February 5, 1991

Alameda County
Department of Environmental Health
80 Swan Way
Oakland, CA 94601

Attn: Susan Hugo

RE: The Removal of Underground Storage Tanks and the Subsequent Field Sampling at 4050 Horton Street Emeryville, CA 94608

Mr. Hunt:

Enclosed please find the hard copy analytical report for tank removal, and subsequent soil sampling completed at:

PLYWOOD AND LUMBER SALES
4050 HORTON STREET
EMERYVILLE, CA

Also enclosed are copies of the manifest documentation for this project. Zaccor Corporation has mailed one copy of this report to the owner of the property and requested that one copy of this report be mailed to the Water Quality Control Board, San Franciscan Region.

If I may be of further assistance to you, please do not hesitate to contact my office at (415) 363-2181.

Sincerely,
ZACCOR CORPORATION

Gary G. Zaccor

Gary A. Zaccor
Project Manager

GAZ/ls

LIC. #478799

ZACCOR
CORPORATION

January 20, ~~1990~~ 1991

Plywood Lumber and Sales
4050 Horton
Emeryville, CA

RE: The Removal of One Underground Storage Tank and the Subsequent Field Sampling at 4050 Horton Street, Emeryville, CA.

Dear Mr. Jeff Hunt:

The following report contains documentation as to the removal of one underground storage tank and subsequent field sampling at 4050 Horton Street, City of Emeryville, County of Alameda, California. Field Sampling was performed in accordance with state and local agency approved methodology, in the presence of Susan L. Hugo, Hazardous Materials Specialist, for the Alameda County Health Agency, Department of Environmental Health. Environmental Technical Services was retained by Zaccor Corporation to perform third party field sampling.

See accompanying site diagram for the tank location prior to removal, field sampling designations, and sampling depths.

TANK REMOVAL

On December 10, 1990, one underground storage tank was removed from the above mentioned address.

Upon tank removal the following observations were noted;

The tank was a 1,000 gallon steel single wall gasoline storage tank. Rust and pitting were noted upon visual inspection, no holes were apparent. Hydrocarbon odor was present in the surrounding fill material and native soil. Groundwater was present within the tank pit excavation.

791 HAMILTON AVENUE MENLO PARK, CA. 94025 (415) 363-2181

SAMPLING

Soil Sampling of Tank Pit Excavation

A soil sample was obtained from the tank pit wall within the capillary zone, at each end of the tank. This was accomplished by the clearing of fill material and slough from the designated sample area. A backhoe bucket then obtained a sample from 12" to 18" into the native soil. The surface three inches of soil was removed from the backhoe bucket and a clean brass sleeve driven into the remaining soil. Soil was packed into the sleeve to eliminate the possibility of headspace. The brass sleeve was then covered with aluminum foil, fitted with plastic caps, sealed with duct tape, labeled, and placed on dry ice under chain of custody to be transported to a certified hazardous waste analytical laboratory, where soil was analyzed . Each soil sample was analyzed for Total Petroleum Hydrocarbons as Diesel (TPH-D) (EPA Method 3550), Total Oil and Grease (TOG) (EPA Method 5520 E&F), Total Petroleum Hydrocarbons as Gasoline with Benzene, Toluene, Ethylbenzene, and Xylene distinction (TPH-G & BTEX), Chlorinated Hydrocarbons EPA Method 8010), Cadmium, Total Chromium, Nickel, Lead and Zinc (EPA Method 6010).

Ground Water Sampling

Groundwater was present within the tank pit excavation at a depth of 6'6". A sample of the groundwater was obtained by lowering a closed one liter amber bottle beneath the groundwater surface, the bottle was then opened, allowed to fill, closed, and removed from the tank pit excavation. This process was repeated till three amber liter bottles and three 40ml VOA vials were filled to a positive meniscus and capped. The bottles were placed on blue ice under chain of custody and transported to a Certified Hazardous Waste Analytical Laboratory. The groundwater sample was analyzed for Total Petroleum Hydrocarbons as Diesel (TPH-D), Total Oil and Grease (TOG), Total Petroleum Hydrocarbons as Gasoline with Benzene, Toluene, Ethylbenzene, and Xylene distinction, Chlorinated Hydrocarbons, Cadmium, Total Chromium, Nickel, Lead and Zinc.

The groundwater was evacuated from the tank pit excavation by pumping and allowed to recharge.

The tank pit was then backfilled with clean imported fill material.

Stockpile Sampling

The approximately 30 cubic yards of contaminated fill material excavated from the tank pit, was stockpiled on visqueen. A composite soil sample was collected from the stockpile. This was accomplished by dividing the stockpile into three sections then driving a discrete brass sleeve two feet into each section. Soil was packed into the sleeve to eliminate the possibility of headspace. The brass sleeve was then covered with aluminum foil, fitted with plastic caps, sealed with duct tape, labeled, and placed on dry ice under chain of custody to be transported to a certified hazardous waste analytical laboratory, where soil was composited and analyzed.

Each soil sample was analyzed for Total Petroleum Hydrocarbons as Diesel (TPH-D), Total Oil and Grease (TOG), Total Petroleum Hydrocarbons as Gasoline with Benzene, Toluene, Ethylbenzene, and Xylene distinction, Chlorinated Hydrocarbons, Cadmium, Total Chromium, Nickel, Lead and Zinc.

Sample Locations

Sample #1 was a soil sample collected within the tank pit wall capillary zone at a depth of 6' below grade from the tank end opposite the fill pipe.

Sample #2 was a soil sample collected within the tank pit wall capillary zone at a depth of 6' below grade from the fill pipe end of the tank.

Sample #3 was a subsurface water sample taken from standing water within the tank pit prior to the pumping of the standing water and its subsequent recharge.

Sample #4 was a composite soil sample collected from three points within the stockpiled material to be composited as one analysis at a certified laboratory. Samples were obtained at a depth of 18" to 24" within the stockpile.

Analytical Results

The chain of custody and certified analytical results have been attached to this report.

Sample #1 contained concentrations of Total Petroleum Hydrocarbons as Gasoline (TPH-G) at 26 ppm, Benzene at 2.2 ppm, Toluene at 1.6 ppm, Ethylbenzene at 0.31 ppm, Total Xylenes at 0.54 ppm, Total Oil and Grease at 177 ppm, Cadmium at 0.34 ppm, Total Chromium at 28.1 ppm, Nickel at 46.6 ppm, Lead at 61.0 ppm, Zinc at 179 ppm. Chlorinated Hydrocarbons and Total Petroleum Hydrocarbons as Diesel were found to be non-detected at their respective detection limits.

Sample #2 contained concentrations of Total Petroleum Hydrocarbons as Gasoline (TPH-G) at 68 ppm, Benzene at 0.13 ppm, Toluene at 0.24 ppm, Ethylbenzene at 0.45 ppm, Total Xylenes at 1.1 ppm, Total Petroleum Hydrocarbons as Diesel at 44 ppm, Total Chromium at 30.5 ppm, Nickel at 27.9 ppm, Lead at 6.6 ppm, Zinc at 29.1 ppm, and 1,2-Dichloroethane at 2.2 ppb. Total Oil and Grease, and Cadmium were found to be non-detected at their respective detection limits.

Sample #3 contained concentrations of Total Petroleum Hydrocarbons as Gasoline (TPH-G) at 200,000 ppb, Benzene at 11,000 ppb, Toluene at 10,000, Total Xylenes at 4,800 ppb, Total Petroleum Hydrocarbons as Diesel at 19,000 ppb, Total Oil and Grease at 6.4 ppm, Total Chromium at 122 ppb, Nickel at 88.0 ppb, Lead at 680 ppb, Zinc at 1740 ppb, and 1,2-Dichloroethane at 180 ppb. Cadmium and Ethylbenzene, were found to be non-detected at their respective detection limits.

Sample #4A-C contained concentrations of Total Petroleum Hydrocarbons as Gasoline (TPH-G) at 71 ppm, Benzene at 0.52 ppm, Toluene at 0.49 ppm, Ethylbenzene at 0.35 ppm, Total Xylenes at 0.72 ppm, Total Petroleum Hydrocarbons as Diesel at 66 ppm, Total Oil and Grease (TOG) at 420 ppm, Total Chromium at 51.1 ppm, Nickel at 38.6 ppm, Lead at 109 ppm, Zinc at 180 ppm. Cadmium and Chlorinated Hydrocarbons were found to be non-detectable at their respective detection limits.

Recommendations

The State Water Resources Board Document, Leaking Underground Fuel Tank Field Manual (LUFT), supported by the San Francisco Regional Water Quality Control Board (SFRWQCB), defines appropriate actions in dealing with contamination related to an unauthorized fuel release from an underground storage tank.

The presence of significant concentrations of Petroleum Hydrocarbons within the tank pit would necessitate a further investigation of the lateral and vertical extent of contaminants in soil. Due to the tank pits' close proximity to the street and a concrete wall, soil borings are recommended to assess the feasibility, cost, and engineering of the excavation of contaminated soil.

In accordance with the LUFT manual one monitoring well would be placed within 10' of and down gradient from the original tank pit to determine the impact of contaminants upon the first encountered groundwater. A minimum of three groundwater reference points are necessary in order to determine the groundwater direction flow beneath the site. The three points would allow triangulation and the proper surveying of groundwater gradient. Should properly installed and screened wells exist on adjacent properties, they may qualify as eligible reference points.

Reportage

Please forward a copy of this report, the chain of custody, and the certified analytical report to the SFRWQCB and the Alameda County Department of Health Services, Division of Environmental Health.

Water Quality Control Board
San Franciscan Region
1800 Harrison Street
Room 700
Oakland, CA 94612

Alameda County Health Agency
Department of Environmental Health
Division of Hazardous Materials
590 Hamilton Street
Redwood City, CA 94063
ATTN: Susan L. Hugo

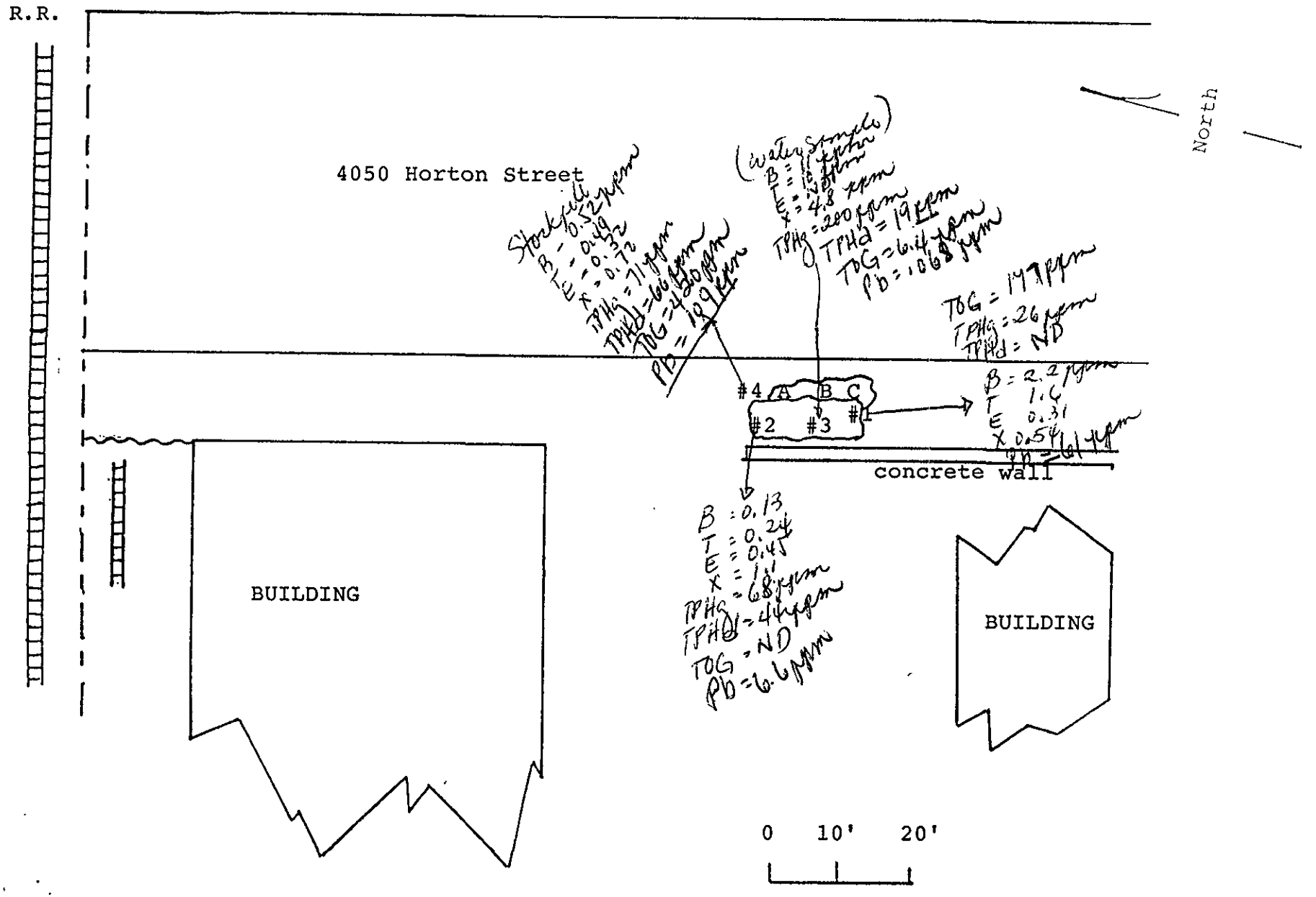
If you have any questions, or if I may be of further assistance, please call me at (415) 325-3235.

Sincerely,
Zaccor Corporation

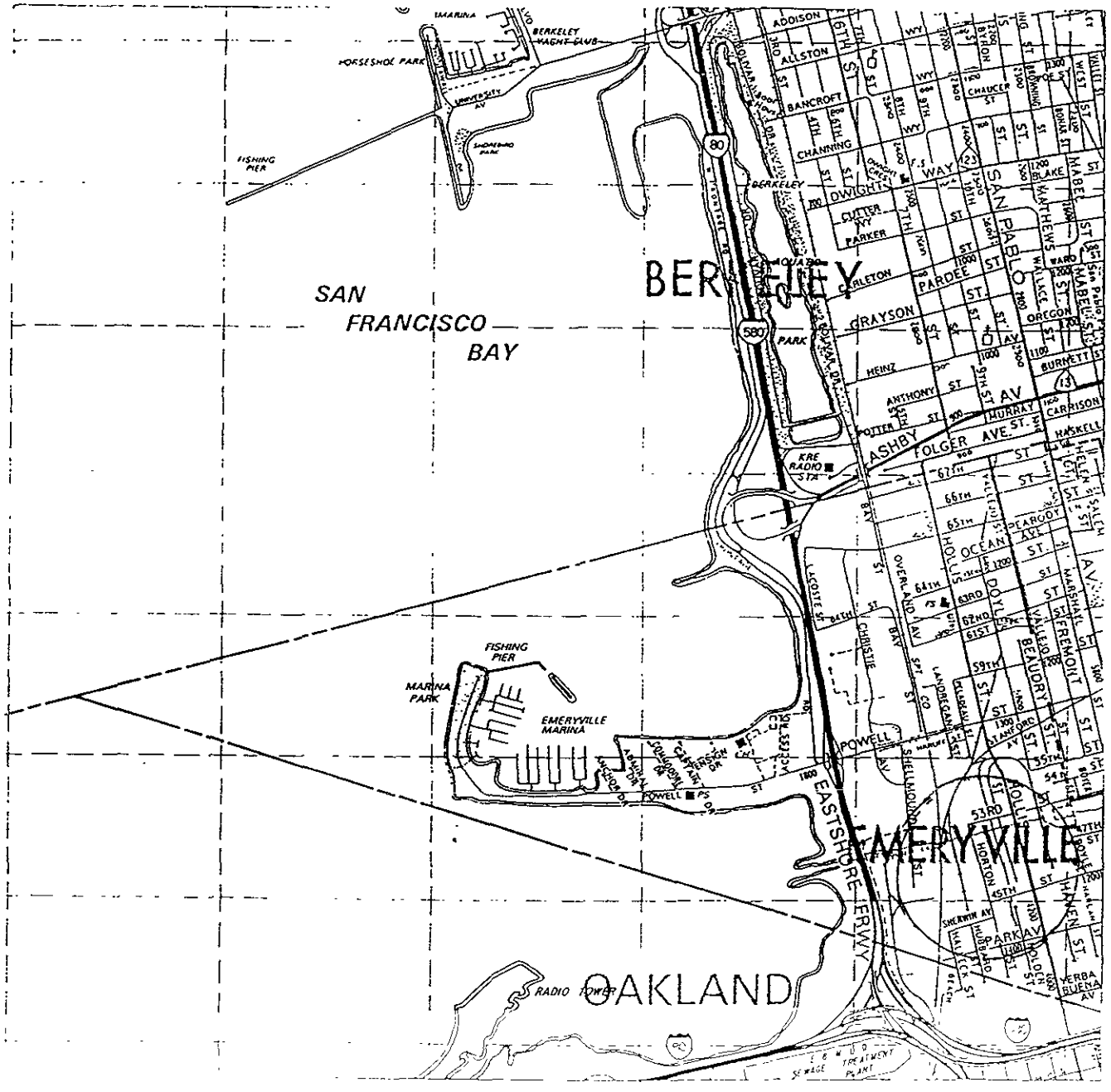
Gary Zaccor
Project Manager

Environmental
Technical
Services

at; 4050 Horton Street, Emeryville, CA



PLYWOOD LUMBER AND SALES
4050 HORTON STREET
EMERYVILLE, CA



North

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

REPORT

MR. GARY ZACCOR
ZACCOR CORP.
791 HAMILTON AVE.
MENLO PARK, CA 94025

Workorder # : 9012085
Date Received : 12/10/90
Project ID : Z0121090M1
Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9012085- 1	#1
9012085- 2	#2
9012085- 3	#3
9012085- 4	#4A,B,C

This report is paginated for your convenience and ease of review. It contains 22 pages excluding the cover letter. The report is organized into sections. Each section contains all analytical results and quality assurance data related to a specific group or section within Anametrix. The Report Summary that precedes each section will help you determine which group at Anametrix generated the data. The Report Summary will contain the signatures of the department supervisor and a chemist, both of whom reviewed the analytical data. Please refer all questions to the department supervisor that signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under certificate number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accrediation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

for
Burt Sutherland
Laboratory Director

12-28-90
Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. GARY ZACCOR
ZACCOR CORP.
791 HAMILTON AVE.
MENLO PARK, CA 94025

Workorder # : 9012085
Date Received : 12/10/90
Project ID : Z0121090M1
Purchase Order: N/A
Department : GC
Sub-Department: VOA

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9012085- 1	#1	SOIL	12/10/90	8010
9012085- 2	#2	SOIL	12/10/90	8010
9012085- 3	#3	H2O	12/10/90	8010
9012085- 4	#4A,B,C	SOIL	12/10/90	8010

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. GARY ZACCOR
ZACCOR CORP.
791 HAMILTON AVE.
MENLO PARK, CA 94025

Workorder # : 9012085
Date Received : 12/10/90
Project ID : Z0121090M1
Purchase Order: N/A
Department : GC
Sub-Department: VOA

QA/QC SUMMARY :

- Due to interfering hydrocarbon peaks, sample #1 was analyzed at a dilution for EPA Method 8010.

Corinne Ham 12/28/90
Department Supervisor Date

Arthur Lemus 12/28/90
Chemist Date

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: Z0121090M1 #1	Anametrix I.D.	: 9012085-01
Matrix	: SOIL	Analyst	: AM
Date sampled	: 12/10/90	Supervisor	: CP
Date analyzed	: 12/17/90	Date released	: 12/27/90
Dilution	: 100	Instrument ID	: HP24

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
74-87-3	* Chloromethane	100	ND
74-83-9	* Bromomethane	50	ND
75-71-8	* Dichlorodifluoromethane	100	ND
75-01-4	* Vinyl Chloride	50	ND
75-00-3	* Chloroethane	50	ND
75-09-2	* Methylene Chloride	50	ND
79-69-4	* Trichlorofluoromethane	50	ND
75-35-4	* 1,1-Dichloroethene	50	ND
75-34-3	* 1,1-Dichloroethane	50	ND
156-59-2	# Cis-1,2-Dichloroethene	50	ND
156-60-5	* Trans-1,2-Dichloroethene	50	ND
67-66-3	* Chloroform	50	ND
76-13-1	# Trichlorotrifluoroethane	50	ND
107-06-2	* 1,2-Dichloroethane	50	ND
71-55-6	* 1,1,1-Trichloroethane	50	ND
56-23-5	* Carbon Tetrachloride	50	ND
75-27-4	* Bromodichloromethane	50	ND
78-87-5	* 1,2-Dichloropropane	50	ND
10061-02-6	* Trans-1,3-Dichloropropene	50	ND
79-01-6	* Trichloroethene	50	ND
124-48-1	* Dibromochloromethane	50	ND
79-00-5	* 1,1,2-Trichloroethane	50	ND
10061-01-5	* cis-1,3-Dichloropropene	50	ND
110-75-8	* 2-Chloroethylvinylether	100	ND
75-25-2	* Bromoform	50	ND
127-18-4	* Tetrachloroethene	50	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	50	ND
108-90-7	* Chlorobenzene	50	ND
541-73-1	* 1,3-Dichlorobenzene	100	ND
95-50-1	* 1,2-Dichlorobenzene	100	ND
106-46-7	* 1,4-Dichlorobenzene	100	ND
	% Surrogate Recovery	33-134%	105%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: Z0121090M1 #2	Anametrix I.D.	: 9012085-02
Matrix	: SOIL	Analyst	: AM
Date sampled	: 12/10/90	Supervisor	: CP
Date analyzed	: 12/17/90	Date released	: 12/27/90
Dilution	: NONE	Instrument ID	: HP24

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
74-87-3	* Chloromethane	1	ND
74-83-9	* Bromomethane	0.5	ND
75-71-8	* Dichlorodifluoromethane	1	ND
75-01-4	* Vinyl Chloride	0.5	ND
75-00-3	* Chloroethane	0.5	ND
75-09-2	* Methylene Chloride	0.5	ND
79-69-4	* Trichlorofluoromethane	0.5	ND
75-35-4	* 1,1-Dichloroethene	0.5	ND
75-34-3	* 1,1-Dichloroethane	0.5	ND
156-59-2	# Cis-1,2-Dichloroethene	0.5	ND
156-60-5	* Trans-1,2-Dichloroethene	0.5	ND
67-66-3	* Chloroform	0.5	ND
76-13-1	# Trichlorotrifluoroethane	0.5	ND
107-06-2	* 1,2-Dichloroethane	0.5	2.2
71-55-6	* 1,1,1-Trichloroethane	0.5	ND
56-23-5	* Carbon Tetrachloride	0.5	ND
75-27-4	* Bromodichloromethane	0.5	ND
78-87-5	* 1,2-Dichloropropane	0.5	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.5	ND
79-01-6	* Trichloroethene	0.5	ND
124-48-1	* Dibromochloromethane	0.5	ND
79-00-5	* 1,1,2-Trichloroethane	0.5	ND
10061-01-5	* cis-1,3-Dichloropropene	0.5	ND
110-75-8	* 2-Chloroethylvinylether	1	ND
75-25-2	* Bromoform	0.5	ND
127-18-4	* Tetrachloroethene	0.5	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.5	ND
108-90-7	* Chlorobenzene	0.5	ND
541-73-1	* 1,3-Dichlorobenzene	1	ND
95-50-1	* 1,2-Dichlorobenzene	1	ND
106-46-7	* 1,4-Dichlorobenzene	1	ND
	% Surrogate Recovery	33-134%	47%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : Z0121090M1 #3
Matrix : WATER
Date sampled : 12/10/90
Date analyzed: 12/17/90
Dilution : 100

Anametrix I.D. : 9012085-03
Analyst : AKL
Supervisor : CP
Date released : 12/27/90
Instrument ID : HP24

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
74-87-3	* Chloromethane	100	ND
74-83-9	* Bromomethane	50	ND
75-71-8	* Dichlorodifluoromethane	100	ND
75-01-4	* Vinyl Chloride	50	ND
75-00-3	* Chloroethane	50	ND
75-09-2	* Methylene Chloride	50	ND
75-69-4	* Trichlorofluoromethane	50	ND
75-35-4	* 1,1-Dichloroethene	50	ND
75-34-3	* 1,1-Dichloroethane	50	ND
156-59-2	# Cis-1,2-Dichloroethene	50	ND
156-60-5	* Trans-1,2-Dichloroethene	50	ND
67-66-3	* Chloroform	50	ND
76-13-1	# Trichlorotrifluoroethane	50	ND
107-06-2	* 1,2-Dichloroethane	50	180
71-55-6	* 1,1,1-Trichloroethane	50	ND
56-23-5	* Carbon Tetrachloride	50	ND
75-27-4	* Bromodichloromethane	50	ND
78-87-5	* 1,2-Dichloropropane	50	ND
10061-02-6	* Trans-1,3-Dichloropropene	50	ND
79-01-6	* Trichloroethene	50	ND
124-48-1	* Dibromochloromethane	50	ND
79-00-5	* 1,1,2-Trichloroethane	50	ND
10061-01-5	* cis-1,3-Dichloropropene	50	ND
110-75-8	* 2-Chloroethylvinylether	100	ND
75-25-2	* Bromoform	50	ND
127-18-4	* Tetrachloroethene	50	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	50	ND
108-90-7	* Chlorobenzene	50	ND
95-50-1	* 1,2-Dichlorobenzene	100	ND
541-73-1	* 1,3-Dichlorobenzene	100	ND
106-46-7	* 1,4-Dichlorobenzene	100	ND
	% Surrogate Recovery	51-136%	105%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : Z0121090M1 #4A,B,C
Matrix : SOIL
Date sampled : 12/10/90
Date analyzed: ~~12/17/90~~ 12/21/90
Dilution : NONE

Anametrix I.D. : 9012085-04
Analyst : ✓
Supervisor :
Date released : 12/27/90
Instrument ID : HP24

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
74-87-3	* Chloromethane	1	ND
74-83-9	* Bromomethane	0.5	ND
75-71-8	* Dichlorodifluoromethane	1	ND
75-01-4	* Vinyl Chloride	0.5	ND
75-00-3	* Chloroethane	0.5	ND
75-09-2	* Methylene Chloride	0.5	ND
79-69-4	* Trichlorofluoromethane	0.5	ND
75-35-4	* 1,1-Dichloroethene	0.5	ND
75-34-3	* 1,1-Dichloroethane	0.5	ND
156-59-2	# Cis-1,2-Dichloroethene	0.5	ND
156-60-5	* Trans-1,2-Dichloroethene	0.5	ND
67-66-3	* Chloroform	0.5	ND
76-13-1	# Trichlorotrifluoroethane	0.5	ND
107-06-2	* 1,2-Dichloroethane	0.5	ND
71-55-6	* 1,1,1-Trichloroethane	0.5	ND
56-23-5	* Carbon Tetrachloride	0.5	ND
75-27-4	* Bromodichloromethane	0.5	ND
78-87-5	* 1,2-Dichloropropane	0.5	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.5	ND
79-01-6	* Trichloroethene	0.5	ND
124-48-1	* Dibromochloromethane	0.5	ND
79-00-5	* 1,1,2-Trichloroethane	0.5	ND
10061-01-5	* cis-1,3-Dichloropropene	0.5	ND
110-75-8	* 2-Chloroethylvinylether	1	ND
75-25-2	* Bromoform	0.5	ND
127-18-4	* Tetrachloroethene	0.5	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.5	ND
108-90-7	* Chlorobenzene	0.5	ND
541-73-1	* 1,3-Dichlorobenzene	1	ND
95-50-1	* 1,2-Dichlorobenzene	1	ND
106-46-7	* 1,4-Dichlorobenzene	1	ND
	% Surrogate Recovery	33-134%	52%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : METHOD BLANK
Matrix : WATER
Date sampled : N/A
Date analyzed: 12/17/90
Dilution : NONE

Anametrix I.D. : 24B1217H02
Analyst : AKL
Supervisor : CP
Date released : 12/27/90
Instrument ID : HP24

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
74-87-3	* Chloromethane	1	ND
74-83-9	* Bromomethane	0.5	ND
75-71-8	* Dichlorodifluoromethane	1	ND
75-01-4	* Vinyl Chloride	0.5	ND
75-00-3	* Chloroethane	0.5	ND
75-09-2	* Methylene Chloride	0.5	0.8
75-69-4	* Trichlorofluoromethane	0.5	ND
75-35-4	* 1,1-Dichloroethene	0.5	ND
75-34-3	* 1,1-Dichloroethane	0.5	ND
156-59-2	# Cis-1,2-Dichloroethene	0.5	ND
156-60-5	* Trans-1,2-Dichloroethene	0.5	ND
67-66-3	* Chloroform	0.5	ND
76-13-1	# Trichlorotrifluoroethane	0.5	ND
107-06-2	* 1,2-Dichloroethane	0.5	ND
71-55-6	* 1,1,1-Trichloroethane	0.5	ND
56-23-5	* Carbon Tetrachloride	0.5	ND
75-27-4	* Bromodichloromethane	0.5	ND
78-87-5	* 1,2-Dichloropropane	0.5	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.5	ND
79-01-6	* Trichloroethene	0.5	ND
124-48-1	* Dibromochloromethane	0.5	ND
79-00-5	* 1,1,2-Trichloroethane	0.5	ND
10061-01-5	* cis-1,3-Dichloropropene	0.5	ND
110-75-8	* 2-Chloroethylvinylether	1	ND
75-25-2	* Bromoform	0.5	ND
127-18-4	* Tetrachloroethene	0.5	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.5	ND
108-90-7	* Chlorobenzene	0.5	ND
95-50-1	* 1,2-Dichlorobenzene	1	ND
541-73-1	* 1,3-Dichlorobenzene	1	ND
106-46-7	* 1,4-Dichlorobenzene	1	ND
	% Surrogate Recovery	51-136%	105%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: METHOD BLANK	Anametrix I.D.	: 24B1221H02
Matrix	: SOIL	Analyst	: ARL
Date sampled	: N/A	Supervisor	: CP
Date analyzed	: 12/21/90	Date released	: 12/27/90
Dilution	: NONE	Instrument ID	: HP24

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
74-87-3	* Chloromethane	1	ND
74-83-9	* Bromomethane	0.5	ND
75-71-8	* Dichlorodifluoromethane	1	ND
75-01-4	* Vinyl Chloride	0.5	ND
75-00-3	* Chloroethane	0.5	ND
75-09-2	* Methylene Chloride	0.5	ND
75-69-4	* Trichlorofluoromethane	0.5	ND
75-35-4	* 1,1-Dichloroethene	0.5	ND
75-34-3	* 1,1-Dichloroethane	0.5	ND
156-59-2	# Cis-1,2-Dichloroethene	0.5	ND
156-60-5	* Trans-1,2-Dichloroethene	0.5	ND
67-66-3	* Chloroform	0.5	ND
76-13-1	# Trichlorotrifluoroethane	0.5	ND
107-06-2	* 1,2-Dichloroethane	0.5	ND
71-55-6	* 1,1,1-Trichloroethane	0.5	ND
56-23-5	* Carbon Tetrachloride	0.5	ND
75-27-4	* Bromodichloromethane	0.5	ND
78-87-5	* 1,2-Dichloropropane	0.5	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.5	ND
79-01-6	* Trichloroethene	0.5	ND
124-48-1	* Dibromochloromethane	0.5	ND
79-00-5	* 1,1,2-Trichloroethane	0.5	ND
10061-01-5	* cis-1,3-Dichloropropene	0.5	ND
110-75-8	* 2-Chloroethylvinylether	1	ND
75-25-2	* Bromoform	0.5	ND
127-18-4	* Tetrachloroethene	0.5	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.5	ND
108-90-7	* Chlorobenzene	0.5	ND
95-50-1	* 1,2-Dichlorobenzene	1	ND
541-73-1	* 1,3-Dichlorobenzene	1	ND
106-46-7	* 1,4-Dichlorobenzene	1	ND
	% Surrogate Recovery	33-134%	108%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. GARY ZACCOR
ZACCOR CORP.
791 HAMILTON AVE.
MENLO PARK, CA 94025

Workorder # : 9012085
Date Received : 12/10/90
Project ID : Z0121090M1
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9012085- 1	#1	SOIL	12/10/90	TPHd
9012085- 2	#2	SOIL	12/10/90	TPHd
9012085- 3	#3	H2O	12/10/90	TPHd
9012085- 4	#4A,B,C	SOIL	12/10/90	TPHd
9012085- 1	#1	SOIL	12/10/90	TPHg/BTEX
9012085- 2	#2	SOIL	12/10/90	TPHg/BTEX
9012085- 3	#3	H2O	12/10/90	TPHg/BTEX
9012085- 4	#4A,B,C	SOIL	12/10/90	TPHg/BTEX

REPORT SUMMARY
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SAMPLE INFORMATION:

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9012085- 1	#1	SOIL	12/10/90	TPHd
9012085- 2	#2	SOIL	12/10/90	TPHd
9012085- 3	#3	H2O	12/10/90	TPHd
9012085- 4	#4A,B,C	SOIL	12/10/90	TPHd
9012085- 1	#1	SOIL	12/10/90	TPHg/BTEX
9012085- 2	#2	SOIL	12/10/90	TPHg/BTEX
9012085- 3	#3	H2O	12/10/90	TPHg/BTEX
9012085- 4	#4A,B,C	SOIL	12/10/90	TPHg/BTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

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ZACCOR CORP.
791 HAMILTON AVE.
MENLO PARK, CA 94025

Workorder # : 9012085
Date Received : 12/10/90
Project ID : Z0121090M1
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- Surrogate recoveries were high for samples #2 and #4 due to matrix interference.
- Concentrations reported as TPHd appear to be primarily due to extractable components of gasoline.

Department Supervisor 12-28-90 Date

Chemist 12-28-90 Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9012085
Matrix : SOIL
Date Sampled : 12/10/90

Project Number : Z0121090M1
Date Released : 12/27/90

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# #1 -01	Sample I.D.# #2 -02	Sample I.D.# #4A,B,C -04	Sample I.D.# 12B1214B BLANK	Sample I.D.# 12B1217B BLANK
Benzene	0.005	2.2	0.13	0.52	ND	ND
Toluene	0.005	1.6	0.24	0.49	ND	ND
Ethylbenzene	0.005	0.31	0.45	0.35	ND	ND
Total Xylenes	0.005	0.54	1.1	0.72	ND	ND
TPH as Gasoline	0.5	26	68	71	ND	ND
% Surrogate Recovery		133%	188%	195%	115%	97%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		12/14/90	12/17/90	12/14/90	12/14/90	12/17/90
RLMF		10	10	5	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.
RLMF - Reporting Limit Multiplication Factor.
Anametrix Control limits for surrogate recovery are 50-150%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 12-27-90 Date

Supervisor 12-27-90 Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9012085
Matrix : WATER
Date Sampled : 12/10/90

Project Number : Z0121090M1
Date Released : 12/27/90

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# #3 -03	Sample I.D.# 12B1217B BLANK
Benzene	0.5	11000	ND
Toluene	0.5	10000	ND
Ethylbenzene	0.5	ND	ND
Total Xylenes	0.5	4800	ND
TPH as Gasoline	50	200000	ND
% Surrogate Recovery		123%	97%
Instrument I.D.		HP12	HP12
Date Analyzed		12/17/90	12/17/90
RLMF		2500	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.
RLMF - Reporting Limit Multiplication Factor.
Anametrix control limits for surrogate recovery are 50-150%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 12-27-90 Date

Supervisor 12-27-90 Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9012085
Matrix : SOIL
Date Sampled : 12/10/90
Date Extracted: 12/12/90

Project Number : Z0121090M1
Date released : 12/27/90
Instrument I.D.: HP19

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9012085-01	#1	12/13/90	10	ND
9012085-02	#2	12/13/90	10	44
9012085-04	#4A,B,C	12/13/90	10	66
METHOD BLANK	DSBLK121290	12/13/90	10	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3550.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 12-27-90 Date

Supervisor 12-27-90 Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9012085
Matrix : WATER
Date Sampled : 12/10/90
Date Extracted: 12/13/90

Project Number : Z0121090M1
Date released : 12/27/90
Instrument I.D.: HP19

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)
9012085-03	#3	12/13/90	50	19000
DWBLK121390	METHOD BLANK	12/13/90	50	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Irene Iwasiw 12-28-90
Analyst Date

Burt Southerland 12/28/90
Supervisor Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. GARY ZACCOR
ZACCOR CORP.
791 HAMILTON AVE.
MENLO PARK, CA 94025

Workorder # : 9012085
Date Received : 12/10/90
Project ID : Z0121090M1
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9012085- 3	#3	H2O	12/10/90	5520BF
9012085- 1	#1	SOIL	12/10/90	5520EF
9012085- 2	#2	SOIL	12/10/90	5520EF
9012085- 4	#4A,B,C	SOIL	12/10/90	5520EF

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. GARY ZACCOR
ZACCOR CORP.
791 HAMILTON AVE.
MENLO PARK, CA 94025

Workorder # : 9012085
Date Received : 12/10/90
Project ID : Z0121090M1
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Department Supervisor 12-28-90 Date

Chemist 12/27/90 Date

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
ANAMETRIX, INC. (408) 432-8192

Project #	: Z0121090M1	Anametrix I.D.	: 9012085
Matrix	: SOIL	Analyst	:
Date sampled	: 12/10/90	Supervisor	:
Date ext. TOG	: 12/13/90	Date released	: 12/27/90
Date anl. TOG	: 12/13/90		

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9012085-01	#1	30	177
9012085-02	#2	30	ND
9012085-04	#4A,B,C	30	420
GSBLK121390	BLANK	30	ND

ND - Not detected at or above the practical quantitation limit for the method.
TOG - Total Oil & Grease is determined by Standard Method 5520EF.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
ANAMETRIX, INC. (408) 432-8192

Project # : Z0121090M1
Matrix : SOIL — Water
Date sampled : 12/10/90
Date ext. TOG: 12/14/90
Date anl. TOG: 12/14/90

Anametrix I.D. : 9012085
Analyst : GRWJ
Supervisor : DHS
Date released : 12/27/90

Workorder #	Sample I.D.	Reporting Limit (mg/L)	Amount Found (mg/L)
9012085-03	#3	30	6.4
GSBLK121490	BLANK	30	ND

ND - Not detected at or above the practical quantitation limit for the method.
TOG - Total Oil & Grease is determined by Standard Method 5520BF.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

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ZACCOR CORP.
791 HAMILTON AVE.
MENLO PARK, CA 94025

Workorder # : 9012085
Date Received : 12/10/90
Project ID : Z0121090M1
Purchase Order: N/A
Department : METALS
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9012085- 1	#1	SOIL	12/10/90	6010
9012085- 2	#2	SOIL	12/10/90	6010
9012085- 3	#3	H2O	12/10/90	6010
9012085- 4	#4A,B,C	SOIL	12/10/90	6010

REPORT SUMMARY
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Workorder # : 9012085
Date Received : 12/10/90
Project ID : Z0121090M1
Purchase Order: N/A
Department : METALS
Sub-Department: METALS

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Department/Supervisor 12-27-90 Date

Chemist 12/27/90 Date

ANALYSIS DATA SHEET - INDIVIDUAL METALS
ANAMETRIX, INC. - (408) 432-8192

Anametrix I.D.: 9012085
Matrix : SOIL
Date Sampled : 12/10/90
Project Number: Z0121090M1

Date Prepared : 12/18/90
Date Analyzed : 12/19/90
Date Released : 12/27/90
Instrument I.D.: ICP1

ELEMENTS	EPA Method#	Reporting Limit (mg/Kg)	Sample I.D.# #1 -01	Sample I.D.# #2 -02	Sample I.D.# #4A,B,C -04	Sample I.D.# BLANK MB1219S
Cadmium (Cd)	6010	0.25	0.34	ND	ND	ND
Total Cr	6010	0.50	28.1	30.5	51.1	ND
Nickel (Ni)	6010	2.0	46.6	27.9	38.6	ND
Lead (Pb)	6010	2.0	61.0	6.6	109	ND
Zinc (Zn)	6010	1.0	179	29.1	180	ND

ND : Not detected at or above the practical quantitation limit for the method.

All Metals by EPA Method 6010/7000, Test Methods for Evaluating Solid Waste, SW-846 3rd Edition November 1986.

Manny Nguyen 12-27-90
Chemist Date

Han Newberry 12/27/90
Chemist Date

ANALYSIS DATA SHEET - INDIVIDUAL METALS
ANAMETRIX, INC. - (408) 432-8192

Anametrix I.D.: 9012085
Matrix : WATER
Date Sampled : 12/10/90
Project Number: Z0121090M1

Date Prepared : 12/19/90
Date Analyzed : 12/21/90
Date Released : 12/27/90
Instrument I.D.: ICP1

ELEMENTS	EPA Method#	Reporting Limit (ug/L)	Sample I.D.# #3 -03	Sample I.D.# BLANK MB1219W
Cadmium (Cd)	6010	5.0	ND	ND
Total Cr	6010	10.0	122	ND
Nickel (Ni)	6010	40.0	88.0	ND
Lead (Pb)	6010	40.0	680	ND
Zinc (Zn)	6010	20.0	1740	ND

ND : Not detected at or above the practical quantitation limit for the method.

All Metals by EPA Method 6010/7000, Test Methods for Evaluating Solid Waste, SW-846 3rd Edition November 1986.

Chemist 12-27-90 Date

Chemist 12/27/90 Date