Woodward-Clyde
Engineering & sciences applied to the earth & its environment

July 29, 1996
961152NA

Mr. Peter Wang
Encinal Terminals
1521 Buena Vista Avenue
Alameda, California 94501-0215

Subject: Results of Confirmation Sampling
Aerated Soil Stockpile, Encinal Terminal Site, Alameda, CA

Dear Mr. Wang:

Please find attached copies of laboratory reports for 6 composite soil samples collected from the stockpile of soil excavated from an area on site by Geomatrix Consultants. Six composite samples of four points were collected from the soil located on the asphaltic concrete paved area on the west side of a former warehouse building at the site. The soil is about 2 to 3 feet thick and is spread over an area about 250 feet long and 60 feet wide. The samples were collected from six equal sized areas numbered from sample 1 at the North to 6 to the South (Figure 1).

SAMPLE COLLECTION

Each samples was collected in a clean brass sample tube, sealed on each end with a plastic end cap, labeled and placed in an ice chest for transport to the laboratory under chain-of- custody procedures. The four individual soil samples from each area were composited in the laboratory.

LABORATORY ANALYSIS

Each composite sample was analyzed for halogenated volatile organics using EPA Method 8021. Three of the composite samples were also analyzed for total organic carbon, which will be used in the fate and transport study.

The laboratory reports no detection of halogenated volatile organics for all 6 of the composite samples. Total organic carbon content is 4400 mg/kg for sample 2-1-4, 8700 mg/kg for sample 4-1-4, and 9600 mg/kg for sample 6-1-4.

Woodward-Clyde Consultants • A subsidiary of Woodward-Clyde Group, Inc.
500 12th Street, Suite 100 • Oakland, California 94607-4014
(510) 893-3600 • Fax (510) 874-3268

CONCLUSIONS

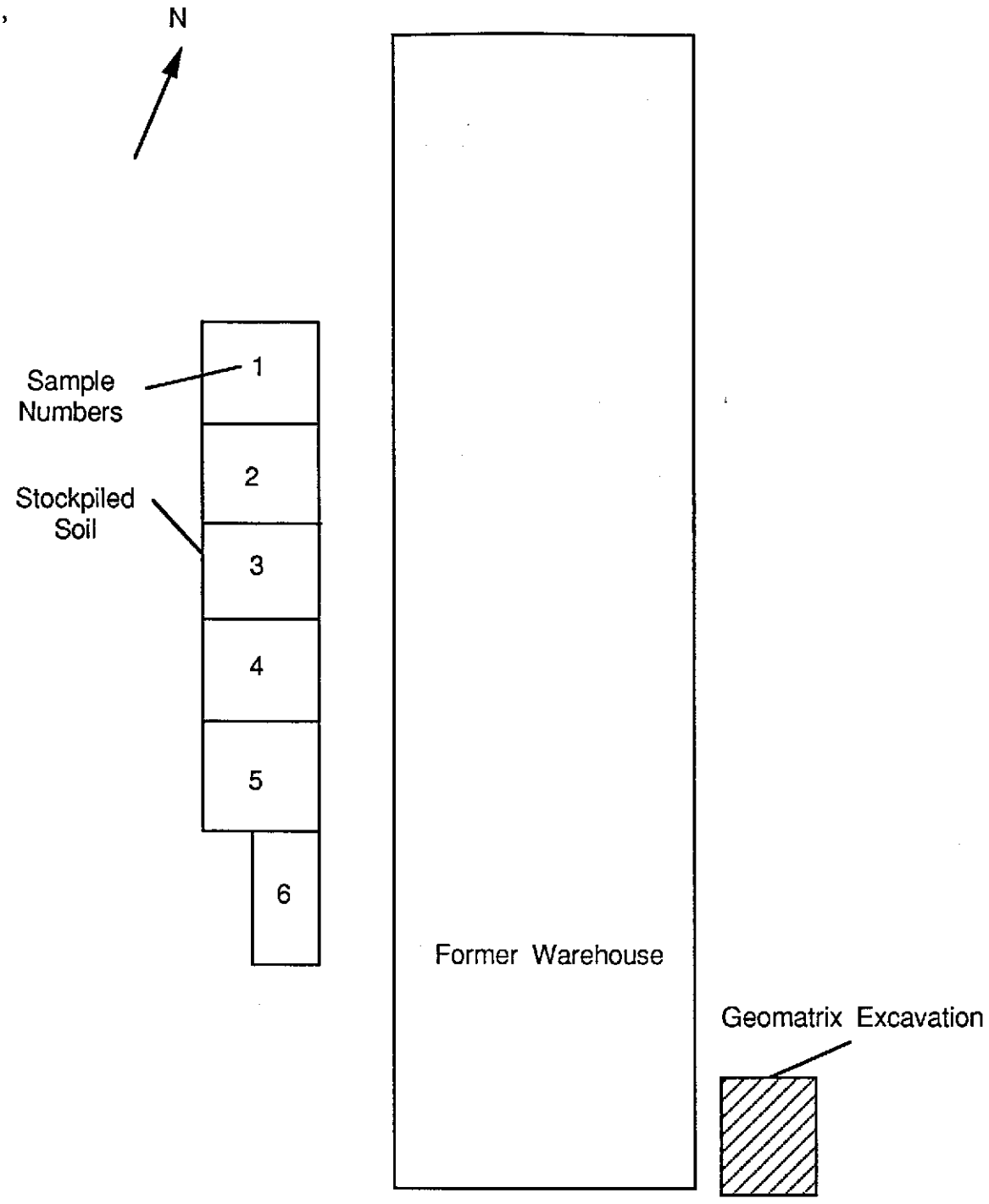
We conclude that the laboratory tests show that the stockpiled soil does not contain detectable concentrations of halogenated volatile organics. It is our opinion that no further aeration of this soil is needed and this soil may be used as fill on the site.

Please call if you have any questions.

Sincerely,

Albert P. Ridley, C.E.G.
Senior Consultant

Attachments: Figure 1, Sample Locations
Laboratory reports



Project No. 961152NA	ENCINAL TERMINALS	STOCKPILE SAMPLE LOCATIONS	JUL 1996 FIG 1
Woodward-Clyde Consultants			

Inchcape Testing Services
Anametrix Laboratories

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

MR. AL RIDLEY
WOODWARD-CLYDE CONSULTANTS
500 12TH STREET, SUITE 100
OAKLAND, CA 94607-4014

Workorder # : 9606267
Date Received : 06/28/96
Project ID : 961152NA/1000
Purchase Order: N/A

The following samples were received at Inchcape for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9606267- 1	1-1-4
9606267- 2	2-1-4
9606267- 3	3-1-4
9606267- 4	4-1-4
9606267- 5	5-1-4
9606267- 6	6-1-4

This report is organized in sections according to the specific Inchcape laboratory group which performed the analysis(es) and generated the data.

The results contained within this report relate to only the sample(s) tested. Additionally, these data should be considered in their entirety and Inchcape cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Inchcape is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234.

If you have any further questions or comments on this report, please call your project manager as soon as possible. Thank you for using Inchcape Testing Services.

Project Manager

7/11/96
Date

This report consists of 16 pages.

GC VOA REPORT DESCRIPTION

Organic Analysis Data Sheets (OADS)
OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Inchcape Testing Services ID number.

Surrogate Recovery Summary (SRS)
SRS forms contain quality assurance data. An SRS form will be printed for each method, if the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "*", and the total number of surrogates outside the limits will be listed in the column labeled "Total Out."

Matrix Spike Recovery Form (MSR)
MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "*", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

Qualifiers
Inchcape Testing Services uses several data qualifiers (Q) in its report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- **U** - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- **B** - Indicates that the compound was detected in the associated method blank.
- **J** - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- **E** - Indicates that the reported amount exceeded the linear range of the instrument calibration.
- **D** - Indicates that the compound was detected in an analysis performed at a secondary dilution.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

REPORTING CONVENTIONS

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- Amounts reported are gross values, i.e., not corrected for method blank contamination.

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

MR. AL RIDLEY
WOODWARD-CLYDE CONSULTANTS
500 12TH STREET, SUITE 100
OAKLAND, CA 94607-4014

Workorder # : 9606267
Date Received : 06/28/96
Project ID : 961152NA/1000
Purchase Order: N/A
Department : GC
Sub-Department: VOA

SAMPLE INFORMATION:

INCHCAPE SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9606267- 1	1-1-4	SOIL	06/28/96	8021
9606267- 2	2-1-4	SOIL	06/28/96	8021
9606267- 3	3-1-4	SOIL	06/28/96	8021
9606267- 4	4-1-4	SOIL	06/28/96	8021
9606267- 5	5-1-4	SOIL	06/28/96	8021
9606267- 6	6-1-4	SOIL	06/28/96	8021

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

MR. AL RIDLEY
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500 12TH STREET, SUITE 100
OAKLAND, CA 94607-4014

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Date Received : 06/28/96
Project ID : 961152NA/1000
Purchase Order: N/A
Department : GC
Sub-Department: VOA

QA/QC SUMMARY :

- All holding times have been met for the analyses reported in this section.
- The recovery for Tetrachloroethene, 1,4, 1,3, 1,2-Dichlorobenzenes in the matrix spike and 1,4 and 1,2-Dichlorobenzenes in the matrix spike duplicate of sample 1-1-4 was outside of control limits for EPA Method 8021. The LCS was within limits for all compounds.

M. Hosseini 7/10/96
Department Supervisor Date

Kamal G. Kamel 7/10/96
Chemist Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8021
ANAMETRIX, INC. (408)432-8192

Project ID	: 961152NA	Anametrix ID	: 9606267-01
Sample ID	: 1-1-4	Analyst	:
Matrix	: SOIL	Supervisor	:
Date Sampled	: 6/28/96		
Date Analyzed	: 7/ 8/96	Dilution Factor	: 2.0
Instrument ID	: AD14	Conc. Units	: ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	2.0	ND	U
74-87-3	Chloromethane	2.0	ND	U
75-01-4	Vinyl chloride	2.0	ND	U
74-83-9	Bromomethane	2.0	ND	U
75-00-3	Chloroethane	2.0	ND	U
75-69-4	Trichlorofluoromethane	2.0	ND	U
76-13-1	Trichlorotrifluoroethane	2.0	ND	U
75-35-4	1,1-Dichloroethene	2.0	ND	U
75-09-2	Methylene chloride	10.	ND	U
156-60-5	trans-1,2-Dichloroethene	2.0	ND	U
75-34-3	1,1-Dichloroethane	2.0	ND	U
156-59-2	cis-1,2-Dichloroethene	2.0	ND	U
67-66-3	Chloroform	2.0	ND	U
71-55-6	1,1,1-Trichloroethane	2.0	ND	U
56-23-5	Carbon tetrachloride	2.0	ND	U
107-06-2	1,2-Dichloroethane	2.0	ND	U
79-01-6	Trichloroethene	2.0	ND	U
78-87-5	1,2-Dichloropropane	2.0	ND	U
75-27-4	Bromodichloromethane	2.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	2.0	ND	U
10061-02-6	trans-1,3-Dichloropropene	2.0	ND	U
79-00-5	1,1,2-Trichloroethane	2.0	ND	U
127-18-4	Tetrachloroethene	2.0	ND	U
124-48-1	Dibromochloromethane	2.0	ND	U
108-90-7	Chlorobenzene	2.0	ND	U
75-25-2	Bromoform	2.0	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	2.0	ND	U
541-73-1	1,3-Dichlorobenzene	2.0	ND	U
106-46-7	1,4-Dichlorobenzene	2.0	ND	U
95-50-1	1,2-Dichlorobenzene	2.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8021
ANAMETRIX, INC. (408)432-8192

Project ID : 961152NA
Sample ID : 2-1-4
Matrix : SOIL
Date Sampled : 6/28/96
Date Analyzed : 7/ 8/96
Instrument ID : AD14

Anametrix ID : 9606267-02
Analyst : KK
Supervisor : DL

Dilution Factor : 2.0
Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	2.0	ND	U
74-87-3	Chloromethane	2.0	ND	U
75-01-4	Vinyl chloride	2.0	ND	U
74-83-9	Bromomethane	2.0	ND	U
75-00-3	Chloroethane	2.0	ND	U
75-69-4	Trichlorofluoromethane	2.0	ND	U
76-13-1	Trichlorotrifluoroethane	2.0	ND	U
75-35-4	1,1-Dichloroethene	2.0	ND	U
75-09-2	Methylene chloride	10.	ND	U
156-60-5	trans-1,2-Dichloroethene	2.0	ND	U
75-34-3	1,1-Dichloroethane	2.0	ND	U
156-59-2	cis-1,2-Dichloroethene	2.0	ND	U
67-66-3	Chloroform	2.0	ND	U
71-55-6	1,1,1-Trichloroethane	2.0	ND	U
56-23-5	Carbon tetrachloride	2.0	ND	U
107-06-2	1,2-Dichloroethane	2.0	ND	U
79-01-6	Trichloroethene	2.0	ND	U
78-87-5	1,2-Dichloropropane	2.0	ND	U
75-27-4	Bromodichloromethane	2.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	2.0	ND	U
10061-02-6	trans-1,3-Dichloropropene	2.0	ND	U
79-00-5	1,1,2-Trichloroethane	2.0	ND	U
127-18-4	Tetrachloroethene	2.0	ND	U
124-48-1	Dibromochloromethane	2.0	ND	U
108-90-7	Chlorobenzene	2.0	ND	U
75-25-2	Bromoform	2.0	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	2.0	ND	U
541-73-1	1,3-Dichlorobenzene	2.0	ND	U
106-46-7	1,4-Dichlorobenzene	2.0	ND	U
95-50-1	1,2-Dichlorobenzene	2.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8021
ANAMETRIX, INC. (408)432-8192

Project ID : 961152NA
Sample ID : 3-1-4
Matrix : SOIL
Date Sampled : 6/28/96
Date Analyzed : 7/ 8/96
Instrument ID : AD14

Anametrix ID : 9606267-03
Analyst : KK
Supervisor : DL

Dilution Factor : 2.0
Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	2.0	ND	U
74-87-3	Chloromethane	2.0	ND	U
75-01-4	Vinyl chloride	2.0	ND	U
74-83-9	Bromomethane	2.0	ND	U
75-00-3	Chloroethane	2.0	ND	U
75-69-4	Trichlorofluoromethane	2.0	ND	U
76-13-1	Trichlorotrifluoroethane	2.0	ND	U
75-35-4	1,1-Dichloroethene	2.0	ND	U
75-09-2	Methylene chloride	10.	ND	U
156-60-5	trans-1,2-Dichloroethene	2.0	ND	U
75-34-3	1,1-Dichloroethane	2.0	ND	U
156-59-2	cis-1,2-Dichloroethene	2.0	ND	U
67-66-3	Chloroform	2.0	ND	U
71-55-6	1,1,1-Trichloroethane	2.0	ND	U
56-23-5	Carbon tetrachloride	2.0	ND	U
107-06-2	1,2-Dichloroethane	2.0	ND	U
79-01-6	Trichloroethene	2.0	ND	U
78-87-5	1,2-Dichloropropane	2.0	ND	U
75-27-4	Bromodichloromethane	2.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	2.0	ND	U
10061-02-6	trans-1,3-Dichloropropene	2.0	ND	U
79-00-5	1,1,2-Trichloroethane	2.0	ND	U
127-18-4	Tetrachloroethene	2.0	ND	U
124-48-1	Dibromochloromethane	2.0	ND	U
108-90-7	Chlorobenzene	2.0	ND	U
75-25-2	Bromoform	2.0	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	2.0	ND	U
541-73-1	1,3-Dichlorobenzene	2.0	ND	U
106-46-7	1,4-Dichlorobenzene	2.0	ND	U
95-50-1	1,2-Dichlorobenzene	2.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8021
ANAMETRIX, INC. (408)432-8192

Project ID	: 961152NA	Anametrix ID	: 9606267-04
Sample ID	: 4-1-4	Analyst	: KK
Matrix	: SOIL	Supervisor	:
Date Sampled	: 6/28/96		
Date Analyzed	: 7/ 8/96	Dilution Factor	: 2.0
Instrument ID	: AD14	Conc. Units	: ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	2.0	ND	U
74-87-3	Chloromethane	2.0	ND	U
75-01-4	Vinyl chloride	2.0	ND	U
74-83-9	Bromomethane	2.0	ND	U
75-00-3	Chloroethane	2.0	ND	U
75-69-4	Trichlorofluoromethane	2.0	ND	U
76-13-1	Trichlorotrifluoroethane	2.0	ND	U
75-35-4	1,1-Dichloroethene	2.0	ND	U
75-09-2	Methylene chloride	10.	ND	U
156-60-5	trans-1,2-Dichloroethene	2.0	ND	U
75-34-3	1,1-Dichloroethane	2.0	ND	U
156-59-2	cis-1,2-Dichloroethene	2.0	ND	U
67-66-3	Chloroform	2.0	ND	U
71-55-6	1,1,1-Trichloroethane	2.0	ND	U
56-23-5	Carbon tetrachloride	2.0	ND	U
107-06-2	1,2-Dichloroethane	2.0	ND	U
79-01-6	Trichloroethene	2.0	ND	U
78-87-5	1,2-Dichloropropane	2.0	ND	U
75-27-4	Bromodichloromethane	2.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	2.0	ND	U
10061-02-6	trans-1,3-Dichloropropene	2.0	ND	U
79-00-5	1,1,2-Trichloroethane	2.0	ND	U
127-18-4	Tetrachloroethene	2.0	ND	U
124-48-1	Dibromochloromethane	2.0	ND	U
108-90-7	Chlorobenzene	2.0	ND	U
75-25-2	Bromoform	2.0	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	2.0	ND	U
541-73-1	1,3-Dichlorobenzene	2.0	ND	U
106-46-7	1,4-Dichlorobenzene	2.0	ND	U
95-50-1	1,2-Dichlorobenzene	2.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8021
ANAMETRIX, INC. (408)432-8192

Project ID	: 961152NA	Anametrix ID	: 9606267-05
Sample ID	: 5-1-4	Analyst	:
Matrix	: SOIL	Supervisor	:
Date Sampled	: 6/28/96		
Date Analyzed	: 7/ 8/96	Dilution Factor	: 2.0
Instrument ID	: AD14	Conc. Units	: ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	2.0	ND	U
74-87-3	Chloromethane	2.0	ND	U
75-01-4	Vinyl chloride	2.0	ND	U
74-83-9	Bromomethane	2.0	ND	U
75-00-3	Chloroethane	2.0	ND	U
75-69-4	Trichlorofluoromethane	2.0	ND	U
76-13-1	Trichlorotrifluoroethane	2.0	ND	U
75-35-4	1,1-Dichloroethene	2.0	ND	U
75-09-2	Methylene chloride	10.	ND	U
156-60-5	trans-1,2-Dichloroethene	2.0	ND	U
75-34-3	1,1-Dichloroethane	2.0	ND	U
156-59-2	cis-1,2-Dichloroethene	2.0	ND	U
67-66-3	Chloroform	2.0	ND	U
71-55-6	1,1,1-Trichloroethane	2.0	ND	U
56-23-5	Carbon tetrachloride	2.0	ND	U
107-06-2	1,2-Dichloroethane	2.0	ND	U
79-01-6	Trichloroethene	2.0	ND	U
78-87-5	1,2-Dichloropropane	2.0	ND	U
75-27-4	Bromodichloromethane	2.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	2.0	ND	U
10061-02-6	trans-1,3-Dichloropropene	2.0	ND	U
79-00-5	1,1,2-Trichloroethane	2.0	ND	U
127-18-4	Tetrachloroethene	2.0	ND	U
124-48-1	Dibromochloromethane	2.0	ND	U
108-90-7	Chlorobenzene	2.0	ND	U
75-25-2	Bromoform	2.0	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	2.0	ND	U
541-73-1	1,3-Dichlorobenzene	2.0	ND	U
106-46-7	1,4-Dichlorobenzene	2.0	ND	U
95-50-1	1,2-Dichlorobenzene	2.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8021
ANAMETRIX, INC. (408)432-8192

Project ID	: 961152NA	Anametrix ID	: 9606267-06
Sample ID	: 6-1-4	Analyst	:
Matrix	: SOIL	Supervisor	:
Date Sampled	: 6/28/96		
Date Analyzed	: 7/ 8/96	Dilution Factor	: 2.0
Instrument ID	: AD14	Conc. Units	: ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	2.0	ND	U
74-87-3	Chloromethane	2.0	ND	U
75-01-4	Vinyl chloride	2.0	ND	U
74-83-9	Bromomethane	2.0	ND	U
75-00-3	Chloroethane	2.0	ND	U
75-69-4	Trichlorofluoromethane	2.0	ND	U
76-13-1	Trichlorotrifluoroethane	2.0	ND	U
75-35-4	1,1-Dichloroethene	2.0	ND	U
75-09-2	Methylene chloride	10.	ND	U
156-60-5	trans-1,2-Dichloroethene	2.0	ND	U
75-34-3	1,1-Dichloroethane	2.0	ND	U
156-59-2	cis-1,2-Dichloroethene	2.0	ND	U
67-66-3	Chloroform	2.0	ND	U
71-55-6	1,1,1-Trichloroethane	2.0	ND	U
56-23-5	Carbon tetrachloride	2.0	ND	U
107-06-2	1,2-Dichloroethane	2.0	ND	U
79-01-6	Trichloroethene	2.0	ND	U
78-87-5	1,2-Dichloropropane	2.0	ND	U
75-27-4	Bromodichloromethane	2.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	2.0	ND	U
10061-02-6	trans-1,3-Dichloropropene	2.0	ND	U
79-00-5	1,1,2-Trichloroethane	2.0	ND	U
127-18-4	Tetrachloroethene	2.0	ND	U
124-48-1	Dibromochloromethane	2.0	ND	U
108-90-7	Chlorobenzene	2.0	ND	U
75-25-2	Bromoform	2.0	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	2.0	ND	U
541-73-1	1,3-Dichlorobenzene	2.0	ND	U
106-46-7	1,4-Dichlorobenzene	2.0	ND	U
95-50-1	1,2-Dichlorobenzene	2.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8021
ANAMETRIX, INC. (408)432-8192

Project ID : 961152
Sample ID : VBLKE1
Matrix : SOIL
Date Sampled : 0/ 0/ 0
Date Analyzed : 7/ 8/96
Instrument ID : AD14

Anametrix ID : BL0802I1
Analyst :
Supervisor :

Dilution Factor : 2.0
Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Dichlorodifluoromethane	2.0	ND	U
74-87-3	Chloromethane	2.0	ND	U
75-01-4	Vinyl chloride	2.0	ND	U
74-83-9	Bromomethane	2.0	ND	U
75-00-3	Chloroethane	2.0	ND	U
75-69-4	Trichlorofluoromethane	2.0	ND	U
76-13-1	Trichlorotrifluoroethane	2.0	ND	U
75-35-4	1,1-Dichloroethene	2.0	ND	U
75-09-2	Methylene chloride	10.	ND	U
156-60-5	trans-1,2-Dichloroethene	2.0	ND	U
75-34-3	1,1-Dichloroethane	2.0	ND	U
156-59-2	cis-1,2-Dichloroethene	2.0	ND	U
67-66-3	Chloroform	2.0	ND	U
71-55-6	1,1,1-Trichloroethane	2.0	ND	U
56-23-5	Carbon tetrachloride	2.0	ND	U
107-06-2	1,2-Dichloroethane	2.0	ND	U
79-01-6	Trichloroethene	2.0	ND	U
78-87-5	1,2-Dichloropropane	2.0	ND	U
75-27-4	Bromodichloromethane	2.0	ND	U
10061-01-5	cis-1,3-Dichloropropene	2.0	ND	U
10061-02-6	trans-1,3-Dichloropropene	2.0	ND	U
79-00-5	1,1,2-Trichloroethane	2.0	ND	U
127-18-4	Tetrachloroethene	2.0	ND	U
124-48-1	Dibromochloromethane	2.0	ND	U
108-90-7	Chlorobenzene	2.0	ND	U
75-25-2	Bromoform	2.0	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	2.0	ND	U
541-73-1	1,3-Dichlorobenzene	2.0	ND	U
106-46-7	1,4-Dichlorobenzene	2.0	ND	U
95-50-1	1,2-Dichlorobenzene	2.0	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8021
ANAMETRIX, INC. (408)432-8192

Project ID : 961152NA
Matrix : SOLID

Anametrix ID : 9606267
Analyst : LK
Supervisor : JL

	SAMPLE ID	SU1	SU2	SU3
1	VBLKE1	95	102	102
2	1-1-4	102	102	70
3	1-1-4MS	106	110	86
4	1-1-4MSD	105	106	89
5	2-1-4	99	94	57
6	3-1-4	89	75	45
7	4-1-4	95	83	42
8	5-1-4	101	86	39
9	6-1-4	92	77	42
10				
11				
12				
13				
14				
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20				
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23				
24				
25				
26				
27				
28				
29				
30				

	QC LIMITS
SU1 = Bromochloromethane	(59-121)
SU2 = 1-Chloro-2-fluorobenze	(63-128)
SU3 = 2-Bromochlorobenzene	(38-159)

* Values outside of Anametrix QC limits

MATRIX SPIKE RECOVERY FORM -- EPA METHOD 8021
ANAMETRIX, INC. (408)432-8192

Project ID : 961152NA
Sample ID : 1-1-4
Matrix : SOIL
Date Sampled : 6/28/96
Date Analyzed : 7/ 8/96
Instrument ID : AD14

Anametrix ID : 9606267-01
Analyst :
Supervisor :

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	%REC LIMITS
Trichlorotrifluoroethan	20.0	.0	20.9	105	43-127
1,1-Dichloroethene	20.0	.0	20.8	104	51-123
trans-1,2-Dichloroethen	20.0	.0	23.3	116	60-121
1,1-Dichloroethane	20.0	.0	23.5	117	70-125
cis-1,2-Dichloroethene	20.0	.0	22.9	115	65-119
1,1,1-Trichloroethane	20.0	.0	21.9	110	61-117
Trichloroethene	20.0	.0	22.2	111	66-114
Tetrachloroethene	20.0	.0	22.3	112 *	58-111
Chlorobenzene	20.0	.0	22.2	111	61-114
1,3-Dichlorobenzene	20.0	.0	20.7	104 *	48-103
1,4-Dichlorobenzene	20.0	.0	20.8	104 *	48- 98
1,2-Dichlorobenzene	20.0	.0	21.2	106 *	47- 99

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	RPD LIMITS	%REC LIMITS
Trichlorotrifluoroethan	20.0	20.4	102	3	25	43-127
1,1-Dichloroethene	20.0	20.7	103	1	25	51-123
trans-1,2-Dichloroethen	20.0	22.6	113	3	25	60-121
1,1-Dichloroethane	20.0	22.9	114	3	25	70-125
cis-1,2-Dichloroethene	20.0	22.7	113	1	25	65-119
1,1,1-Trichloroethane	20.0	21.4	107	3	25	61-117
Trichloroethene	20.0	21.7	109	2	25	66-114
Tetrachloroethene	20.0	21.7	108	3	25	58-111
Chlorobenzene	20.0	21.7	109	2	25	61-114
1,3-Dichlorobenzene	20.0	20.2	101	2	25	48-103
1,4-Dichlorobenzene	20.0	20.3	102 *	2	25	48- 98
1,2-Dichlorobenzene	20.0	21.2	106 *	0	25	47- 99

* Value is outside of Anametrix QC limits

RPD: 0 out of 12 outside limits
Spike Recovery: 6 out of 24 outside limits

EPA METHOD 8010
INCHCAPE TESTING SERVICES - ANAMETRIX
(408) 432-8192

LABORATORY CONTROL SAMPLE

Sample ID: LAB CONTROL SAMPLE
Batch: 6267
Matrix: SOIL
Date Analyzed: 7/8/96

Laboratory ID: ML0802I1
Instrument ID: AD14
Concentration Units: ug/Kg
Analyst: tk
Supervisor: [illegible]

COMPOUND NAME	SPIKE AMOUNT	LCS REC	%REC LCS	%RECOVERY LIMITS
Trichlorotrifluoroethane	40	40.0	100%	60-125
1,1-Dichloroethene	40	38.3	96%	59-130
trans-1,2-Dichloroethene	40	40.4	101%	81-125
1,1-Dichloroethane	40	39.9	100%	78-137
cis-1,2-Dichloroethene	40	40.0	100%	72-134
1,1,1-Trichloroethane	40	38.3	96%	83-123
Trichloroethene	40	38.1	95%	81-125
Tetrachloroethene	40	39.7	99%	72-131
Chlorobenzene	40	41.6	104%	69-117
1,3-Dichlorobenzene	40	41.6	104%	63-124
1,4-Dichlorobenzene	40	40.8	102%	65-124
1,2-Dichlorobenzene	40	40.5	101%	63-124

SURROGATE NAME	SPIKE AMT	SURR. REC	% REC	% REC LIMITS
Bromochloromethane	28	29.9	107%	59-121
1-Chloro-2-fluorobenzene	28	29.1	104%	63-128
2-Bromochlorobenzene	28	29.3	105%	38-159

960626 (15)

Woodward-Clyde Consultants

500 12th Street, Suite 100, Oakland, CA 94607-4041
(415) 893-3600

Chain of Custody Record

(?)

PROJECT NO.

SAMPLERS: (Signature)

DATE	TIME	SAMPLE NUMBER	General Mineral	Priority Pollutant Metals	EPA Method 624	EPA Method 625	EPA Method 608	8010	Number of Containers	REMARKS (Sample preservation, handling procedures, etc.)
6/28/96	15:00	1-1	5					X	1	
	15:10	1-2							1	
	15:20	1-3							1	
	15:30	1-4							1	
	16:00	2-1							1	
	16:07	2-2							1	
	16:14	2-3							1	
	16:20	2-4							1	
	16:25	3-1							1	
	16:29	3-2							1	
	16:34	3-3							1	
	16:39	3-4							1	
	16:53	4-1							1	
	16:57	4-2							1	
	17:03	4-3							1	
	17:06	4-4							1	
	17:11	5-1							1	
	17:15	5-2							1	
	17:19	5-3							1	
	17:22	5-4							1	
	17:30	6-1							1	
	17:33	6-2							1	
	17:36	6-3							1	
	17:41	6-4							1	

(1) (2) (3) (4) (5) (6)

ANALYSES

Standard T.A.T.

Composite samples into 6 samples
Ex. (1-1 thru 1-4), (2-1 thru 2-4) etc.

All 6 samples to be analyzed For 8010; 3 samples for TOC (9060 or 415.1)

Questions to: Marco Lobascio or Al Ridley

TOTAL NUMBER OF CONTAINERS: 24

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
	6/28/96 18:03			6/28/96 1850	

METHOD OF SHIPMENT:	SHIPPED BY: (Signature)	COURIER: (Signature)	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
				6/28/96 1850

Inchcape Testing Services
Environmental Laboratories

SAMPLE RECEIVING CHECKLIST

Workorder Number: 9606267	*Client Project ID:*	*Quote Number:*

Cooler			
Shipping documentation present? If YES, enter Carrier and Airbill #:	YES	NO	(N/A)
Custody Seal on the outside of cooler? *Condition*: Intact ☐ Broken ☐	YES	NO	(N/A)
Temperature of sample(s) within range? List temperatures of cooler(s): 6 °C **Note**: If all samples taken within previous 4 hr, circle N/A and place in sample storage area as soon as possible.	YES	NO	(N/A)
Samples			
Chain of custody seal present for each container? *Condition*: Intact ☐ Broken ☐	YES	NO	(N/A)
Samples arrived within holding time?	(YES)	NO	N/A
Samples in proper containers for methods requested? *Condition of containers*: Intact ☑ Broken ☐ If NO, were samples transferred to proper container(s)? Yes ☐ No ☐	(YES)	NO	
Were VOA containers received with zero headspace? If NO, were bubbles < 6 mm? Yes ☐ No ☐	YES	NO	(N/A)
Were container labels complete? (ID, date, time, preservative)	YES	(NO)	N/A
Were samples properly preserved? If NO, was the preservative added at time of receipt? Yes ☐ No ☐	YES	NO	(N/A)
pH check of samples required at time of receipt? If YES, pH checked and recorded by:	YES	(NO)	
Sufficient amount of sample received for methods requested? If NO, has the client or PM been notified? Yes ☐ No ☐	(YES)	NO	
Field blanks received with sample batch?	YES	NO	(N/A)
Trip blanks received with sample batch?	YES	NO	(N/A)
Chain of Custody			
Chain of custody form received with samples?	(YES)	NO	
Has it been filled out completely and in ink?	YES	(NO)	
Sample IDs on chain of custody form agree with labels?	(YES)	NO	
Number of containers on chain agree with number received?	(YES)	NO	
Analysis methods specified?	YES	(NO)	
Sampling date and time indicated?	(YES)	NO	
Proper signatures of sampler, courier and custodian in appropriate spaces? With time and date? Yes ☑ No ☐	(YES)	NO	
Turnaround time? Standard ☑ Rush ☐			

Any NO responses and/or any BROKEN that was checked must be detailed in a Corrective Action Form.

Sample Custodian: JP Date: 6/28/96 Project Manager: AW Date: 7-2-96

Inchcape Testing Services
Environmental Laboratories

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

July 15, 1996

Mr. Al Ridley
Woodward-Clyde Consultants
500 12th St. #100
Oakland, CA 94607

Dear Mr. Ridley,

Enclosed are the analytical results for your Project ID: 961552NA/1000 we received on June 28, 1996. The enclosed work was performed by a laboratory subcontracted by Inchcape Testing Services - Environmental Laboratories.

I.T.S. Anametrix ID:	Client ID:
9606267- 2	2-1-4
9606267- 4	4-1-4
9606267- 6	6-1-4

If you have any questions regarding this workorder, please give me a call at (408) 432-8192.

Sincerely,

INCHCAPE TESTING SERVICES
ENVIRONMENTAL LABORATORIES

7/15/96.
Richard Phaler
Project Manager

Columbia Analytical Services inc.

July 11, 1996 Service Request No.: S9601065

Mr. Lance Wakida
INCHCAPE TESTING SERVICES
1961 Concourse Drive Suite E
San Jose, CA 95131

RE: 961152NA/100 / Project No. 9606267

Dear Mr. Wakida:

Attached are the results of the samples submitted to our lab o July 03, 1996.
For you reference, our service request number for this work is S9601065.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytical Report below confirms that pages 2 through 6, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

If you have questions or further needs, please call me at (408) 428-1282.

Sincerely,

Cristina V. Rayburn

Cristina Velasquez Rayburn
Project Chemist

CVR/sh

COLUMBIA ANALYTICAL SERVICES, Inc.
Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Inchcape Testing Services
Project: 961152NA/100 / #9606267
Sample Matrix: Soil

Service Request: S9601065
Date Collected: 6/28/96
Date Received: 7/3/96
Date Extracted: 7/9/96

Inorganic Parameters [1]
Units: mg/Kg (ppm)
As Received Basis

	Sample Name:	O2	O4	O6
	Lab Code:	S9601065-001	S9601065-002	S9601065-003
	Date Analyzed:	7/9/96	7/9/96	7/9/96
Analyte	**EPA Method**	**MRL**		
Total Organic Carbon	Walkley-Black	10	4400	8700	9600

1. Method of Soil Analysis, Part 2, 2nd Edition pp. 570-571

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Inchcape Testing Services	**Service Request:**	S9601065
Project:	961152NA/100 / #9606267	**Date Collected:**	6/28/96
Sample Matrix:	Soil	**Date Received:**	7/3/96
		Date Extracted:	7/9/96

Inorganic Parameters [1]
Units: mg/Kg (ppm)
As Received Basis

Sample Name:	**Method Blank**	
Lab Code:	S9601065-SB1	
Date Analyzed:	7/9/96	

Analyte	**EPA Method**	**MRL**	
Total Organic Carbon	Walkley-Black	10	ND

1. Method of Soil Analysis, Part 2, 2nd Edition pp. 570-571

QA/QC Report

Client: America Analytics
Project: A17426
Sample Matrix: Soil

Service Request: S9601063
Date Collected: 7/1/96
Date Received: 7/3/96
Date Extracted: 7/9/96
Date Analyzed: 7/9/96

Matrix Spike/Duplicate Matrix Spike Summary
Inorganic Parameters

Units: mg/Kg (ppm)

Sample Name: 47974
Lab Code: S9601063-001

Analyte	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference
Total Organic Carbon*	400	400	69	600	550	133	120	75-125	9

* Outside of acceptance limits because of matrix interferences.

Inchcape Testing Services
Anametrix Laboratories

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

CHAIN-OF-CUSTODY RECORD

S960106S

PROJECT NUMBER	PROJECT NAME
9606267	961152NA/1000

Send Report Attention of:	Report Due	Verbal Due
MR. LANCE WAKIDA	7/12/96	/ /

	Sample Number	Date	Time	Comp	Matrix	Station Location	Number of Cntnrs	Type of Containers	Type of Analysis: 9060 TOC	Type of Analysis: MS/MSD	Condition of Samples	Initial
(1)	02	6/28/96		X	SOIL	2	1	VOA	X	X		
(2)	04	↓		↓	↓	4	↓	↓	↓			
(3)	06	↓		↓	↓	6	↓	↓	↓			
											A20/S68	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	7/03/96 1145	Laura Olson	7-3-96 1145
Laura Olson	7-3-96 1155	Joanne Brown	7-3-96 1155
	Date/Time	Received by Lab:	Date/Time

Remarks:
PLEASE SEND RAW DATA AND ORIGINAL CHAIN OF CUSTODY ALONG WITH THE REPORT.
SUBBED TO COLUMBIA 5960106S

COMPANY: INCHCAPE TESTING SERVICES
ADDRESS: 1961 CONCOURSE DRIVE, SUITE E
SAN JOSE, CA 95131
PHONE : (408) 432-8192 FAX : (408)432-8198