



**Epigene International**  
CONSULTING GEOLOGISTS

September 29, 1993

Bernabe and Brinker, Inc.  
1281 30th Street  
Oakland, CA 94608

Attn: Mr. James Brinker

Subject: Progress Report and Results of Groundwater Sampling and  
Analyses, 2301 East 12th Street, Oakland, July -  
September, 1993

Dear Mr. Brinker:

The site is located at the southwest corner of the intersection of East 12th Street and 23rd Ave. The location of the site is shown on the attached location map (Figure 1). As per our agreement, the following tasks were carried out at the subject site in this quarter:

- 1) Monitoring of groundwater levels at the site as required as part of the overall site monitoring;
- 2) Calculating the groundwater gradient;
- 3) Quarterly sampling and analyses of the groundwater from the three wells on site as required by Alameda County. The water sample from each well was tested for TPH as gasoline with BTEX, TPH as diesel fuel, EPA method 8010, total oil and

grease and the five Tri-regional metals (Cd, Cr, Pb, Ni and Zn).

The groundwater levels measured for the three wells are listed in Table 2. The relative elevations for the top of casing for the wells were first surveyed on May 26th. The top of casing for MW-1 was assigned an assumed elevation of 10.00 feet. The City of Oakland does not have any benchmarks in the vicinity of the site. The relative elevations are shown in Table 2.

The relative groundwater elevations for August are also listed along with those of the previous quarters for comparison. Based on these data, the groundwater gradient was calculated.

The direction of the groundwater gradient for the August data is westnorthwest as shown on the gradient map (Figure 3). The slope of the gradient is calculated to be 0.011 ft/ft.

The well locations are shown on the Site Plan (Figure 2). Wells MW-2 and MW-3 were purged, by bailing, of approximately 7 gallons of water and a groundwater sample was collected using a disposable bailer for each well. Because of the extended depth of MW-1, it was purged of approximately 15 gallons of water. MW-1 was sampled as discussed above. The samples were placed in a cooled ice chest and transported to a Certified Laboratory for analyses following chain of custody procedures. A copy of the chain of custody form is included in Appendix A. The purge water was placed in a 55 gallon drum that was left on site.

Prior to purging, each well was checked for the presence of floating product. No floating product was observed in any of the wells. Both MW-2 and MW-3 had a sheen observed on the purge water.

The laboratory results are attached to this report as Appendix A and are summarized on Table 1. They indicate that relatively high levels of TPH as both gasoline and diesel continue to be present in all three wells. BTEX compounds are also present in the groundwater samples from each of the wells. The results of the 8010 analyses for the three wells were relatively insignificant and the data are included in Appendix A.

Oil and grease in all three wells were reported to be "non-detect" (Appendix A).

The metals in MW-2 and MW-3 were "nondetect". MW-1 had a reported lead of 0.005 ppm, nickel of 0.37 ppm and zinc of 0.12 ppm. These data are listed in Appendix A.

Weekly purging of the three wells previously carried out by Bernabe and Brinker as an interim remediation to remove the floating product in MW-2 and help lower the concentration of contamination present in all three of the wells was not continued in this quarter.

Other activities concerning this site that occurred during this quarter are listed below.

- 1) A tank closure report documenting, to the extent possible, the removal of the four tanks on site in December of 1990 and February 1991 was completed and sent to Alameda County Dept. of Environmental Health and the Regional Water Quality Control Board.

- 2) A workplan for the installation of additional wells on and adjacent to the site was submitted to the County by Bernabe and Brinker on July 15, 1993. The workplan was not accepted by the County.

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3) A Pre-Enforcement Review Panel was convened on August 31, 1993, at the Alameda County Dept. of Environmental Health Offices in Oakland. The property owner was represented by Mr. Robert Shapiro, Esq., Mr. James Brinker of Bernabe and Brinker, and the undersigned. The panel included staff of the Alameda County Dept. of Environmental Health, Alameda County DA's Office, and the RWQCB. The outcome of the meeting was that an Order would be issued by the RWQCB regarding further characterization and remediation of the site . That order was issued on September 27, 1993.

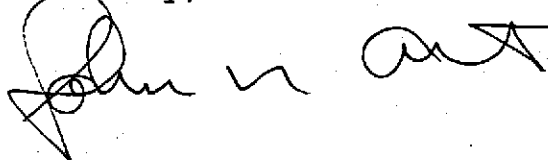
The documents requested within the order will be prepared and transmitted under separate cover as per the schedule.

4) Although logistical arrangements were made and various permits were obtained for additional investigations for this quarter, the work was not authorized by the County and consequently no additional field work was carried out.

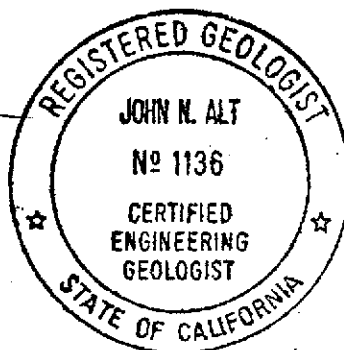
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It is recommended that the quarterly sampling and monitoring of groundwater levels in the three existing wells continue. The purging of the wells should continue until a more permanent remediation system is installed. It is a pleasure to continue to work with you on this project. Should you have any questions please contact the undersigned.

Sincerely,



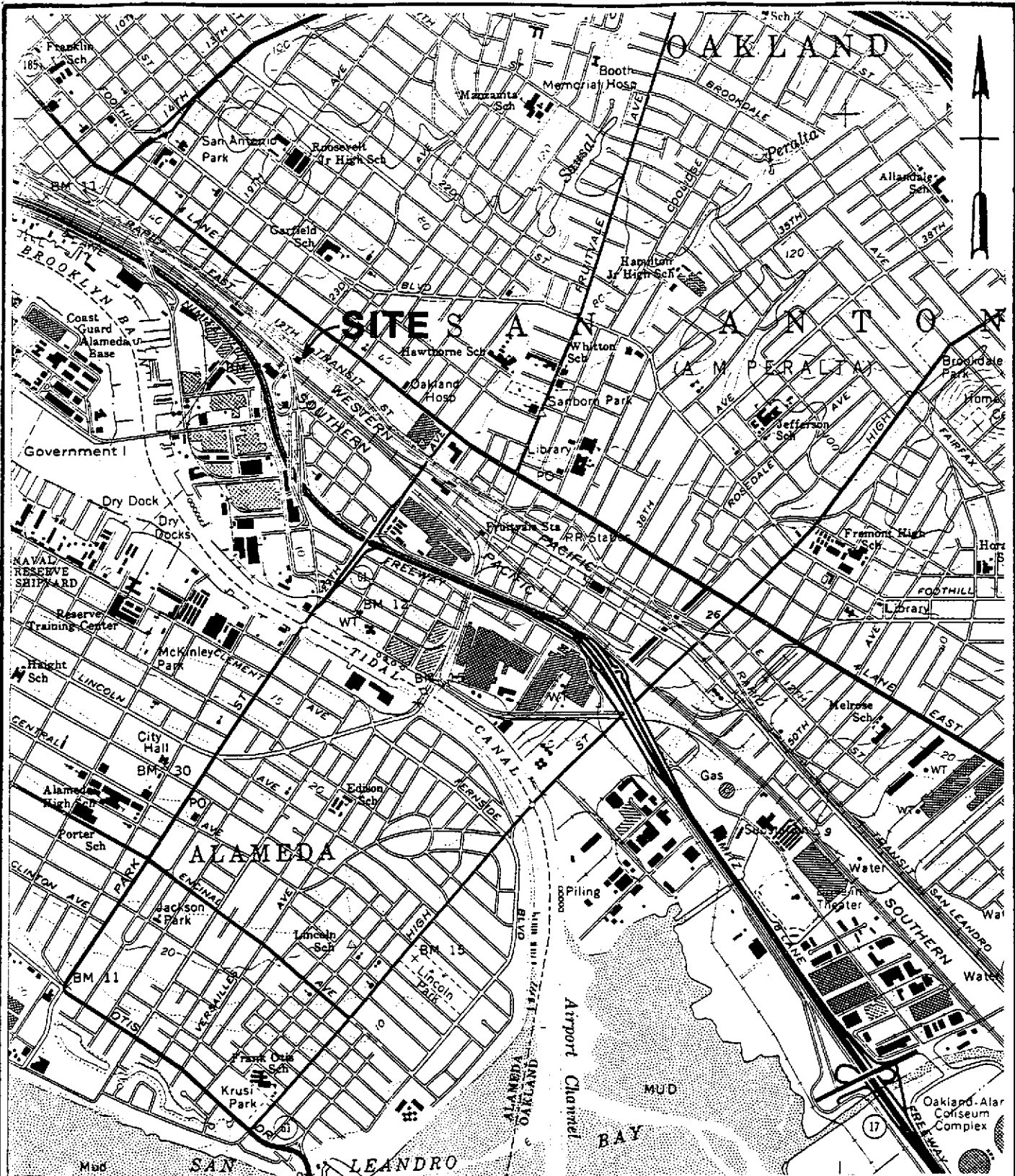
John N. Alt, CEG No. 1136



cc. Mr. Barney Chan, Alameda County Dept. of Environmental Health  
Mr. Rich Hiatt, RWQCB  
Mr. Robert Shapiro, Esq.



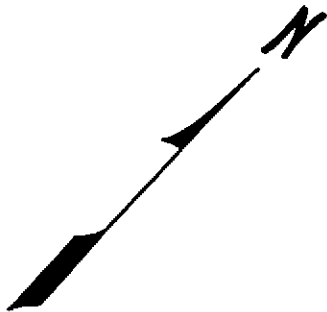




From U.S.G.S. 7 1/2" Quadrangle OAKLAND EAST

PLATE	No.
<b>SITE LOCATION MAP</b>	





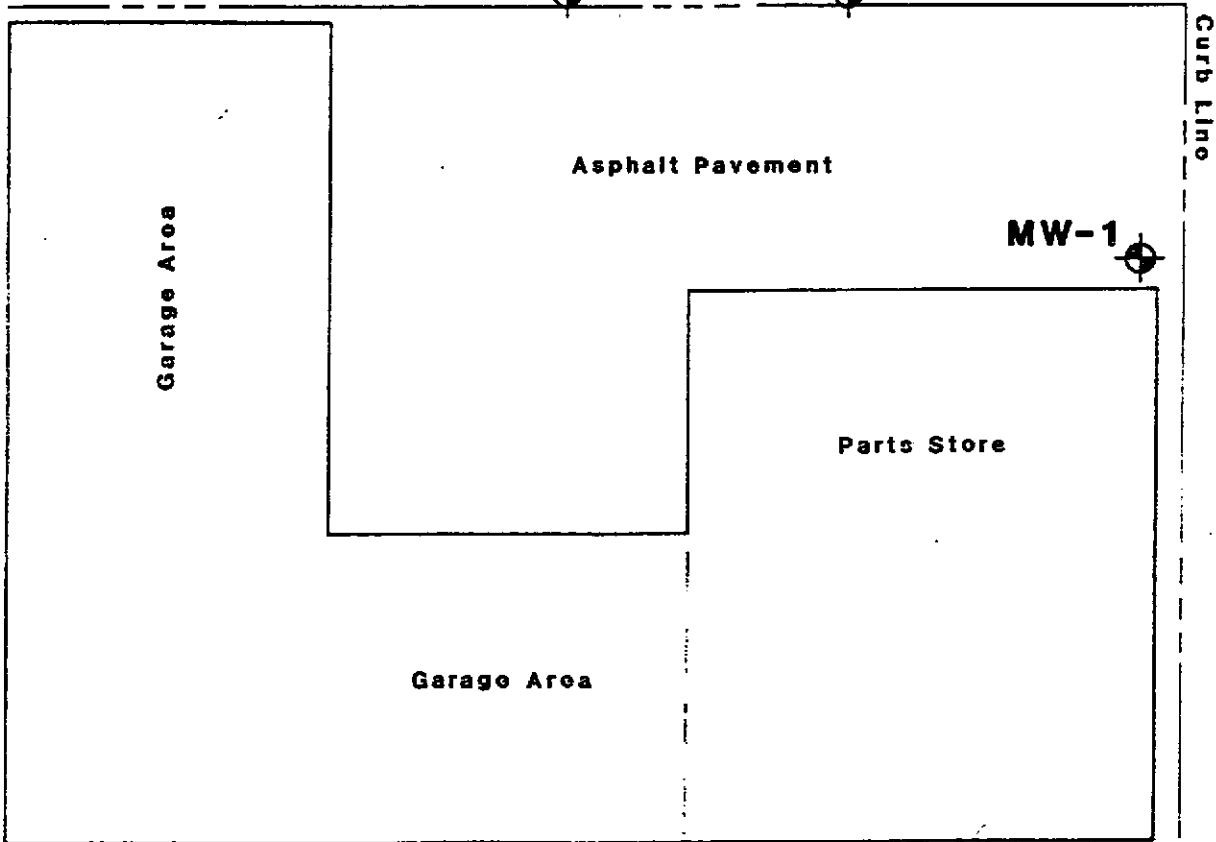
Cul-de-sac

23RD AVENUE

MW-2

MW-3

Approximate



Curb Line

12TH STREET

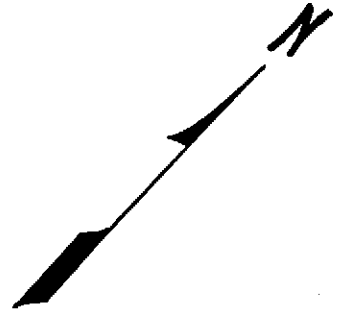
Map derived from  
Artesian Environmental Consultants,  
Mill Valley, California  
July, 1992

Approximate Scale: 1 Inch equals 20 Feet

PLATE 2

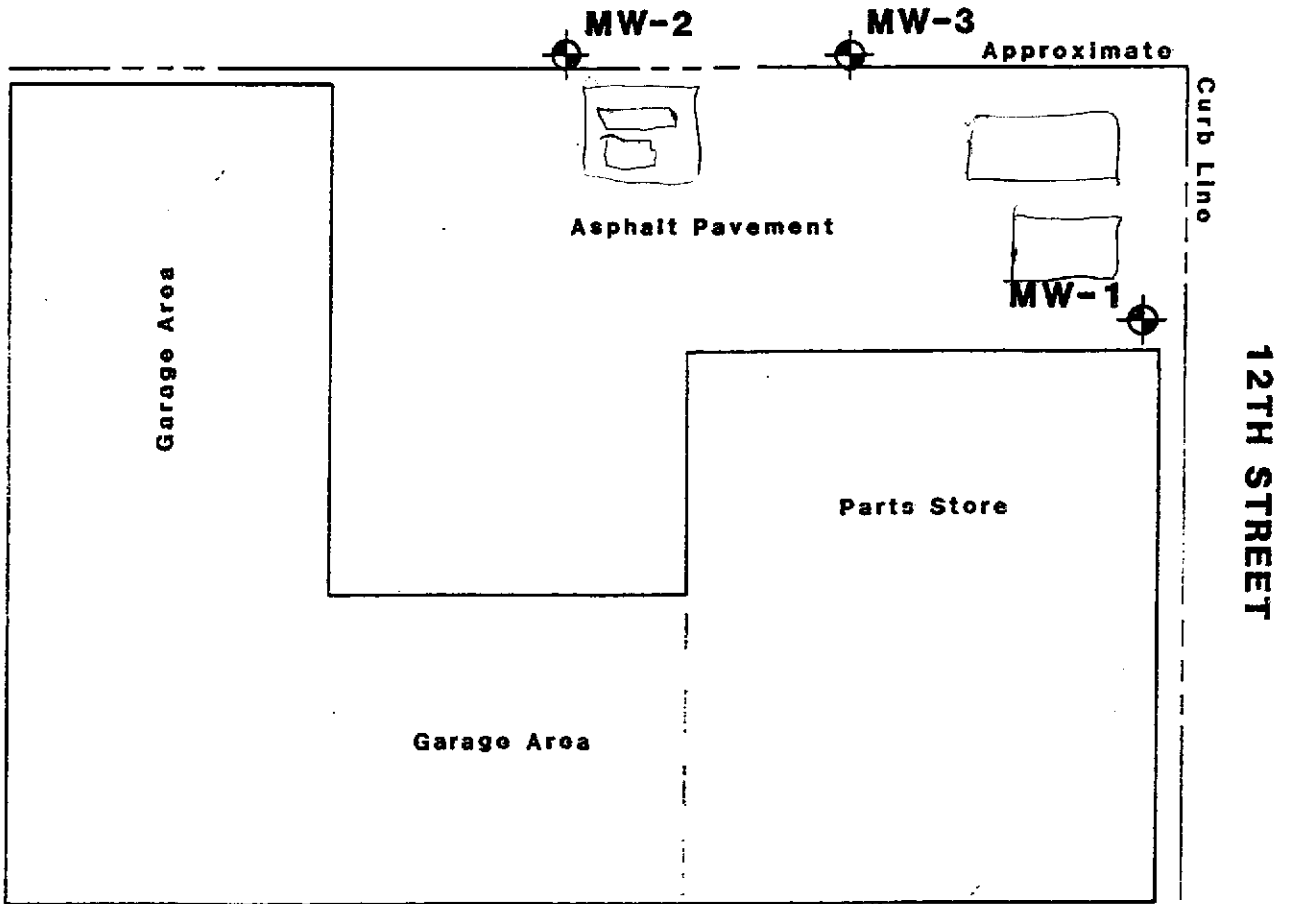
SITE MAP

**Gradient: 0.011 ft./ft.**



Cul-de-sac

**23RD AVENUE**



Map derived from  
Artesian Environmental Consultants,  
Mill Valley, California  
July, 1992

**Approximate Scale: 1 Inch equals 20 Feet**

**Gradient based on  
data from 8/27/93**

<b>PLATE 3</b>	
<b>GROUNDWATER GRADIENT</b>	

## **APPENDIX A**

### **LABORATORY RESULTS**







McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553  
Tele: 510-798-1620 Fax: 510-798-1622

Epigene International 38750 Paseo Padre Pkwy, # B4 Fremont, CA 94536	Client Project ID: 93-008; 2301 E. 12th St.	Date Sampled: 08/27/93
		Date Received: 08/27/93
	Client Contact: John Alt	Date Extracted: 08/29/93
	Client P.O:	Date Analyzed: 08/29/93

## Volatile Halocarbons

EPA method 601 or 8010

Lab ID	32006	32007	32008	
Client ID	MW-1	MW-2	MW-3	
Matrix	W	W	W	
Compound <sup>(1)</sup>	Concentration*	Concentration*	Concentration*	Concentration*
Bromodichloromethane	ND	ND	ND < 5	
Bromoform <sup>(2)</sup>	ND	ND	ND < 5	
Bromomethane	ND	ND	ND < 5	
Carbon Tetrachloride <sup>(3)</sup>	ND	ND	ND < 5	
Chlorobenzene	ND	10 <sup>9</sup>	ND < 5	
Chloroethane	ND	1.3	ND < 5	
2-Chloroethyl Vinyl Ether <sup>(4)</sup>	ND	ND	ND < 5	
Chloroform <sup>(5)</sup>	ND	ND	ND < 5	
Chloromethane	ND	ND	ND < 5	
Dibromochloromethane	ND	ND	ND < 5	
1,2-Dichlorobenzene	ND	ND	ND < 5	
1,3-Dichlorobenzene	ND	ND	ND < 5	
1,4-Dichlorobenzene	ND	ND	ND < 5	
1,1-Dichloroethane	ND	ND	ND < 5	
1,2-Dichloroethane	ND	0.66	ND < 5	
1,1-Dichloroethene	ND	ND	ND < 5	
cis 1,2-Dichloroethene	1.1	3.2	ND < 5	
trans 1,2-Dichloroethene	ND	ND	ND < 5	
1,2-Dichloropropane	ND	ND	ND < 5	
cis 1,3-Dichloropropene	ND	ND	ND < 5	
trans 1,3-Dichloropropene	ND	ND	ND < 5	
Methylene Chloride <sup>(6)</sup>	ND	ND	ND < 5	
1,1,2,2-Tetrachloroethane	ND	ND	ND < 5	
Tetrachloroethene <sup>(7)</sup>	5.4	ND	ND < 5	
1,1,1-Trichloroethane	ND	ND	ND < 5	
1,1,2-Trichloroethane	ND	ND	ND < 5	
Trichloroethene	ND	ND	16	
Trichlorofluoromethane	ND	ND	ND < 5	
Vinyl Chloride <sup>(8)</sup>	ND	2.2	ND < 5	
% Recovery Surrogate	98	99	100	
Comments			v. high TPH	

Detection limit unless otherwise stated: water, ND &lt; 0.5ug/L; soil, ND &lt; 10ug/kg.

\* water samples are reported in ug/L, soil samples in ug/kg and all TCLP extracts in ug/L.

(1) IUPAC allows "ylene" or "ene"; ex. ethylene or ethone; (2) tribromomethane; (3) tetrachloromethane; (4) (2-chloroethoxy) ethane; (5) trichloromethane; (6) dichloromethane; (7) perchlorethylene, PCE or perclor; (8) chloroethene; (9) unidentified peak(s) present.

McCAMPBELL ANALYTICAL INC.	110 2nd Avenue South, #D7, Pacheco, CA 94553 Tele: 510-798-1620 Fax: 510-798-1622
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Epigene International 38750 Paseo Padre Pkwy, # B4 Fremont, CA 94536	Client Project ID: 93-008; 2301 E. 12th St.	Date Sampled: 08/27/93
		Date Received: 08/27/93
	Client Contact: John Alt	Date Extracted: 09/01/93
	Client P.O:	Date Analyzed: 09/01-09/02/93

**LUFT Metals\***

EPA analytical methods				239.2,7420*	213.1,7130	218.1,7190	249.1,7520	289.1,7990
Lab ID	Client ID	Matrix	Extraction <sup>o</sup>	Lead *	Cadmium *	Chromium *	Nickel *	Zinc *
32006	MW-1	W	TTLC	0.005	ND	ND	0.37	0.12
32007	MW-2	W	TTLC	ND	ND	ND	ND	ND
32008	MW-3	W	TTLC	ND	ND	ND	ND	ND
Detection Limit unless otherwise stated; ND means Not Detected		W	TTLC	0.005mg/L	0.05	0.25	0.10	0.05
		S	TTLC	4.0 mg/kg	1.0	5.0	2.0	1.0
		---	STLC,TCLP	0.20 mg/L	0.05	0.25	0.10	0.05

\* soil samples are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L  
 \* Lead is analysed using EPA method 7420 (AA Flame) for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples  
<sup>o</sup> EPA extraction methods 1311(TCLP), 3010/3020(water, TTLC), 3040(organic matrices, TTLC), 3050(solids, TTLC); STLC from CA Title 22



# CHAIN OF CUSTODY



## Epigene International

CONSULTING GEOLOGISTS

38750 Paseo Padre Parkway, Suite B-4  
Fremont, California, 94536

Business: (510) 791-1986 FAX: (510) 791-3306

Laboratory: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Contact: \_\_\_\_\_

Contact: John Alt Sampler: J. Alt  
 Project Name: 2301 E 12th St. No. 93-002  
 Date: 8/27/93

Sample I.D.	Date/Time Sampled	Matrix Desc.	Container No. of	Container Type	Lab. #	Analyses Requested					Comments	
						TPH/Gasoline	W/BTEX	TPH/Diesel	601/8010/10	602/8020		SSLOI
1. MW-1	8/27 PM	H <sub>2</sub> O	4	VOAS		X	X		X			W/HCl
2. MW-1	"	"	1	1 liter bottle				X		X		32006
3. MW-1	"	"	1	plastic bottle						X		
4. MW-2	"	"	4	VOAS		X	X		X			W/HCl
5. MW-2	"	"	1	1 liter bottle				X		X		
6. MW-2	"	"	1	plastic bottle						X		32007
7. MW-3	"	"	4	VOAS		X	X		X			W/HCl
8. "	"	"	1	1 liter bottle				X		X		
9. "	"	"	1	plastic bottle						X		32008
10.												

Relinquished by: <u>John Alt</u>	Date: <u>8/27/93</u>	Time: <u>3:10</u>	Received by: <u>James E. Bruck</u>	Date: <u>8-27-93</u>	Time: <u>2:10</u>
Relinquished by: <u>James E. Bruck</u>	Date: <u>8-27-93</u>	Time: <u>17:10</u>	Received by: <u>John Alt</u>	Date: <u>8-27-93</u>	Time: <u>17:10</u>
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____

Turnaround Time: \_\_\_\_\_

Additional Comments: \_\_\_\_\_

ICE/T  PRESERVATIVE  GOOD CONDITION  APPROPRIATE CONTAINERS  HEAD SPACE ABSENT

VOAS  O&G  METALS  OTHER

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09-09-1993 12:04PM FROM McCampbell TO 7913306 P.11