAMPLE ID: Lab. Control Sample FRAC.: D3A COLLECTED: N/A RECEIVED: 09/28/98

PARAMETER	RESULT	LIMIT	UNITS	DIL. FACTOR	EXTRACTED	RUN	METHOD
EPA 8151/Soil							EPA 8151
Dalapon	70.3	N/A	% Rec	1.0	09/02/98	09/05/98	EPA 8151
Dicamba	70.8	N/A	% Rec	1.0	09/02/98	09/05/98	EPA 8151

REPORT

02 09/11/98  
 Order: 98-08-652  
 Site #: 60060963

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>	<u>UNITS</u>	<u>DIL. FACTOR</u>	<u>EXTRACTED</u>	<u>RUN</u>	<u>REINOC</u>
MCP	67.5	N/A	% Rec	1.0	09/02/98	09/05/98	EPA 8151
MCPA	70.3	N/A	% Rec	1.0	09/02/98	09/05/98	EPA 8151
Dichloroprop	72.4	N/A	% Rec	1.0	09/02/98	09/05/98	EPA 8151
2,4-D	72.9	N/A	% Rec	1.0	09/02/98	09/05/98	EPA 8151
2,4,5 - TP	68.7	N/A	% Rec	1.0	09/02/98	09/05/98	EPA 8151
2,4,5 - T	69.6	N/A	% Rec	1.0	09/02/98	09/05/98	EPA 8151
2,4-DB	68.6	N/A	% Rec	1.0	09/02/98	09/05/98	EPA 8151
Dinoseb	77.5	N/A	% Rec	1.0	09/02/98	09/05/98	EPA 8151
Surrogate: 2,3-D	69.8	N/A	% Rec	1.0	09/02/98	09/05/98	EPA 8151

NOV 11 1998 10:40 AM