

100 Pine Street, 10th Floor
San Francisco, CA 94111
(415) 434-8400 • FAX (415) 434-1366



3 September 1992
Project No. 1886.02

RECEIVED
SEP 04 1992

Ravi Arulanantham, Ph.D., CHMM
Alameda County Health Agency
Division of Hazardous Materials
Department of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Subject: Results of Supplemental Soil Sampling/Approval of Proposed Site Use
Sunnyside Nursery
Hayward, California

TRACT 6078

Dear Dr. Arulanantham:

13 Lots

This letter reports the analytical results of supplemental soil sampling conducted at the subject site on behalf of The Plymouth Group (Plymouth), of Mountain View, California, by Geomatrix Consultants, Inc. (Geomatrix) on 7 and 12 August 1992. The objective of the soil sampling plan and chemical analyses was to further evaluate the presence of pesticides in shallow soil. As you requested in our meeting of 29 June 1992, the plan included the collection of four surface soil samples (0 to 6 inches below ground surface), and six near-surface soil samples from approximately 18 inches below ground surface to augment initial soil sampling results from a 1.8-acre area proposed for residential development by Plymouth.

The soil sampling locations are identified on the attached site map, Figure 1, along with the locations of previously collected soil samples. The soil samples were collected in clean brass tubes using a hand-held drive sampler and sealed with aluminum foil and plastic end caps, labeled, and stored in ice-cooled chest for transport under Geomatrix chain-of-custody procedures to a state-certified analytical laboratory.

A total of 10 soil samples were collected and analyzed for chlorinated pesticides and polychlorinated biphenyls (PCBs) by Environmental Protection Agency (EPA) Method 8080; organophosphorus pesticides by EPA Method 8140; and carbamates and urea-based pesticides and herbicides by EPA Method 632. In addition, soil samples from two of the locations were collected in glass jars and analyzed for California Code of Regulations Title 22 metals by EPA Methods 6010 and 7000 series. Samples were analyzed by Anametrix, Inc., of San Jose, California; Anresco, Inc., of San Francisco, California; and APPL, Inc., of Fresno, California. Laboratory analytical reports and chain-of-custody documentation are presented in Attachment B.

Geomatrix Consultants, Inc.
Engineers, Geologists, and Environmental Scientists

Ravi Arulanantham, Ph.D., CHMM
Alameda County Health Agency
3 September 1992
Page 2

Results of the suite of analyses are presented in Tables 1 and 2. No EPA Method 8080 compounds were detected above the practical quantitation limit in nine of the ten soil samples; sample A-2 contained 0.026 milligrams per kilogram (mg/kg) of 4,4'-DDE and 0.022 mg/kg of 4,4'-DDT. No EPA Method 8140 compounds were detected above the practical quantitation limit in any of the ten soil samples. No EPA Method 632 compounds were detected above the practical quantitation limit in nine of the ten soil samples; sample A-3 contained 0.03 mg/kg of Diuron. The concentration of metals in samples A-3 and A-4 are considered to be background levels.


Following review of the above results at our 1 September 1992 meeting with you, it is our understanding that these results are acceptable to the Alameda County Health Care Services Agency Division of Hazardous Materials for residential development without restrictions. A plan to control dust from and access to surrounding agricultural chemical-affected sites will be developed with you concurrently with site development. As currently planned, site grading is expected to begin as soon as 8 September 1992. Please contact either of the undersigned if you have any questions or require further information.

Sincerely yours,

GEOMATRIX CONSULTANTS



Daniel Del Grande
Staff Engineer


Tom Graf, P.E.
Vice President

DDG/slr
CONTR18862RES.LTR

Attachments (4)

cc: Mr. Curtis Peterson - The Plymouth Group
Mr. Hugh Murphy - City of Hayward Fire Department

TABLE 1
ORGANIC COMPOUND ANALYTICAL RESULTS FOR SOIL SAMPLES¹
7 and 12 AUGUST 1992
 Sunnyside Nursery
 Hayward, California

Results in milligrams per kilogram (mg/kg)

Sample I.D.	Sample Depth (inches)	Analytical Results ²		
		EPA Method 8080	EPA Method 8140	EPA Method 632
A-1	6	ND ³	ND	ND
B-1	18	ND	ND	ND
A-2	6	4,4' - DDE - 0.026 4,4' - DDT - 0.022	ND	ND
B-2	18	ND	ND	ND
A-3	6	ND	ND	Diuron - 0.03
B-3	18	ND	ND	ND
A-4	6	ND	ND	ND
B-5	18	ND	ND	ND
B-6	18	ND	ND	ND
B-7	18	ND	ND	ND

¹ Samples analyzed by Anametrix, Inc., of San Jose, California; Anresco, Inc., of San Francisco, California; and Apple Laboratories, Inc., of Fresno, California.

² Samples analyzed by: EPA Method 8080 - Organochlorine Pesticides and Polychlorinated Biphenyls; EPA Method 8140 - Organophosphorous Pesticides; EPA Method 632 - Carbamate and Urea Pesticides. Only compounds detected are listed on table.

³ ND = Chemicals were not detected above the laboratory's practical quantitation limit for the method.

TABLE 2
TOTAL METALS ANALYTICAL RESULTS FOR SOIL SAMPLES¹
7 AUGUST 1992
Sunnyside Nursery
Hayward, California

Results in milligrams per kilogram (mg/kg)

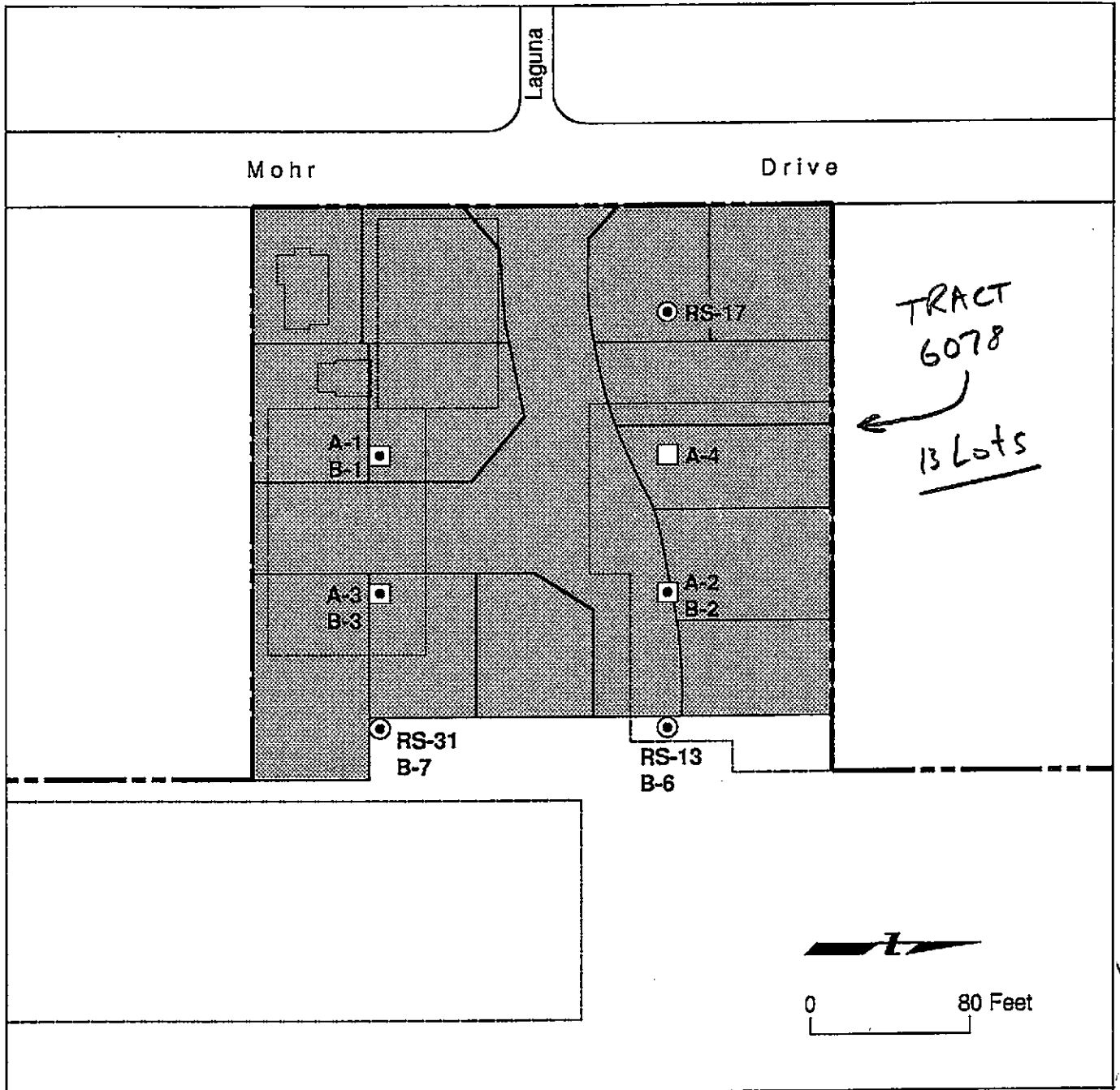
Sample I.D.	Sample Depth (inches)	Title 22 Metals ²											
		Arsenic (As)	Barium (Ba)	Beryllium (Be)	Cadmium (Cd)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Nickel (Ni)	Vanadium (V)	Zinc (Zn)
A-3	6	2.2	174	0.42	0.27	32.0	9.6	18.3	9.9	<0.14	35.5	19.5	40.0
A-4 ³	6	<5.0	67.1	<0.62	<0.62	39.0	21.5	90.0	6.1	0.17	40.1	42.5	39.5
Background Concentrations ⁴		6.5	700	<1	---	100 - 1000	15 - 70	30	30 - 300	0.2 - 1.3	30 - 300	150 - 500	120 - 400

¹ Samples analyzed by Anametrix, Inc., of San Jose, California, by U.S. Environmental Protection Agency (EPA) Method 6010/7000.

² California Code of Regulations, Title 22, Section 66261.24. Only metals that were detected are listed. The metals antimony, molybdenum, selenium, silver, and thallium were not detected above their practical quantification limits.

³ Sample A-4 was analyzed at 1:2.5 dilution for EPA Method 6010 due to spectral interferences.

⁴ Background metals concentrations in soils in the South Bay from maps presented in: Shacklette, H.T. and Boerngen, J.G., 1984, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States; USGS Prof. Paper 1270.



EXPLANATION

- RS-13 ○ Surface (0 - 6") sample location (Terratech, December 1990)
- A-1 □ Surface (0 - 6") sample location (Geomatrix, August 1992)
- B-1 • Near surface (18") sample location (Geomatrix, August 1992)
- Sunnyside Nursery property boundary
- Former building location
- ▨ Proposed Phase I development area

TRACT 6078



SOIL SAMPLING LOCATIONS
 PHASE I DEVELOPMENT AREA
 Sunnyside Nursery
 Hayward, California

Figure
 1

Project No.
 1886.02

100 Pine Street, 10th Floor
San Francisco, CA 94111
(415) 434-8400 • FAX (415) 434-1386



3 September 1992
Project No. 1886.02

92091-0001-05

Ravi Arulanantham, Ph.D., CHMM
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Division of Hazardous Materials
Department of Environmental Health
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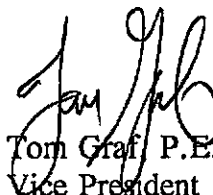
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Sincerely yours,

GEOMATRIX CONSULTANTS

A handwritten signature in black ink, appearing to read "Daniel Del Grande".

Daniel Del Grande
Staff Engineer

A handwritten signature in black ink, appearing to read "Tom Graf".

Tom Graf, P.E.
Vice President

DDG/slr
CONTR\18862RES.LTR

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cc: Mr. Curtis Peterson - The Plymouth Group
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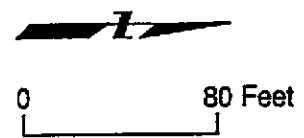
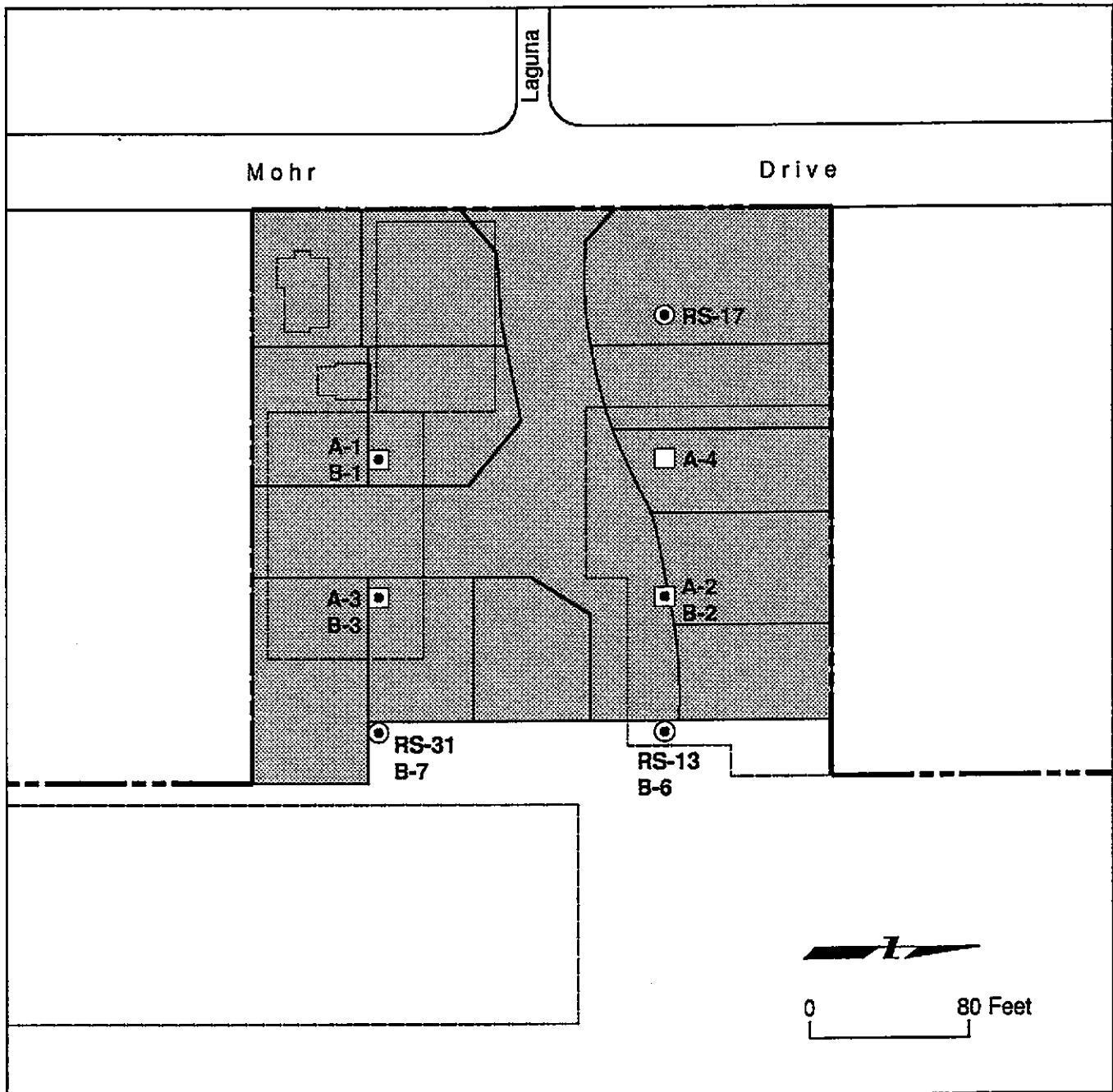
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SOIL SAMPLING LOCATIONS
PHASE I DEVELOPMENT AREA
 Sunnyside Nursery
 Hayward, California

Figure 1
Project No. 1886.02

ATTACHMENT

**LABORATORY REPORTS AND
CHAIN-OF-CUSTODY RECORDS**

ANAMETRIX INC

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

**REPORT**

MR. TOM GRAF
GEOMATRIX CONSULTANTS INC.
100 PINE STREET, SUITE 1000
SAN FRANCISCO, CA 94111

Workorder # : 9208095
Date Received : 08/10/92
Project ID : 1886.02
Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9208095- 1	A-3
9208095- 2	A-4
9208095- 3	A-2
9208095- 4	B-2
9208095- 5	B-3

This report consists of 18 pages not including the cover letter, and is organized in sections according to the specific Anamatrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anamatrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anamatrix 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 Accreditation 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 Anamatrix.

Sarah Schoen, Ph.D.
Laboratory Director

8-24-92

Date

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

MR. TOM GRAF
GEOMATRIX CONSULTANTS INC.
100 PINE STREET, SUITE 1000
SAN FRANCISCO, CA 94111

Workorder # : 9208095
Date Received : 08/10/92
Project ID : 1886.02
Purchase Order: N/A
Department : GC
Sub-Department: PEST

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9208095- 1	A-3	SOIL	08/07/92	632
9208095- 2	A-4	SOIL	08/07/92	632
9208095- 3	A-2	SOIL	08/07/92	632
9208095- 4	B-2	SOIL	08/07/92	632
9208095- 5	B-3	SOIL	08/07/92	632
9208095- 1	A-3	SOIL	08/07/92	8080
9208095- 2	A-4	SOIL	08/07/92	8080
9208095- 3	A-2	SOIL	08/07/92	8080
9208095- 4	B-2	SOIL	08/07/92	8080
9208095- 5	B-3	SOIL	08/07/92	8080
9208095- 1	A-3	SOIL	08/07/92	8140
9208095- 2	A-4	SOIL	08/07/92	8140
9208095- 3	A-2	SOIL	08/07/92	8140
9208095- 4	B-2	SOIL	08/07/92	8140
9208095- 5	B-3	SOIL	08/07/92	8140

REPORT SUMMARY
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GEOMATRIX CONSULTANTS INC.
100 PINE STREET, SUITE 1000
SAN FRANCISCO, CA 94111

Workorder # : 9208095
Date Received : 08/10/92
Project ID : 1886.02
Purchase Order: N/A
Department : GC
Sub-Department: PEST

QA/QC SUMMARY :

- EPA 632 and 8140 analysis for samples 1 through 5 were sub-contracted to another California DHS certified laboratory.

Sean Randall 8/21/92
Department Supervisor Date

Juliet Oluwole 8/21/92
Chemist Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080
 ANAMETRIX, INC. (408)432-8192

Project ID : 1886.02
 Sample ID : A-3
 Matrix : SOIL
 Date Sampled : 8/ 7/92
 Date Extracted : 8/13/92
 Amount Extracted : 30.0 g
 Date Analyzed : 8/18/92
 Instrument ID : HP16

Anamatrix ID : 9208095-01
 Analyst : *HW*
 Supervisor : *STR*

Dilution Factor : 1.0
 Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	8.0	ND	U
319-85-7	beta-BHC	8.0	ND	U
319-86-8	delta-BHC	8.0	ND	U
58-89-9	gamma-BHC	8.0	ND	U
76-44-8	Heptachlor	8.0	ND	U
309-00-2	Aldrin	8.0	ND	U
1024-57-3	Heptachlor Epoxide	8.0	ND	U
959-98-8	Endosulfan I	8.0	ND	U
60-57-1	Dieldrin	16.	ND	U
72-55-9	4,4'-DDE	16.	ND	U
72-20-8	Endrin	16.	ND	U
33213-65-9	Endosulfan II	16.	ND	U
72-54-8	4,4'-DDD	16.	ND	U
1031-07-8	Endosulfan Sulfate	16.	ND	U
50-29-3	4,4'-DDT	16.	ND	U
72-43-5	Methoxychlor	80.	ND	U
53494-70-5	Endrin Ketone	16.	ND	U
8001-35-2	Toxaphene	160.	ND	U
12674-11-2	Aroclor-1016	80.	ND	U
11104-28-2	Aroclor-1221	80.	ND	U
11141-16-5	Aroclor-1232	80.	ND	U
53469-21-9	Aroclor-1242	80.	ND	U
12672-29-6	Aroclor-1248	80.	ND	U
11097-69-1	Aroclor-1254	160.	ND	U
11096-82-5	Aroclor-1260	160.	ND	U
7421-93-4	Endrin Aldehyde	16.	ND	U
12789-03-6	Technical Chlordane	80.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080
 ANAMETRIX, INC. (408)432-8192

Project ID : 1886.02
 Sample ID : A-4
 Matrix : SOIL
 Date Sampled : 8/ 7/92
 Date Extracted : 8/13/92
 Amount Extracted : 30.0 g
 Date Analyzed : 8/18/92
 Instrument ID : HP16

Anamatrix ID : 9208095-02
 Analyst : *STW*
 Supervisor : *SR*

Dilution Factor : 1.0
 Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	8.0	ND	U
319-85-7	beta-BHC	8.0	ND	U
319-86-8	delta-BHC	8.0	ND	U
58-89-9	gamma-BHC	8.0	ND	U
76-44-8	Heptachlor	8.0	ND	U
309-00-2	Aldrin	8.0	ND	U
1024-57-3	Heptachlor Epoxide	8.0	ND	U
959-98-8	Endosulfan I	8.0	ND	U
60-57-1	Dieldrin	16.	ND	U
72-55-9	4,4'-DDE	16.	ND	U
72-20-8	Endrin	16.	ND	U
33213-65-9	Endosulfan II	16.	ND	U
72-54-8	4,4'-DDD	16.	ND	U
1031-07-8	Endosulfan Sulfate	16.	ND	U
50-29-3	4,4'-DDT	16.	ND	U
72-43-5	Methoxychlor	80.	ND	U
53494-70-5	Endrin Ketone	16.	ND	U
8001-35-2	Toxaphene	160.	ND	U
12674-11-2	Aroclor-1016	80.	ND	U
11104-28-2	Aroclor-1221	80.	ND	U
11141-16-5	Aroclor-1232	80.	ND	U
53469-21-9	Aroclor-1242	80.	ND	U
12672-29-6	Aroclor-1248	80.	ND	U
11097-69-1	Aroclor-1254	160.	ND	U
11096-82-5	Aroclor-1260	160.	ND	U
7421-93-4	Endrin Aldehyde	16.	ND	U
12789-03-6	Technical Chlordane	80.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080
ANAMETRIX, INC. (408)432-8192

Project ID : 1886.02
Sample ID : A-2
Matrix : SOIL
Date Sampled : 8/ 7/92
Date Extracted : 8/13/92
Amount Extracted : 30.0 g
Date Analyzed : 8/18/92
Instrument ID : HP16

Anamatrix ID : 9208095-03
Analyst : *STO*
Supervisor : *STR*

Dilution Factor : 1.0
Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	8.0	ND	U
319-85-7	beta-BHC	8.0	ND	U
319-86-8	delta-BHC	8.0	ND	U
58-89-9	gamma-BHC	8.0	ND	U
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309-00-2	Aldrin	8.0	ND	U
1024-57-3	Heptachlor Epoxide	8.0	ND	U
959-98-8	Endosulfan I	8.0	ND	U
60-57-1	Dieldrin	16.	ND	U
72-55-9	4,4'-DDE	16.	26.	U
72-20-8	Endrin	16.	ND	U
33213-65-9	Endosulfan II	16.	ND	U
72-54-8	4,4'-DDD	16.	ND	U
1031-07-8	Endosulfan Sulfate	16.	ND	U
50-29-3	4,4'-DDT	16.	22.	U
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959-98-8	Endosulfan I	8.0	ND	U
60-57-1	Dieldrin	16.	ND	U
72-55-9	4,4'-DDE	16.	ND	U
72-20-8	Endrin	16.	ND	U
33213-65-9	Endosulfan II	16.	ND	U
72-54-8	4,4'-DDD	16.	ND	U
1031-07-8	Endosulfan Sulfate	16.	ND	U
50-29-3	4,4'-DDT	16.	ND	U
72-43-5	Methoxychlor	80.	ND	U
53494-70-5	Endrin Ketone	16.	ND	U
8001-35-2	Toxaphene	160.	ND	U
12674-11-2	Aroclor-1016	80.	ND	U
11104-28-2	Aroclor-1221	80.	ND	U
11141-16-5	Aroclor-1232	80.	ND	U
53469-21-9	Aroclor-1242	80.	ND	U
12672-29-6	Aroclor-1248	80.	ND	U
11097-69-1	Aroclor-1254	160.	ND	U
11096-82-5	Aroclor-1260	160.	ND	U
7421-93-4	Endrin Aldehyde	16.	ND	U
12789-03-6	Technical Chlordane	80.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080
ANAMETRIX, INC. (408)432-8192

Project ID : 1886.02
Sample ID : B-3
Matrix : SOIL
Date Sampled : 8/ 7/92
Date Extracted : 8/13/92
Amount Extracted : 30.0 g
Date Analyzed : 8/18/92
Instrument ID : HP16

Anamatrix ID : 9208095-05
Analyst : JWO
Supervisor : STR
Dilution Factor : 1.0
Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	8.0	ND	U
319-85-7	beta-BHC	8.0	ND	U
319-86-8	delta-BHC	8.0	ND	U
58-89-9	gamma-BHC	8.0	ND	U
76-44-8	Heptachlor	8.0	ND	U
309-00-2	Aldrin	8.0	ND	U
1024-57-3	Heptachlor Epoxide	8.0	ND	U
959-98-8	Endosulfan I	8.0	ND	U
60-57-1	Dieldrin	16.	ND	U
72-55-9	4,4'-DDE	16.	ND	U
72-20-8	Endrin	16.	ND	U
33213-65-9	Endosulfan II	16.	ND	U
72-54-8	4,4'-DDD	16.	ND	U
1031-07-8	Endosulfan Sulfate	16.	ND	U
50-29-3	4,4'-DDT	16.	ND	U
72-43-5	Methoxychlor	80.	ND	U
53494-70-5	Endrin Ketone	16.	ND	U
8001-35-2	Toxaphene	160.	ND	U
12674-11-2	Aroclor-1016	80.	ND	U
11104-28-2	Aroclor-1221	80.	ND	U
11141-16-5	Aroclor-1232	80.	ND	U
53469-21-9	Aroclor-1242	80.	ND	U
12672-29-6	Aroclor-1248	80.	ND	U
11097-69-1	Aroclor-1254	160.	ND	U
11096-82-5	Aroclor-1260	160.	ND	U
7421-93-4	Endrin Aldehyde	16.	ND	U
12789-03-6	Technical Chlordane	80.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080
 ANAMETRIX, INC. (408)432-8192

Project ID : 1886.0
 Sample ID : BLANK
 Matrix : SOIL
 Date Sampled : 0/ 0/ 0
 Date Extracted : 8/13/92
 Amount Extracted : 30.0 g
 Date Analyzed : 8/18/92
 Instrument ID : HP16

Anamatrix ID : PSBLK081392
 Analyst : JWO
 Supervisor : STR

Dilution Factor : 1.0
 Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	8.0	ND	U
319-85-7	beta-BHC	8.0	ND	U
319-86-8	delta-BHC	8.0	ND	U
58-89-9	gamma-BHC	8.0	ND	U
76-44-8	Heptachlor	8.0	ND	U
309-00-2	Aldrin	8.0	ND	U
1024-57-3	Heptachlor Epoxide	8.0	ND	U
959-98-8	Endosulfan I	8.0	ND	U
60-57-1	Dieldrin	16.	ND	U
72-55-9	4,4'-DDE	16.	ND	U
72-20-8	Endrin	16.	ND	U
33213-65-9	Endosulfan II	16.	ND	U
72-54-8	4,4'-DDD	16.	ND	U
1031-07-8	Endosulfan Sulfate	16.	ND	U
50-29-3	4,4'-DDT	16.	ND	U
72-43-5	Methoxychlor	80.	ND	U
53494-70-5	Endrin Ketone	16.	ND	U
8001-35-2	Toxaphene	160.	ND	U
12674-11-2	Aroclor-1016	80.	ND	U
11104-28-2	Aroclor-1221	80.	ND	U
11141-16-5	Aroclor-1232	80.	ND	U
53469-21-9	Aroclor-1242	80.	ND	U
12672-29-6	Aroclor-1248	80.	ND	U
11097-69-1	Aroclor-1254	160.	ND	U
11096-82-5	Aroclor-1260	160.	ND	U
7421-93-4	Endrin Aldehyde	16.	ND	U
12789-03-6	Technical Chlordane	80.	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8080
 ANAMETRIX, INC. (408)432-8192

Project ID : 1886.02
 Matrix : SOLID

Anamatrix ID : 9208095
 Analyst : *JW*
 Supervisor : *SR*

	SAMPLE ID	SU1	SU2	SU3	SU4	SU5	SU6
1	BLANK	127					
2	A-3	90					
3	A-4	73					
4	A-2	81					
5	B-2	95					
6	B-3	91					
7	A-4 MS	99					
8	A-4 MSD	113					
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

QC LIMITS

SU1 = Decachlorobiphenyl (30-130)

* Values outside of Anamatrix QC limits

MATRIX SPIKE RECOVERY FORM -- EPA METHOD 8080
 ANAMETRIX, INC. (408)432-8192

Project ID : 1886.02
 Sample ID : A-4
 Matrix : SOIL
 Date Sampled : 8/ 7/92
 Date Extracted : 8/13/92
 Date Analyzed : 8/18/92
 Instrument ID : HP16

Anamatrix ID : 9208095-02
 Analyst : JLO
 Supervisor : JIK

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	%REC LIMITS
gamma-BHC	16.67	.00	13.87	83	41-123
Heptachlor	16.67	.00	10.77	65	41-124
Aldrin	16.67	.00	12.97	78	37-123
Dieldrin	33.33	.00	17.71	53	44-112
Endrin	33.33	.00	28.16	84	41-117
4,4'-DDT	33.33	.00	27.48	82	35-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	RPD LIMITS	%REC LIMITS
gamma-BHC	16.67	14.59	88	5	25	41-123
Heptachlor	16.67	11.28	68	5	25	41-124
Aldrin	16.67	13.79	83	6	25	37-123
Dieldrin	33.33	20.38	61	14	25	44-112
Endrin	33.33	32.00	96	13	25	41-117
4,4'-DDT	33.33	33.06	99	18	25	35-134

* Value is outside of Anamatrix QC limits

RPD: 0 out of 6 outside limits
 Spike Recovery: 0 out of 12 outside limits

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

MR. TOM GRAF
GEOMATRIX CONSULTANTS INC.
100 PINE STREET, SUITE 1000
SAN FRANCISCO, CA 94111

Workorder # : 9208095
Date Received : 08/10/92
Project ID : 1886.02
Purchase Order: N/A
Department : METALS
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9208095- 1	A-3	SOIL	08/07/92	T 22-MET
9208095- 2	A-4	SOIL	08/07/92	T 22-MET

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

MR. TOM GRAF
GEOMATRIX CONSULTANTS INC.
100 PINE STREET, SUITE 1000
SAN FRANCISCO, CA 94111

Workorder # : 9208095
Date Received : 08/10/92
Project ID : 1886.02
Purchase Order: N/A
Department : METALS
Sub-Department: METALS

QA/QC SUMMARY :

- Sample A-4 was analyzed at 1:2.5 dilution for EPA Method 6010 due to spectral interferences.
- Spike recoveries for sample A-4 for copper by EPA Method 6010 were outside of Anamatrix control limits due to high levels present in the unspiked sample.
- Matrix and post digestion spike recoveries for sample A-4 for arsenic by EPA Method 7060, antimony by EPA Method 6010 and selenium by EPA Method 7740 were outside of Anamatrix control limits due to matrix effects.
- Spike recoveries for sample A-4 for thallium by EPA Method 7841 were outside of Anamatrix control limits due to matrix effects.

Wannyn Hoyer 8/21/92
Department Supervisor Date

Mona Kameel 8/20/92
Chemist Date

ANALYSIS DATA SHEET - TITLE 22 METALS
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9208095
Matrix : SOIL
Date Sampled : 08/07/92
Project Number: 1886.02

Date Prepared : 08/12/92
Date Analyzed : 08/13/92
Date Released : 08/19/92
Instrument I.D.: HGA1/AA2/AA3/ICP1

ELEMENTS	EPA Method#	Reporting Limit (mg/Kg)	Sample I.D.# A-3
Silver (Ag)	6010	0.50	ND
Arsenic (As)	7060	0.50	2.2
Barium (Ba)	6010	5.0	174
Beryllium (Be)	6010	0.25	0.42
Cadmium (Cd)	6010	0.25	0.27
Cobalt (Co)	6010	2.5	9.6
Total Cr	6010	1.0	32.0
Copper (Cu)	6010	1.25	18.3
Mercury (Hg)	7471	0.14	ND
Molybdenum (Mo)	6010	0.50	ND
Nickel (Ni)	6010	2.0	35.5
Lead (Pb)	7421	0.75	9.9
Antimony (Sb)	6010	3.0	ND
Selenium (Se)	7740	1.2	ND
Thallium (Tl)	7841	0.50	ND
Vanadium (V)	6010	2.5	19.5
Zinc (Zn)	6010	1.0	40.0

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

All Metals by EPA Method 6010/7000, Test Method for Evaluating Solid Waste, SW-846 3rd Edition November 1986, and California Code of Regulations Title 22, or Method for Chemical Analysis of Water and Wastes, EPA, 3rd edition, 1983.

Wannynghuyn 8/21/92
Supervisor Date

Mona Kameel 8/20/92
Chemist Date

ANALYSIS DATA SHEET - TITLE 22 METALS
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9208095
Matrix : SOIL
Date Sampled : 08/07/92
Project Number: 1886.02

Date Prepared : 08/12/92
Date Analyzed : 08/13/92
Date Released : 08/19/92
Instrument I.D.: HGA1/AA2/AA3/ICP1

ELEMENTS	EPA Method#	Reporting Limit (mg/Kg)	Sample I.D.# A-4
Silver (Ag)	6010	1.2	ND
Arsenic (As)	7060	5.0	ND
Barium (Ba)	6010	12.5	67.1
Beryllium (Be)	6010	0.62	ND
Cadmium (Cd)	6010	0.62	ND
Cobalt (Co)	6010	6.2	21.5
Total Cr	6010	2.5	39.0
Copper (Cu)	6010	3.1	90.0
Mercury (Hg)	7471	0.14	0.17
Molybdenum (Mo)	6010	1.2	ND
Nickel (Ni)	6010	5.0	40.1
Lead (Pb)	7421	0.75	6.1
Antimony (Sb)	6010	7.5	ND
Selenium (Se)	7740	2.5	ND
Thallium (Tl)	7841	0.50	ND
Vanadium (V)	6010	6.2	42.5
Zinc (Zn)	6010	2.5	39.5

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

All Metals by EPA Method 6010/7000, Test Method for Evaluating Solid Waste, SW-846 3rd Edition November 1986, and California Code of Regulations Title 22, or Method for Chemical Analysis of Water and Wastes, EPA, 3rd edition, 1983.

Wannyn Guyer 8/24/92
Supervisor Date

Mona Kannel 8/24/92
Chemist Date

ANALYSIS DATA SHEET - TITLE 22 METALS
 ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9208095
 Matrix : SOIL
 Date Sampled : N/A
 Project Number: 1886.02

Date Prepared : 08/12/92
 Date Analyzed : 08/13/92
 Date Released : 08/19/92
 Instrument I.D.: HGA1/AA2/AA3/ICP1

ELEMENTS	EPA Method#	Reporting Limit (mg/Kg)	Sample I.D.# BLANK
			MB0812S
Silver (Ag)	6010	0.50	ND
Arsenic (As)	7060	0.50	ND
Barium (Ba)	6010	5.0	ND
Beryllium (Be)	6010	0.25	ND
Cadmium (Cd)	6010	0.25	ND
Cobalt (Co)	6010	2.5	ND
Total Cr	6010	1.0	ND
Copper (Cu)	6010	1.25	ND
Mercury (Hg)	7471	0.14	ND
Molybdenum (Mo)	6010	0.50	ND
Nickel (Ni)	6010	2.0	ND
Lead (Pb)	6010	2.0	ND
Antimony (Sb)	6010	3.0	ND
Selenium (Se)	7740	0.25	ND
Thallium (Tl)	7841	0.50	ND
Vanadium (V)	6010	2.5	ND
Zinc (Zn)	6010	1.0	ND

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

All Metals by EPA Method 6010/7000, Test Method for Evaluating Solid Waste, SW-846 3rd Edition November 1986, and California Code of Regulations Title 22, or Method for Chemical Analysis of Water and Wastes, EPA, 3rd edition, 1983.

Wannynghuyn 8/2/92
 Supervisor Date

Mona Kamel 8/20/92
 Chemist Date

ANAMETRIX, INC.
 1961 CONCOURSE DRIVE, SUITE E
 SAN JOSE, CA 95131, (408) 432-8192

 INORGANICS MATRIX SPIKE REPORT

Spike I.D. : 9208095-02MS,MD Inst. ID : HGA1/AA2/AA3/ICP1
 Date Prepared: 08/12/92 Date : 08/19/92
 Date Analyzed: 08/13/92 Matrix : SOIL
 Assoc. WO # : 9208095 Conc. Units: mg/Kg

ELEMENTS	METHOD	SPIKE AMOUNT	SAMPLE CONC.*	M.S. CONC.	% REC.	M.S.D. CONC.	% REC.	R P D
Ag	6010	2.5	0.0	2.0	80.0	1.9	76.0	5.1
As	7060	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Ba	6010	100	67.1	161	93.9	160	92.9	1.1
Be	6010	2.50	0.0	2.4	96.0	2.4	96.0	0.0
Cd	6010	2.50	0.0	3.1	124	3.0	120	3.3
Co	6010	25.0	21.5	46.4	99.6	46.2	98.8	0.8
TTl Cr	6010	10.0	39.0	47.8	88.0	47.8	88.0	0.0
Cu	6010	12.5	90.0	118	NR	116	NR	NR
Hg	7471	0.680	0.2	0.77	88.8	0.8	96.4	8.2
Mo	6010	100	0.0	78.9	78.9	78.2	78.2	0.9
Ni	6010	25.0	40.1	66.2	104	65.6	102	2.3
Pb	7421	1.0	6.1	7.2	110	6.9	80.0	31.6
Sb	6010	25.0	0.0	7.2	28.8	5.9	23.6	19.8
Se	7740	0.50	0.0	0.10	20.0	0.0	0.0	200
Tl	7841	2.5	0.0	1.6	64.0	1.5	60.0	6.5
V	6010	25.0	42.5	65.1	90.4	64.2	86.8	4.1
Zn	6010	25.0	39.5	68.6	116	68.4	116	0.7

COMMENT: Quality control limits for percent recovery are 75-125% and 25% for RPD.

NR : Not reported due to interferences from relatively high background levels in the unspiked sample.

* : Sample concentration of 0.0 indicates that the analyte in the sample was below detection limit for the method. 0.0 is entered for calculations of the percent recovery and RPD only.

Manny Lopez 8/24/92
 Supervisor Date

Mona Kane 8/24/92
 Chemist Date

ANAMETRIX, INC.
1961 CONCOURSE DRIVE, SUITE E
SAN JOSE, CA 95131, (408) 432-8192

POST DIGESTION SPIKE REPORT

Spike I.D. : 9208095-02PDS Inst. ID : AA2/ICP1
Date Prepared: 08/13/92 Date : 08/19/92
Date Analyzed: 08/13/92 Matrix : SOIL
Assoc. WO # : 9208095 Conc. Units: mg/Kg

ELEMENTS METHOD SPIKE SAMPLE P.D.S. %
 AMOUNT CONC. CONC. REC.

As 7060 1.0 0.0 0.0 0.0
Sb 6010 15.0 2.7 10.9 54.7
Se 7740 0.50 0.0 0.0 0.0
Tl 7841 1.0 0.0 0.84 84.0

=====

COMMENT: Quality control limits for percent recovery are 85-115%.

Wannyan 8/20/92
Supervisor Date

Mona Kamel 8/20/92
Chemist Date

ANAMETRIX, INC.
 1961 CONCOURSE DRIVE, SUITE E
 SAN JOSE, CA 95131, (408) 432-8192

 INDIVIDUAL METALS METHOD SPIKE REPORT

Spike I.D. : LCS0812S
 Date Prepared: 08/12/92
 Date Analyzed: 08/13/92
 Assoc. WO # : 9208095

Inst. ID: HGA1/AA2/AA3/ICP1
 Date : 08/19/92
 Matrix : SOIL
 Units : mg/Kg

ELEMENTS	METHOD	SPIKE AMOUNT	METHOD SPIKE	% REC.
Ag	6010	2.5	2.2	88.0
As	7060	2.0	2.0	100
Ba	6010	100	97.7	97.7
Be	6010	2.50	2.3	92.0
Cd	6010	2.50	2.8	112
Co	6010	25.0	24.1	96.4
Ttl Cr	6010	10.0	10.5	105
Cu	6010	12.5	11.1	88.8
Hg	7471	0.680	0.62	91.2
Mo	6010	100	97.1	97.1
Ni	6010	25.0	23.6	94.4
Pb	7421	1.0	0.96	96.0
Sb	6010	25.0	23.4	93.6
Se	7740	0.50	0.47	94.0
Tl	7841	2.5	2.5	100
V	6010	25.0	21.7	86.8
Zn	6010	25.0	21.4	85.6

=====

COMMENT: Quality control limits for percent recovery are 80-120%.

Wannhagen 8/20/92
 Supervisor Date

Mona Kamel 8/20/92
 Chemist Date

16:55
MB

9208156

10/20

Chain-of-Custody Record No. 1223 Date: 12 August 1992 Page 1 of 1

Project No.: 1886.02			ANALYSES										REMARKS				
Samplers (Signatures): <i>Daniel Del Grande</i>			EPA Method 8010	EPA Method 8020	EPA Method 8240	EPA Method 8270	TPH as gasoline	TPH as diesel	TPH as BTEX	8080	8140	632	Cooled	Soil (S) or water (W)	Acidified	Number of containers	Additional comments
Date	Time	Sample Number															
8/12/92	3:15	A-1							X	X	X	X	S	S		1	REF. No: 783C
	3:19	B-1							X	X	X	X	S	S		1	
	3:05	B-7							X	X	X	X	S	S		1	
	28:55	B-6							X	X	X	X	S	S		1	
	28:45	B-5							X	X	X	X	S	S		1	
(tabbed)																	

- ①
- ②
- ③
- ④
- ⑤

Turnaround time: ONE WEEK Results to: Tom Graf Total No. of containers: 5

Relinquished by: <i>Daniel Del Grande</i> Signature: DANIEL DEL GRANDE Printed name: GEOMETRIX Company: GEOMETRIX	Date: 8/12/92	Relinquished by: <i>Thomas R Jones</i> Signature: THOMAS R JONES Printed name: THOMAS R JONES Company: GEOMETRIX	Date: 8/12/92	Relinquished by: <i>Jim Champagne</i> Signature: JIM CHAMPAGNE Printed name: JIM CHAMPAGNE Company: GEOMETRIX	Date: 8/15/92	Method of shipment: COURIER PICK-UP Laboratory comments and Log No.:
Received by: <i>Thomas R Jones</i> Signature: THOMAS R JONES Printed name: THOMAS R JONES Company: GEOMETRIX	Time: 4:50	Received by: <i>Jim Champagne</i> Signature: JIM CHAMPAGNE Printed name: JIM CHAMPAGNE Company: GEOMETRIX	Time: 15:05	Received by: <i>Kathy Peaffle</i> Signature: KATHY PEAFFLE Printed name: ANAMATRIX Company: ANAMATRIX	Time: 16:12	8-13-92 1642

Geomatrix Consultants
100 Pine St. 10th Floor
San Francisco, CA. 94111
(415) 434-9400

ANAMETRIX INC

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

**REPORT**

MR. TOM GRAF
 GEOMATRIX CONSULTANTS INC.
 100 PINE STREET, SUITE 1000
 SAN FRANCISCO, CA 94111

Workorder # : 9208156
 Date Received : 08/13/92
 Project ID : 1886.02
 Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9208156- 1	A-1
9208156- 2	B-1
9208156- 3	B-7
9208156- 4	B-6
9208156- 5	B-5

This report consists of 11 pages not including the cover letter, and is organized in sections according to the specific Anamatrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anamatrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anamatrix 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 Accreditation 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 Anamatrix.

 Sarah Schoen, Ph.D.
 Laboratory Director

8-24-92

 Date

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

MR. TOM GRAF
GEOMATRIX CONSULTANTS INC.
100 PINE STREET, SUITE 1000
SAN FRANCISCO, CA 94111

Workorder # : 9208156
Date Received : 08/13/92
Project ID : 1886.02
Purchase Order: N/A
Department : GC
Sub-Department: PEST

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9208156- 1	A-1	SOIL	08/12/92	632
9208156- 2	B-1	SOIL	08/12/92	632
9208156- 3	B-7	SOIL	08/12/92	632
9208156- 4	B-6	SOIL	08/12/92	632
9208156- 5	B-5	SOIL	08/12/92	632
9208156- 1	A-1	SOIL	08/12/92	8080
9208156- 2	B-1	SOIL	08/12/92	8080
9208156- 3	B-7	SOIL	08/12/92	8080
9208156- 4	B-6	SOIL	08/12/92	8080
9208156- 5	B-5	SOIL	08/12/92	8080
9208156- 1	A-1	SOIL	08/12/92	8140
9208156- 2	B-1	SOIL	08/12/92	8140
9208156- 3	B-7	SOIL	08/12/92	8140
9208156- 4	B-6	SOIL	08/12/92	8140
9208156- 5	B-5	SOIL	08/12/92	8140

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

MR. TOM GRAF
GEOMATRIX CONSULTANTS INC.
100 PINE STREET, SUITE 1000
SAN FRANCISCO, CA 94111

Workorder # : 9208156
Date Received : 08/13/92
Project ID : 1886.02
Purchase Order: N/A
Department : GC
Sub-Department: PEST

QA/QC SUMMARY :

- EPA 632 and 8140 analyses for these samples were subcontracted to another California DHS certified laboratory.

Ran Randall 8-24-92
Department Supervisor Date

Juliet O'Leary 8/24/92
Chemist Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080
 ANAMETRIX, INC. (408)432-8192

Project ID : 1886.02
 Sample ID : A-1
 Matrix : SOIL
 Date Sampled : 8/12/92
 Date Extracted : 8/17/92
 Amount Extracted : 30.0 g
 Date Analyzed : 8/24/92
 Instrument ID : HP5

Anamatrix ID : 9208156-01
 Analyst : *EX*
 Supervisor : *SMR*

Dilution Factor : 1.0
 Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	8.0	ND	U
319-85-7	beta-BHC	8.0	ND	U
319-86-8	delta-BHC	8.0	ND	U
58-89-9	gamma-BHC	8.0	ND	U
76-44-8	Heptachlor	8.0	ND	U
309-00-2	Aldrin	8.0	ND	U
1024-57-3	Heptachlor Epoxide	8.0	ND	U
959-98-8	Endosulfan I	8.0	ND	U
60-57-1	Dieldrin	16.	ND	U
72-55-9	4,4'-DDE	16.	ND	U
72-20-8	Endrin	16.	ND	U
33213-65-9	Endosulfan II	16.	ND	U
72-54-8	4,4'-DDD	16.	ND	U
1031-07-8	Endosulfan Sulfate	16.	ND	U
50-29-3	4,4'-DDT	16.	ND	U
72-43-5	Methoxychlor	80.	ND	U
53494-70-5	Endrin Ketone	16.	ND	U
8001-35-2	Toxaphene	160.	ND	U
12674-11-2	Aroclor-1016	80.	ND	U
11104-28-2	Aroclor-1221	80.	ND	U
11141-16-5	Aroclor-1232	80.	ND	U
53469-21-9	Aroclor-1242	80.	ND	U
12672-29-6	Aroclor-1248	80.	ND	U
11097-69-1	Aroclor-1254	160.	ND	U
11096-82-5	Aroclor-1260	160.	ND	U
7421-93-4	Endrin Aldehyde	16.	ND	U
12789-03-6	Technical Chlordane	80.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080
 ANAMETRIX, INC. (408)432-8192

Project ID : 1886.02
 Sample ID : B-1
 Matrix : SOIL
 Date Sampled : 8/12/92
 Date Extracted : 8/17/92
 Amount Extracted : 30.0 g
 Date Analyzed : 8/24/92
 Instrument ID : HP5

Anamatrix ID : 9208156-02
 Analyst : *EX*
 Supervisor : *SR*

Dilution Factor : 1.0
 Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	8.0	ND	U
319-85-7	beta-BHC	8.0	ND	U
319-86-8	delta-BHC	8.0	ND	U
58-89-9	gamma-BHC	8.0	ND	U
76-44-8	Heptachlor	8.0	ND	U
309-00-2	Aldrin	8.0	ND	U
1024-57-3	Heptachlor Epoxide	8.0	ND	U
959-98-8	Endosulfan I	8.0	ND	U
60-57-1	Dieldrin	16.	ND	U
72-55-9	4,4'-DDE	16.	ND	U
72-20-8	Endrin	16.	ND	U
33213-65-9	Endosulfan II	16.	ND	U
72-54-8	4,4'-DDD	16.	ND	U
1031-07-8	Endosulfan Sulfate	16.	ND	U
50-29-3	4,4'-DDT	16.	ND	U
72-43-5	Methoxychlor	80.	ND	U
53494-70-5	Endrin Ketone	16.	ND	U
8001-35-2	Toxaphene	160.	ND	U
12674-11-2	Aroclor-1016	80.	ND	U
11104-28-2	Aroclor-1221	80.	ND	U
11141-16-5	Aroclor-1232	80.	ND	U
53469-21-9	Aroclor-1242	80.	ND	U
12672-29-6	Aroclor-1248	80.	ND	U
11097-69-1	Aroclor-1254	160.	ND	U
11096-82-5	Aroclor-1260	160.	ND	U
7421-93-4	Endrin Aldehyde	16.	ND	U
12789-03-6	Technical Chlordane	80.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080
ANAMETRIX, INC. (408)432-8192

Project ID : 1886.02
Sample ID : B-7
Matrix : SOIL
Date Sampled : 8/12/92
Date Extracted : 8/17/92
Amount Extracted : 30.0 g
Date Analyzed : 8/24/92
Instrument ID : HP5

Anamatrix ID : 9208156-03
Analyst : *EX*
Supervisor : *SK*

Dilution Factor : 1.0
Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	8.0	ND	U
319-85-7	beta-BHC	8.0	ND	U
319-86-8	delta-BHC	8.0	ND	U
58-89-9	gamma-BHC	8.0	ND	U
76-44-8	Heptachlor	8.0	ND	U
309-00-2	Aldrin	8.0	ND	U
1024-57-3	Heptachlor Epoxide	8.0	ND	U
959-98-8	Endosulfan I	8.0	ND	U
60-57-1	Dieldrin	16.	ND	U
72-55-9	4,4'-DDE	16.	ND	U
72-20-8	Endrin	16.	ND	U
33213-65-9	Endosulfan II	16.	ND	U
72-54-8	4,4'-DDD	16.	ND	U
1031-07-8	Endosulfan Sulfate	16.	ND	U
50-29-3	4,4'-DDT	16.	ND	U
72-43-5	Methoxychlor	80.	ND	U
53494-70-5	Endrin Ketone	16.	ND	U
8001-35-2	Toxaphene	160.	ND	U
12674-11-2	Aroclor-1016	80.	ND	U
11104-28-2	Aroclor-1221	80.	ND	U
11141-16-5	Aroclor-1232	80.	ND	U
53469-21-9	Aroclor-1242	80.	ND	U
12672-29-6	Aroclor-1248	80.	ND	U
11097-69-1	Aroclor-1254	160.	ND	U
11096-82-5	Aroclor-1260	160.	ND	U
7421-93-4	Endrin Aldehyde	16.	ND	U
12789-03-6	Technical Chlordane	80.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080
ANAMETRIX, INC. (408)432-8192

Project ID : 1886.02
Sample ID : B-6
Matrix : SOIL
Date Sampled : 8/12/92
Date Extracted : 8/17/92
Amount Extracted : 30.0 g
Date Analyzed : 8/24/92
Instrument ID : HP5

Anamatrix ID : 9208156-04
Analyst : *EX*
Supervisor : *SR*

Dilution Factor : 1.0
Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	8.0	ND	U
319-85-7	beta-BHC	8.0	ND	U
319-86-8	delta-BHC	8.0	ND	U
58-89-9	gamma-BHC	8.0	ND	U
76-44-8	Heptachlor	8.0	ND	U
309-00-2	Aldrin	8.0	ND	U
1024-57-3	Heptachlor Epoxide	8.0	ND	U
959-98-8	Endosulfan I	8.0	ND	U
60-57-1	Dieldrin	16.	ND	U
72-55-9	4,4'-DDE	16.	ND	U
72-20-8	Endrin	16.	ND	U
33213-65-9	Endosulfan II	16.	ND	U
72-54-8	4,4'-DDD	16.	ND	U
1031-07-8	Endosulfan Sulfate	16.	ND	U
50-29-3	4,4'-DDT	16.	ND	U
72-43-5	Methoxychlor	80.	ND	U
53494-70-5	Endrin Ketone	16.	ND	U
8001-35-2	Toxaphene	160.	ND	U
12674-11-2	Aroclor-1016	80.	ND	U
11104-28-2	Aroclor-1221	80.	ND	U
11141-16-5	Aroclor-1232	80.	ND	U
53469-21-9	Aroclor-1242	80.	ND	U
12672-29-6	Aroclor-1248	80.	ND	U
11097-69-1	Aroclor-1254	160.	ND	U
11096-82-5	Aroclor-1260	160.	ND	U
7421-93-4	Endrin Aldehyde	16.	ND	U
12789-03-6	Technical Chlordane	80.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080
 ANAMETRIX, INC. (408)432-8192

Project ID : 1886.02
 Sample ID : B-5
 Matrix : SOIL
 Date Sampled : 8/12/92
 Date Extracted : 8/17/92
 Amount Extracted : 30.0 g
 Date Analyzed : 8/24/92
 Instrument ID : HP5

Anamatrix ID : 9208156-05
 Analyst : *ey*
 Supervisor : *SM*

Dilution Factor : 1.0
 Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	8.0	ND	U
319-85-7	beta-BHC	8.0	ND	U
319-86-8	delta-BHC	8.0	ND	U
58-89-9	gamma-BHC	8.0	ND	U
76-44-8	Heptachlor	8.0	ND	U
309-00-2	Aldrin	8.0	ND	U
1024-57-3	Heptachlor Epoxide	8.0	ND	U
959-98-8	Endosulfan I	8.0	ND	U
60-57-1	Dieldrin	16.	ND	U
72-55-9	4,4'-DDE	16.	ND	U
72-20-8	Endrin	16.	ND	U
33213-65-9	Endosulfan II	16.	ND	U
72-54-8	4,4'-DDD	16.	ND	U
1031-07-8	Endosulfan Sulfate	16.	ND	U
50-29-3	4,4'-DDT	16.	ND	U
72-43-5	Methoxychlor	80.	ND	U
53494-70-5	Endrin Ketone	16.	ND	U
8001-35-2	Toxaphene	160.	ND	U
12674-11-2	Aroclor-1016	80.	ND	U
11104-28-2	Aroclor-1221	80.	ND	U
11141-16-5	Aroclor-1232	80.	ND	U
53469-21-9	Aroclor-1242	80.	ND	U
12672-29-6	Aroclor-1248	80.	ND	U
11097-69-1	Aroclor-1254	160.	ND	U
11096-82-5	Aroclor-1260	160.	ND	U
7421-93-4	Endrin Aldehyde	16.	ND	U
12789-03-6	Technical Chlordane	80.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8080
ANAMETRIX, INC. (408)432-8192

Project ID : 1886.0
Sample ID : BLANK
Matrix : SOIL
Date Sampled : 0/ 0/ 0
Date Extracted : 8/17/92
Amount Extracted : 30.0 g
Date Analyzed : 8/24/92
Instrument ID : HP5

Anamatrix ID : PSBLK081792
Analyst : *EF*
Supervisor : *SM*

Dilution Factor : 1.0
Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
319-84-6	alpha-BHC	8.0	ND	U
319-85-7	beta-BHC	8.0	ND	U
319-86-8	delta-BHC	8.0	ND	U
58-89-9	gamma-BHC	8.0	ND	U
76-44-8	Heptachlor	8.0	ND	U
309-00-2	Aldrin	8.0	ND	U
1024-57-3	Heptachlor Epoxide	8.0	ND	U
959-98-8	Endosulfan I	8.0	ND	U
60-57-1	Dieldrin	16.	ND	U
72-55-9	4,4'-DDE	16.	ND	U
72-20-8	Endrin	16.	ND	U
33213-65-9	Endosulfan II	16.	ND	U
72-54-8	4,4'-DDD	16.	ND	U
1031-07-8	Endosulfan Sulfate	16.	ND	U
50-29-3	4,4'-DDT	16.	ND	U
72-43-5	Methoxychlor	80.	ND	U
53494-70-5	Endrin Ketone	16.	ND	U
8001-35-2	Toxaphene	160.	ND	U
12674-11-2	Aroclor-1016	80.	ND	U
11104-28-2	Aroclor-1221	80.	ND	U
11141-16-5	Aroclor-1232	80.	ND	U
53469-21-9	Aroclor-1242	80.	ND	U
12672-29-6	Aroclor-1248	80.	ND	U
11097-69-1	Aroclor-1254	160.	ND	U
11096-82-5	Aroclor-1260	160.	ND	U
7421-93-4	Endrin Aldehyde	16.	ND	U
12789-03-6	Technical Chlordane	80.	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8080
ANAMETRIX, INC. (408)432-8192

Project ID : 1886.02
Matrix : SOLID

Anamatrix ID : 9208156
Analyst : *Ex*
Supervisor : *STR*

	SAMPLE ID	SU1	SU2	SU3	SU4	SU5	SU6
1	BLANK	68					
2	A-1	65					
3	B-1	58					
4	B-7	60					
5	B-6	54					
6	B-5	69					
7	B-1 MS	61					
8	B-1 MSD	69					
9	LCS	69					
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

QC LIMITS

SU1 = Decachlorobiphenyl (30-130)

* Values outside of Anamatrix QC limits

MATRIX SPIKE RECOVERY FORM -- EPA METHOD 8080
 ANAMETRIX, INC. (408)432-8192

Project ID : 1886.02
 Sample ID : B-1
 Matrix : SOIL
 Date Sampled : 8/12/92
 Date Extracted : 8/17/92
 Date Analyzed : 8/24/92
 Instrument ID : HP5

Anamatrix ID : 9208156-02MS
 Analyst : *EF*
 Supervisor : *SM*

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	%REC LIMITS
gamma-BHC	16.67	.00	12.38	74	41-123
Heptachlor	16.67	.00	13.24	79	41-124
Aldrin	16.67	.00	13.23	79	37-123
Dieldrin	33.33	.00	25.69	77	44-112
Endrin	33.33	.00	27.56	83	41-117
4,4'-DDT	33.33	.00	24.13	72	35-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	RPD LIMITS	%REC LIMITS
gamma-BHC	16.67	11.82	71	5	25	41-123
Heptachlor	16.67	13.75	82	4	25	41-124
Aldrin	16.67	12.80	77	3	25	37-123
Dieldrin	33.33	24.64	74	4	25	44-112
Endrin	33.33	26.74	80	3	25	41-117
4,4'-DDT	33.33	23.75	71	2	25	35-134

* Value is outside of Anamatrix QC limits

RPD: 0 out of 6 outside limits
 Spike Recovery: 0 out of 12 outside limits

LABORATORY CONTROL SPIKE RECOVERY FORM -- EPA METHOD 8080
ANAMETRIX, INC. (408)432-8192

Project/Case	: 1886.02	Sample ID	: B-1
Matrix	: SOIL	Anamatrix ID	: MG2301P1
Date Extracted	: 8/17/92	Analyst	: <i>EX</i>
Date Analyzed	: 8/23/92	Supervisor	: <i>SR</i>
Instrument ID	: HP5	SDG/Batch	: N/A

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	%REC LIMITS
gamma-BHC	17	0	11	65	41-123
Heptachlor	17	0	14	82	41-124
Aldrin	17	0	13	76	37-123
Dieldrin	33	0	24	73	44-112
Endrin	33	0	25	76	41-117
4,4'-DDT	33	0	24	73	35-134



August 28, 1992

1961 Concourse Drive, Suite E
San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-6198

Mr. Tom Graf
GEOMATRIX CONSULTANTS, INC.
100 Pine Street
Suite 1000
San Francisco, CA 94111

Dear Mr. Graf:

Enclosed are the analytical results from your project number 1886.02, received by Anamatrix, Inc. on August 10th and 13th, 1992. The enclosed work, **Carbamates (EPA Method 632) and Organophosphate Pesticides (EPA Method 8140)**, were performed by a laboratory subcontracted by Anamatrix, Inc.

<u>Anamatrix I.D.#</u>	<u>Client I.D. #</u>
9208095-1	A-3
9208095-2	A-4
9208095-3	A-2
9208095-4	B-2
9208095-5	B-3
9208156-01	A-1
9208156-02	B-1
9208156-03	B-7
9208156-04	B-6
9208156-05	B-5

If you have any questions concerning this workorder, please call our Client Services Department at (408)432-8192.

Sincerely,

ANAMETRIX, INC.

Kilma Desai
Client Services Representative

KD/mh/6879

Enclosures

APPL, INC.

AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES, INC.

4203 WEST SWIFT AVENUE • FRESNO, CALIFORNIA 93722 • PHONE (209) 275-2175

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Sample Date: 08/07/92
Report Date: 08/26/92

Page 1 of 2

Sample I.D. No: 9208095 1

Date Received: 08/12/92

APPL Sample No: R12604-80829S

Date Extracted: 08/18/92

Modified Method 632 Results (Carbamates):

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Quantitation Limit mg/kg</u>
Aminocarb	ND*	0.02
Aldicarb	ND	0.02
Barban	ND	0.07
Benomyl (Carbendazim)	ND	0.02
Bromacil	ND	0.02
Carbaryl	ND	0.02
Carbofuran	ND	0.02
Chloroprotham	ND	0.07
Chloroxuron	ND	0.02
Diuron	0.03	0.02
Fenuron	ND	0.02
Fluometuron	ND	0.02
Linuron	ND	0.07
Methomyl	ND	0.02
Methiocarb	ND	0.02
Mexacarbate	ND	0.07
Monuron	ND	0.02
Neburon	ND	0.07
Oxamyl	ND	0.02
Propachlor	ND	0.07
Protham	ND	0.07
Propoxur	ND	0.02
Siduron	ND	0.02

* ND = None Detected

Tested By

Allyson Sturman

Checked By

Mark Ray

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Sample Date: 08/07/92
Report Date: 08/26/92

Page 2 of 2

Sample I.D. No: 9208095 1

Date Received: 08/12/92

APPL Sample No: R12604-80829S

Date Extracted: 08/18/92

Method 8140 Results (OP Pesticides):

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Quantitation Limit mg/kg</u>
Azinphosmethyl	ND*	0.5
Bolstar	ND	0.05
Carbophenothion	ND	0.1
Chlorpyrifos	ND	0.05
Coumaphos	ND	0.5
Def	ND	0.05
Demeton	ND	0.1
Diazinon	ND	0.05
Dichlorvos	ND	0.1
Dimethoate	ND	0.05
Diphenamid	ND	0.05
Disulfoton	ND	0.05
Ethion	ND	0.05
Ethoprop	ND	0.05
Fensulfothion	ND	0.1
Fenthion	ND	0.05
Malathion	ND	0.2
Merphos	ND	0.05
Methyl Parathion	ND	0.05
Methyl Trithion	ND	0.1
Mevinphos	ND	0.35
Naled	ND	0.25
Parathion	ND	0.05
Phorate	ND	0.05
Phosalone	ND	0.05
Prometon	ND	0.05
Ronnel	ND	0.05
Trichloronate	ND	0.05
Trifluralin	ND	0.05

* ND = None Detected

Tested By Steven Tallman

Checked By Michael Ray

APPL, INC.

AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES, INC.

4203 WEST SWIFT AVENUE • FRESNO, CALIFORNIA 93722 • PHONE (209) 275-2175

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Sample Date: 08/07/92
Report Date: 08/26/92

Page 1 of 2

Sample I.D. No: 9208095 2

Date Received: 08/12/92

APPL Sample No: R12604-80830S

Date Extracted: 08/18/92

Modified Method 632 Results (Carbamates):

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Quantitation Limit mg/kg</u>
Aminocarb	ND*	0.02
Aldicarb	ND	0.02
Barban	ND	0.07
Benomyl (Carbendazim)	ND	0.02
Bromacil	ND	0.02
Carbaryl	ND	0.02
Carbofuran	ND	0.02
Chloroprotham	ND	0.07
Chloroxuron	ND	0.02
Diuron	ND	0.02
Fenuron	ND	0.02
Fluometuron	ND	0.02
Linuron	ND	0.07
Methomyl	ND	0.02
Methiocarb	ND	0.02
Mexacarbate	ND	0.07
Monuron	ND	0.02
Neburon	ND	0.07
Oxamyl	ND	0.02
Propachlor	ND	0.07
Protham	ND	0.07
Propoxur	ND	0.02
Siduron	ND	0.02

* ND = None Detected

Tested By

Wayne Stinson

Checked By

Mark Ray

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Sample Date: 08/07/92
Report Date: 08/26/92

Page 2 of 2

Sample I.D. No: 9208095 2

Date Received: 08/12/92

APPL Sample No: R12604-80830S

Date Extracted: 08/18/92

Method 8140 Results (OP Pesticides):

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Quantitation Limit mg/kg</u>
Azinphosmethyl	ND*	0.5
Bolstar	ND	0.05
Carbophenothion	ND	0.1
Chlorpyrifos	ND	0.05
Coumaphos	ND	0.5
Def	ND	0.05
Demeton	ND	0.1
Diazinon	ND	0.05
Dichlorvos	ND	0.1
Dimethoate	ND	0.05
Diphenamid	ND	0.05
Disulfoton	ND	0.05
Ethion	ND	0.05
Ethoprop	ND	0.05
Fensulfothion	ND	0.1
Fenthion	ND	0.05
Malathion	ND	0.2
Merphos	ND	0.05
Methyl Parathion	ND	0.05
Methyl Trithion	ND	0.1
Mevinphos	ND	0.35
Naled	ND	0.25
Parathion	ND	0.05
Phorate	ND	0.05
Phosalone	ND	0.05
Prometon	ND	0.05
Ronnel	ND	0.05
Trichloronate	ND	0.05
Trifluralin	ND	0.05

* ND = None Detected

Tested By Steven Tallman

Checked By Mark Ray

APPL, INC.

AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES, INC.

4203 WEST SWIFT AVENUE • FRESNO, CALIFORNIA 93722 • PHONE (209) 275-2175

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Sample Date: 08/07/92
Report Date: 08/26/92

Page 1 of 2

Sample I.D. No: 9208095 3

Date Received: 08/12/92

APPL Sample No: R12604-80831S

Date Extracted: 08/18/92

Modified Method 632 Results (Carbamates):

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Quantitation Limit mg/kg</u>
Aminocarb	ND*	0.02
Aldicarb	ND	0.02
Barban	ND	0.07
Benomyl (Carbendazim)	ND	0.02
Bromacil	ND	0.02
Carbaryl	ND	0.02
Carbofuran	ND	0.02
Chloroprotham	ND	0.07
Chloroxuron	ND	0.02
Diuron	ND	0.02
Fenuron	ND	0.02
Fluometuron	ND	0.02
Linuron	ND	0.07
Methomyl	ND	0.02
Methiocarb	ND	0.02
Mexacarbate	ND	0.07
Monuron	ND	0.02
Neburon	ND	0.07
Oxamyl	ND	0.02
Propachlor	ND	0.07
Protham	ND	0.07
Propoxur	ND	0.02
Siduron	ND	0.02

* ND = None Detected

Tested By

Wayne Sumner

Checked By

Mark Day

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Sample Date: 08/07/92
Report Date: 08/26/92

Page 2 of 2

Sample I.D. No: 9208095 3

Date Received: 08/12/92

APPL Sample No: R12604-80831S

Date Extracted: 08/18/92

Method 8140 Results (OP Pesticides):

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Quantitation Limit mg/kg</u>
Azinphosmethyl	ND*	0.5
Bolstar	ND	0.05
Carbophenothion	ND	0.1
Chlorpyrifos	ND	0.05
Coumaphos	ND	0.5
Def	ND	0.05
Demeton	ND	0.1
Diazinon	ND	0.05
Dichlorvos	ND	0.1
Dimethoate	ND	0.05
Diphenamid	ND	0.05
Disulfoton	ND	0.05
Ethion	ND	0.05
Ethoprop	ND	0.05
Fensulfothion	ND	0.1
Fenthion	ND	0.05
Malathion	ND	0.2
Merphos	ND	0.05
Methyl Parathion	ND	0.05
Methyl Trithion	ND	0.1
Mevinphos	ND	0.35
Naled	ND	0.25
Parathion	ND	0.05
Phorate	ND	0.05
Phosalone	ND	0.05
Prometon	ND	0.05
Ronnel	ND	0.05
Trichloronate	ND	0.05
Trifluralin	ND	0.05

* ND = None Detected

Tested By Steven Tallman

Checked By Mark Ray

APPL, INC.

AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES, INC.

4203 WEST SWIFT AVENUE • FRESNO, CALIFORNIA 93722 • PHONE (209) 275-2175

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Sample Date: 08/07/92
Report Date: 08/26/92

Page 1 of 2

Sample I.D. No: 9208095 4

Date Received: 08/12/92

APPL Sample No: R12604-80832S

Date Extracted: 08/18/92

Modified Method 632 Results (Carbamates):

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Quantitation Limit mg/kg</u>
Aminocarb	ND*	0.02
Aldicarb	ND	0.02
Barban	ND	0.07
Benomyl (Carbendazim)	ND	0.02
Bromacil	ND	0.02
Carbaryl	ND	0.02
Carbofuran	ND	0.02
Chloroprotham	ND	0.07
Chloroxuron	ND	0.02
Diuron	ND	0.02
Fenuron	ND	0.02
Fluometuron	ND	0.02
Linuron	ND	0.07
Methomyl	ND	0.02
Methiocarb	ND	0.02
Mexacarbate	ND	0.07
Monuron	ND	0.02
Neburon	ND	0.07
Oxamyl	ND	0.02
Propachlor	ND	0.07
Propham	ND	0.07
Propoxur	ND	0.02
Siduron	ND	0.02

* ND - None Detected

Tested By

Wagel Steiner

Checked By

Michael Ray

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Sample Date: 08/07/92
Report Date: 08/26/92

Page 2 of 2

Sample I.D. No: 9208095 4

Date Received: 08/12/92

APPL Sample No: R12604-80832S

Date Extracted: 08/18/92

Method 8140 Results (OP Pesticides):

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Quantitation Limit mg/kg</u>
Azinphosmethyl	ND*	0.5
Bolstar	ND	0.05
Carbophenothion	ND	0.1
Chlorpyrifos	ND	0.05
Coumaphos	ND	0.5
Def	ND	0.05
Demeton	ND	0.1
Diazinon	ND	0.05
Dichlorvos	ND	0.1
Dimethoate	ND	0.05
Diphenamid	ND	0.05
Disulfoton	ND	0.05
Ethion	ND	0.05
Ethoprop	ND	0.05
Fensulfothion	ND	0.1
Fenthion	ND	0.05
Malathion	ND	0.2
Merphos	ND	0.05
Methyl Parathion	ND	0.05
Methyl Trithion	ND	0.1
Mevinphos	ND	0.35
Naled	ND	0.25
Parathion	ND	0.05
Phorate	ND	0.05
Phosalone	ND	0.05
Prometon	ND	0.05
Ronnel	ND	0.05
Trichloronate	ND	0.05
Trifluralin	ND	0.05

* ND = None Detected

Tested By Steven Tallman

Checked By Mark Ray

APPL, INC.

AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES, INC.

4203 WEST SWIFT AVENUE • FRESNO, CALIFORNIA 93722 • PHONE (209) 275-2175

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Sample Date: 08/07/92

Report Date: 08/26/92

Page 1 of 2

Sample I.D. No: 9208095 5

Date Received: 08/12/92

APPL Sample No: R12604-80833S

Date Extracted: 08/18/92

Modified Method 632 Results (Carbamates):

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Quantitation Limit mg/kg</u>
Aminocarb	ND*	0.02
Aldicarb	ND	0.02
Barban	ND	0.07
Benomyl (Carbendazim)	ND	0.02
Bromacil	ND	0.02
Carbaryl	ND	0.02
Carbofuran	ND	0.02
Chloroprotham	ND	0.07
Chloroxuron	ND	0.02
Diuron	ND	0.02
Fenuron	ND	0.02
Fluometuron	ND	0.02
Linuron	ND	0.07
Methomyl	ND	0.02
Methiocarb	ND	0.02
Mexacarbate	ND	0.07
Monuron	ND	0.02
Neburon	ND	0.07
Oxamyl	ND	0.02
Propachlor	ND	0.07
Protham	ND	0.07
Propoxur	ND	0.02
Siduron	ND	0.02

* ND = None Detected

Tested By

Wayne Sturms

Checked By

Mark Desai

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Sample Date: 08/07/92
Report Date: 08/26/92

Page 2 of 2

Sample I.D. No: 9208095 5

Date Received: 08/12/92

APPL Sample No: R12604-80833S

Date Extracted: 08/18/92

Method 8140 Results (OP Pesticides):

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Quantitation Limit mg/kg</u>
Azinphosmethyl	ND*	0.5
Bolstar	ND	0.05
Carbophenothion	ND	0.1
Chlorpyrifos	ND	0.05
Coumaphos	ND	0.5
Def	ND	0.05
Demeton	ND	0.1
Diazinon	ND	0.05
Dichlorvos	ND	0.1
Dimethoate	ND	0.05
Diphenamid	ND	0.05
Disulfoton	ND	0.05
Ethion	ND	0.05
Ethoprop	ND	0.05
Fensulfothion	ND	0.1
Fenthion	ND	0.05
Malathion	ND	0.2
Merphos	ND	0.05
Methyl Parathion	ND	0.05
Methyl Trithion	ND	0.1
Mevinphos	ND	0.35
Naled	ND	0.25
Parathion	ND	0.05
Phorate	ND	0.05
Phosalone	ND	0.05
Prometon	ND	0.05
Ronnel	ND	0.05
Trichloronate	ND	0.05
Trifluralin	ND	0.05

* ND = None Detected

Tested By Steven Tallman

Checked By Mark Ray

APPL, INC.

AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES, INC.

4203 WEST SWIFT AVENUE • FRESNO, CALIFORNIA 93722 • PHONE (209) 275-2175

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Sample Date: NA
Report Date: 08/26/92

Page 1 of 4

Sample I.D. No: 9208095
Blank for samples
taken 08/07/92

Date Received: NA

APPL Sample No: R12604-920818S

Date Extracted: 08/18/92

Modified Method 632 Results (Carbamates):

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Quantitation Limit mg/kg</u>
Aminocarb	ND*	0.02
Aldicarb	ND	0.02
Barban	ND	0.07
Benomyl (Carbendazim)	ND	0.02
Bromacil	ND	0.02
Carbaryl	ND	0.02
Carbofuran	ND	0.02
Chloroprotham	ND	0.07
Chloroxuron	ND	0.02
Diuron	ND	0.02
Fenuron	ND	0.02
Fluometuron	ND	0.02
Linuron	ND	0.07
Methomyl	ND	0.02
Methiocarb	ND	0.02
Mexacarbate	ND	0.07
Monuron	ND	0.02
Neburon	ND	0.07
Oxamyl	ND	0.02
Propachlor	ND	0.07
Protham	ND	0.07
Propoxur	ND	0.02
Siduron	ND	0.02

* ND = None Detected

Checked By Lance Coe

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Report Date: 08/26/92

Page 2 of 4

Project ID No: 9208095

APPL Spike ID: R12604 80829S-80833S 80919SA

Concentration Units: mg/kg

SPIKES

<u>Method</u>	<u>Analysis</u>	<u>Date</u>	<u>Amt in Sample</u>	<u>Amt Spiked</u>	<u>Results</u>	<u>Percent Recovery</u>	<u>RPD</u>
632	Carbofuran	08/18/92	0.00	0.050	0.0453	90.6	12.8
632	Fluometuron	08/18/92	0.00	0.100	0.0942	94.2	1.4
632	Diuron	08/18/92	0.00	0.100	0.0801	80.1	18.1

APPL Spike ID: R12604 80829S-80833S 80919SB

<u>Method</u>	<u>Analysis</u>	<u>Date</u>	<u>Amt in Sample</u>	<u>Amt Spiked</u>	<u>Results</u>	<u>Percent Recovery</u>	<u>RPD</u>
632	Carbofuran	08/18/92	0.00	0.050	0.0515	103	12.8
632	Fluometuron	08/18/92	0.00	0.100	0.0955	95.5	1.4
632	Diuron	08/18/92	0.00	0.100	0.0960	96.0	18.1

Comments:

Checked By Lamel Coope

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Sample Date: NA
Report Date: 08/26/92

Page 3 of 4

Sample I.D. No: 9208095
Blank for samples
taken 08/07/92
APPL Sample No: R12604-920818S

Date Received: NA

Date Extracted: 08/18/92

Method 8140 Results (OP Pesticides):

<u>Compound</u>	<u>Concentration mg/kg</u>	<u>Quantitation Limit mg/kg</u>
Azinphosmethyl	ND*	0.5
Bolstar	ND	0.05
Carbophenothion	ND	0.1
Chlorpyrifos	ND	0.05
Coumaphos	ND	0.5
Def	ND	0.05
Demeton	ND	0.1
Diazinon	ND	0.05
Dichlorvos	ND	0.1
Dimethoate	ND	0.05
Diphenamid	ND	0.05
Disulfoton	ND	0.05
Ethion	ND	0.05
Ethoprop	ND	0.05
Fensulfothion	ND	0.1
Fenthion	ND	0.05
Malathion	ND	0.2
Merphos	ND	0.05
Methyl Parathion	ND	0.05
Methyl Trithion	ND	0.1
Mevinphos	ND	0.35
Naled	ND	0.25
Parathion	ND	0.05
Phorate	ND	0.05
Phosalone	ND	0.05
Prometon	ND	0.05
Ronnel	ND	0.05
Trichloronate	ND	0.05
Trifluralin	ND	0.05

* ND = None Detected

Checked By Lamel Coope

ANAMETRIX INC
1961 Concourse Drive, Suite E
San Jose, CA 95131
Attn: Kilma Desai

Report Date: 08/26/92

Page 4 of 4

Project ID No: 9208095

APPL Spike ID: R12604 80829S-80833S 920818SA

Concentration Units: mg/kg

SPIKES

Method	Analysis	Date	Amt in Sample	Amt Spiked	Results	Percent Recovery	RPD
8140	Trifluralin	08/18/92	0.00	1.5	1.73	115	0.6
8140	Meth Parathion	08/18/92	0.00	0.75	0.50	67	5.8
8140	Diphenamid	08/18/92	0.00	1.5	1.12	75	3.5

APPL Spike ID: R12604 80829S-80833S 920818SB

Method	Analysis	Date	Amt in Sample	Amt Spiked	Results	Percent Recovery	RPD
8140	Trifluralin	08/18/92	0.00	1.5	1.74	116	0.6
8140	Meth Parathion	08/18/92	0.00	0.75	0.53	71	5.8
8140	Diphenamid	08/18/92	0.00	1.5	1.16	77	3.5

Comments:

Checked By Samuel Cooper

ANAMETRIX CHAIN-OF-CUSTODY RECORD

ANAMETRIX Workorder Number 9208095					Number of Cntnrs	Type of Containers	Type of Analysis										Condition of Samples	Initial				
Send Report Attention of: Kulma Desai			Report Due 8/24/92				Verbal Due		8140	689												
Sample Number	Date	Time	Comp	Grab			Station Location															
1	8/7/92	4:30		SOIL			1	120 ml	X	X												
2	↓	3:00		↓			↓	↓	X	X												
3	↓	3:20		↓			↓	↓	X	X												
4	↓	3:30		↓			↓	↓	X	X												
5	↓	5:00		↓			↓	↓	X	X												
Relinquished by: (Signature) <i>Josephine DeCarli</i>		Date/Time <i>8/11/92 08:55</i>		Received by: (Signature) <i>Fed Ex</i>		Date/Time		Remarks: <i>Subbed to Appl. Inc</i> <i>checked & intact</i>														
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time																
Relinquished by: (Signature) <i>Fed Ex</i>		Date/Time		Received by: (Signature) <i>Jason Datta</i>		Date/Time <i>8-12-92 10:00</i>																

ANAMETRIX INC
 LABORATORY SERVICES
 1961 Concourse Drive, Suite E, San Jose, CA 95131
 Phone: (408)432-8192 Fax: (408)432-8198



ANRESKO

INCORPORATED

ANALYSIS RESEARCH

1370 Van Dyke Ave., S.F., CA 94124
Tel: (415) 822-1100 Fax: (415) 822-6615
790 Basin Street, #2, San Pedro, CA 90731
Tel: (310) 833-4598 Fax: (310) 833-1585
Toll Free - 800-359-0920

25 August 1992

Anametrix
1961 Concourse Dr., Ste. E
San Jose, CA. 95131

File No. 892167

Attn: Kilma

Re: Five Soil samples marked: 1 - 5 (Workorder #9208156)

Received: 8/14/92

RESULTS:

Method of Extraction & Analysis: EPA SW 846 8140.

Pesticide	1	2	3	4	5	D.L. (ppb)
Azinphos methyl	ND	ND	ND	ND	ND	50
Bolstar	ND	ND	ND	ND	ND	10
Chlorpyrifos	ND	ND	ND	ND	ND	10
Coumaphos	ND	ND	ND	ND	ND	50
Demeton-O	ND	ND	ND	ND	ND	10
Demeton-S	ND	ND	ND	ND	ND	10
Diazinon	ND	ND	ND	ND	ND	10
Dichlorvos	ND	ND	ND	ND	ND	10
Disulfoton	ND	ND	ND	ND	ND	10
Ethoprop	ND	ND	ND	ND	ND	10
Fensulfothion	ND	ND	ND	ND	ND	50
Fenthion	ND	ND	ND	ND	ND	10
Merphos	ND	ND	ND	ND	ND	10
Mevinphos	ND	ND	ND	ND	ND	10
Naled	ND	ND	ND	ND	ND	10
Parathion Methyl	ND	ND	ND	ND	ND	10
Phorate	ND	ND	ND	ND	ND	10
Ronnel	ND	ND	ND	ND	ND	10
Tetrachlorvinphos	ND	ND	ND	ND	ND	50
Tokuthion	ND	ND	ND	ND	ND	20
Trichloronate	ND	ND	ND	ND	ND	10

D.L.: Detection Limit

ND: None Detected

(Continued...)

Anametrix
25 August 1992
page 2

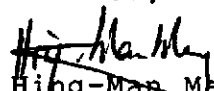
File No. 892167

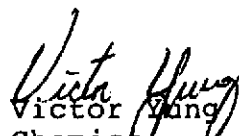
II. HPLC Scan:

<u>Pesticide</u>	<u>Concentration (ug/g)</u>
Methiocarb	< 0.1
Other n-Methyl Carbamates	< 0.05

Sample spiked with Methomyl, Aldicarb, Carbofuran & Propoxur.
Recovery: 55%

Reported by:
ANRESO, INC.


Hing-Man Mang
Senior Chemist


Victor Fung
Chemist

HMM/VY:ms G-892167

ANAMETRIX CHAIN-OF-CUSTODY RECORD

ANAMETRIX Workorder Number 9208 156						Number of Cntnrs	Type of Containers	Type of Analysis										Condition of Samples	Initial			
Send Report Attention of: Kilma Desai			Report Due 8/24/92		Verbal Due																	
Sample Number	Date	Time	Comp	Grab	Station Location																	
1	8/14/92			Soil		1	BL	X	X													
2	↓			↓		↓	↓	X	X													
3	↓			↓		↓	↓	X	X													
4	↓			↓		↓	↓	X	X													
5	↓			↓		↓	↓	X	X													
Relinquished by: (Signature) Marta Barajas						Date/Time 8/14/92 0800	Received by: (Signature) Bonny Campuzano						Date/Time 8-14-92 0800	Remarks: Subbed to Anresco								
Relinquished by: (Signature) Bonny Campuzano						Date/Time 8-14-92 0945	Received by: (Signature) Nicholas Puan						Date/Time 8/14 9:45									
Relinquished by: (Signature)						Date/Time	Received by: (Signature)						Date/Time									

ANAMETRIX INC
LABORATORY SERVICES

1961 Concourse Drive, Suite E, San Jose, CA 95131
Phone: (408)432-8192 Fax: (408)432-8198

