HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	1208
Date:	July 1, 1997
Client Name:	Environmental Strategies Corporation
Project/Site Name:	Al Tech - Dunkirk
Date Sampled:	March 24-26, 1997
Number of Samples:	27 Aqueous Sample(s) with 2 MS/MSD(s)
Laboratory:	Antech Ltd.
Validation Guidance:	NYSDEC
QA/QC Level:	Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, Semivolatiles, TAL Metals, Dissolved TAL Metals, Alkalinity, Chloride, Free Cyanide, Total Cyanide, Fluoride, Ammonia, Nitrate, pH, Phenols, Sulfate, Specific Conductance

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user in urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Scorfina
for Eugene M. Watson, Vice President

8/8/97
Date

4127 Plaza 94 South · St. Charles, MO 63304
(314) 936-1332 · Fax (314) 936-1335

SDG# 1208

Samples and Fractions Reviewed

Sample Identifications

Analytical Fractions

ESC ID	Matrix	VOA		SVOA		PHE		TAL		DTAL		ALK		CHL		FCN		TCN		FL		AMM		NIT		PH		SUL		SCON	
ALT-GW-B1-0397	WATER							X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-RFI01-0397	WATER			X				X		X		X		X		X		X		X		X		X		X		X		X	
ALT-GW-RFI02-0397	WATER							X		X		X		X		X		X		X		X		X		X		X		X	
ALT-GW-RFI03-0397	WATER			X				X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-WP4-0397	WATER	X		X				X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-WP3-0397	WATER	X																													
ALT-GW-WP1-0397	WATER	X																													
TRIP BLANK	WATER	X																													
ALT-GW-WP2-0397	WATER	X																													
ALT-GW-RFI15-0397	WATER	X						X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-RFI16-0397	WATER	X						X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-WP5-0397	WATER	X						X		X		X		X		X		X		X		X		X		X		X		X	
ALT-GW-RFI14-0397	WATER							X		X		X		X		X		X		X		X		X		X		X		X	
ALT-GW-MW1-0397	WATER			X				X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-RFI04-0397	WATER							X		X		X		X		X		X		X		X		X		X		X		X	
ALT-GW-RFI10-0397	WATER							X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-RFI10-0397D	WATER							X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-RFI11-0397	WATER							X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-WT1A-0397	WATER	X		X		X		X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-WT1A-0397MS	WATER	X		X		X		X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-WT1A-0397MSD	WATER	X		X		X																									
ATL-GW-TB-0326	WATER	X																													
ALT-GW-WT1B-0397	WATER	X		X		X		X		X		X		X		X		X		X		X		X		X		X		X	
ALT-GW-WT1B-0397MS	WATER									X																					
ALT-GW-WT1B-0397DUP	WATER	X		X		X		X		X		X		X		X		X		X		X		X		X		X		X	
ALT-GW-WT4-0397	WATER	X		X		X		X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-RFI09-0397	WATER	X		X		X		X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-WT3-0397	WATER	X		X		X		X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-RFI07-0397	WATER			X				X		X		X		X		X		X		X		X		X		X		X		X	
ALT-GW-RFI17-0397	WATER							X				X		X		X		X		X		X		X		X		X		X	
ALT-GW-MW3-0397	WATER							X				X		X		X		X		X		X		X		X		X		X	
Total Billable Samples (Water/Soil)		17	0	13	0	8	0	24	0	9	0	24	0	24	0	24	0	24	0	24	0	24	0	24	0	24	0	24	0	24	0

VOA Volatiles
SVOA- Semivolatiles
PHE- Phenols
TAL- TAL Metals
DTAL- Dissolved Metals
ALK- Alkalinity
CHL- Chloride
FCN- Free Cyanide
TCN- Total Cyanide
FL- Fluoride
AMM- Ammonia
NIT- Nitrate
PH- pH
SUL- Sulfate
SCON- Specific Conductance

DATA ASSESSMENT NARRATIVES

DATA ASSESSMENT NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8260, The NYSDEC-ASP, September 1989, 12/91 Revisions, the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results.

SDG # 97-1208

Holding Times

All analysis holding times were met. No qualifications were required.

Tuning

All of the BFB tunes in the initial and continuing calibrations met the percent relative abundance criteria. No qualifications are required.

Initial Calibrations

The initial calibrations that were analyzed by the laboratory for these samples were not acceptable for all compound %RSDs. However, there were no samples associated with the non-compliant ICAL. The average RRFs for all of the criteria compounds did meet the initial calibration criteria. No qualifications were required.

Continuing Calibrations

The continuing calibrations that were analyzed by the laboratory for these samples were not acceptable for all compound %Ds. All compound RRFs were not within criteria.

Specific Finding

1. The continuing calibration standard 97AP030M exhibited a non-compliant RRF less than 0.05 for one (1) compound. For the following samples and compound, the reported positive results are qualified as estimated, J, and the non-detect results are rejected, R.

   All Samples except DLs and WT30397 — 2-hexanone

Continuing Calibrations, continued
Specific Findings, continued

2. The continuing calibration standard 97AP030M exhibited one (1) compound with a %D greater than 25% but less than 50% for which qualifications were required. For the following samples and compound, the reported positive results are qualified as estimated, J.

TB0326	acetone
TRPBLK	

3. The continuing calibration standard 97AP056M exhibited a non-compliant RRF less than 0.05 for one (1) compound. For the following samples and compound, the reported positive results are qualified as estimated, J, and the non-detect results are rejected, R

WT30397	2-hexanone

Internal Standards

All of the internal standard EICP areas were acceptable for all samples and blanks. No qualifications were required.

Method Blanks

The method blanks that were analyzed did exhibit contamination for target compounds. The associated samples were compared to the method blanks. Please refer to the glossary of data qualifiers for definition of the blank qualifiers, U, CRQL, and NA.

Specific Finding

4. The following samples were qualified for method blank contamination. The qualifications are for all method blanks:

WP20397	acetone	CRQL
WP50397		
WT1A0397		
WP50397	methylene chloride	CRQL
WT1A0397		
TB026		
WT1B0397		
RF090397		

Field QC Blanks

Qualifications were required based on contamination in trip blank TB0326. The associated samples were compared to the trip blanks. Please refer to the glossary of data qualifiers for definition of the blank qualifiers, U, CRQL, and NA.

Specific Finding

5. The following samples were qualified for trip blank contamination. The qualifications are for all trip blanks.

RF150397	toluene	CRQL

Rinseate Blanks

The associated rinseate blank EB010326 exhibited contamination for several target compounds. However, qualifications were not required.

Surrogates

Surrogate recoveries for all samples and blanks did meet QA/QC criteria. No qualifications were required.

Matrix Spike/Matrix Spike Duplicate

The MS/MSD pair of sample WT1A0397 exhibited recoveries and RPDs which were acceptable for all compounds with the exception of the RPD for benzene. No qualifications were required.

Field Duplicates

The field duplicate pair of sample WT1B0397/WT1B0397D did not exhibit positive results for target compounds. No qualifications were required.

Compound Identification/Quantitation

Specific Finding

6. For the following samples, the e flagged results are rejected, R, in favor of the corresponding D-flagged results from the dilution analysis. All other results from the dilution analysis are rejected, R, in favor of the undiluted results.

   RF150397
   WP40397

System Performance and Overall Assessment

The data, as reported, required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common lab contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common lab contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common lab contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL	SPECIFIC FINDINGS
All Samples except DLs and WT30397	2-hexanone	+/-	J/R	1
TB0326 TRPBLK	acetone	+	J	2
WT30397	2-hexanone	+/-	J/R	3
WP20397 WP50397 WT1A0397	acetone	+B	CRQL	4
WP50397 WT1A0397 TB026 WT1B0397 RF090397	methylene chloride	+B	CRQL	4
RF150397	toluene	+	CRQL	5
RF150397 WP40397	All E flagged results	+E	R	6
RF150397DL WP40397DL	All except corresponding D flagged results	+/-	R	6

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA SW846 Method 8270,the NYSDEC Guidelines, The National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 97-1208

Holding Times

All extraction and analysis holding times for all samples were met for all samples per the SOW and National Functional Guidelines. No qualifications are required.

Tuning

All of the DFTPP tunes in the initial and continuing calibrations met the percent relative abundance criteria of the SOW and the Organic Functional Guidelines. No qualifications are required.

Initial Calibrations

The initial calibration that was analyzed by the laboratory for these samples was acceptable for all compound %RSDs. The average RRFs for all of the initial calibrations were within QA/QC calibration criteria. No qualifications are required.

Continuing Calibrations

The continuing calibrations that were analyzed met all calibration requirements for the RRFs. However, qualifications are required for compounds with non compliant %Ds.

Continuing Calibrations (continued)

Specific Findings:

1. The continuing calibration, M30410C1, contained compounds with %Ds greater than 25% D but less than 50% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J).

GWRFI010397	hexachlorocyclopentadiene
GWRFI030397	
GWWP40397	
GWMW10397	

2. The continuing calibration, M30410C1, contained compounds with %Ds greater than 50% D but less than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

GWRFI010397	2,4-dinitrophenol
GWRFI030397	4,6-dinitro-2-methylphenol
GWWP40397	
GWMW10397	

3. The continuing calibration,M30410C2 , contained compounds with %Ds greater than 25% D but less than 50% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J).

GWWT1A0397	hexachlorocyclopentadiene
GWWT1B0397	2,4-dinitrophenol
GWWT1B0397D	4,6-dinitro-2-methylphenol
GWWT40397	
GWRFI090397	
GWWT30397	
GWRFI070397	

Continuing Calibrations (continued)

Specific Findings:

4. The continuing calibration, M30410C2, contained compounds with %Ds greater than 50% D but less than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

GWWT1A0397	carbazole
GWWT1B0397	
GWWT1B0397D	
GWWT40397	
GWRFI090397	
GWWT30397	
GWRFI070397	

Internal Standards

All of the blank and sample internal standard EICP areas met the EICP internal standard area QA/QC criteria. No qualifications are required.

Method Blanks

The method blank that was analyzed did not exhibit contamination. No qualifications are required.

Rinseate Blanks

The rinseate blanks that was analyzed did not exhibit contamination. No qualifications are required.

Field Blanks

The associated field blanks were not identified for this SDG. No qualifications are required.

Surrogates

Surrogate recoveries for all samples and blanks met QA/QC criteria. No qualifications are required.

Matrix Spike/Matrix Spike Duplicate

All spike and RPD recoveries were within QA/QC limits for MS/MSD GWWT1A0397. No qualifications are required.

Field Duplicates

No qualifications are required.

Compound Identification/Quantitation

No qualifications are required.

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data as presented required qualification

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL	SPECIFIC FINDINGS
GWRFI010397 GWRFI030397 GWWP40397 GWMW10397	hexachlorocyclopentadiene	+	J	1
GWRFI010397 GWRFI030397 GWWP40397 GWMW10397	2,4-dinitrophenol 4,6-dinitro-2-methylphenol	+/-	J/UJ	2
GWWT1A0397 GWWT1B0397 GWWT1B0397D GWWT40397 GWRFI090397 GWWT30397 GWRFI070397	hexachlorocyclopentadiene 2,4-dinitrophenol 4,6-dinitro-2-methylphenol	+	J	3
GWWT1A0397 GWWT1B0397 GWWT1B0397D GWWT40397 GWRFI090397 GWWT30397 GWRFI070397	carbazole	+/-	J/UJ	4

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm

DATA ASSESSMENT NARRATIVE
Metals, Cyanide and Wet Chemistry

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, calibration standards, blank analysis results and MS/MSD results. A minimum of ten percent of all laboratory calculations are recalculated by the reviewer. All comments made within this report should be considered when examining the analytical results (Form Is).

This data package consisted of results from **ESC, Altech, Ltd. Dunkirk Project, SDG# 1208**, the analysis of twenty-one (21) total water samples with one (1) Matrix Spike and two (2) Duplicate pairs, seven (7) dissolved water samples with one (1) matrix Spike and Duplicate pair and twenty-three (23) of these samples and a Matrix Spike for free and total Cyanide and wet chemistry. Overall, the inorganic data quality was fair. All protocol requirements were followed with the exception of the following problems.

Specific QA/QC deficiency **Findings** are listed numerically in the following categories:

Holding Times

1. The Holding Time for Nitrate was exceeded. All positive and non-detect results are qualified as estimated, "J" or "UJ".

Calibration

No deficiencies in this section.

Preparation and Field Blank

2. The Preparation Blank exhibited contamination for the following element:

   Thallium 5.12 ug/l All positive dissolved results below 25.6 ug/l

   The USEPA requires that all sample values below five times the preparation or calibration blank contamination be negated, "U".

3. The Preparation Blank exhibited contamination for the following element:

   Manganese(dissolved) -3.12 ug/l No impact

   It is the USEPA's policy to review the impact and requires the reviewer to make judgment on the impact negative bias will have on the data. It is the reviewer's position that all data points below ten (10) times the absolute value of the negative prep results be qualified as estimated, "J" or "UJ".

Interferences

No significant interferences were observed.

Spike Recovery

4. The Matrix Spike Recovery for Phenolics was below the lower control limits. All positive and non-detect results are qualified as estimated, "J" or "UJ".

5. The Matrix Spike Recoveries for Aluminum and Copper (diss) were above the upper control limits. All positive results are qualified as estimated, "J".

Duplicate

6. The Duplicate Recoveries for Aluminum, Chromium, Iron and Lead (total) and Calcium, Magnesium, Manganese and Sodium (dissolved) were outside the control limits. All positive results are qualified as estimated, "J".

LCS

No deficiencies in this section.

Serial Dilution

No deficiencies in this section.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE	DL	QL	SPECIFIC FINDING
All samples	Nitrate	+/U	J/UJ	1
All results <5X prep blank	Tl (diss)	+	U	2
All sample results	Phenolics	+/U	J/UJ	4
All sample results	Al and Cu (diss)	+	J	5
All sample results	Al, Cr, Fe and Pb (tot), Ca, Mg, Mn and Na (diss)	+	J	6

DL - denotes laboratory qualifier/reported value
+ denotes positive values
U denotes non-detect values

QL - denotes data validation qualifier

ANNOTATED FORM Is

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000227
RF090397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032057

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP052M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	10.	U	
74-83-9	Bromomethane	10.	U	
75-01-4	Vinyl Chloride	10.	U	
75-00-3	Chloroethane	10.	U	
75-09-2	Methylene Chloride	10 ~~7~~	~~B~~ U	4
67-64-1	Acetone	10.	U	
75-15-0	Carbon Disulfide	10.	U	
75-35-4	1,1-Dichloroethene	10.	U	
75-34-3	1,1-Dichloroethane	10.	U	
156-60-5	Trans-1,2-Dichloroethene	10.	U	
156-59-2	Cis-1,2-Dichloroethene	10.	U	
67-66-3	Chloroform	10.	U	
107-06-2	1,2-Dichloroethane	10.	U	
78-93-3	2-Butanone	10.	U	
71-55-6	1,1,1-Trichloroethane	10.	U	
56-23-5	Carbon Tetrachloride	10.	U	
75-27-4	Bromodichloromethane	10.	U	
78-87-5	1,2-Dichloropropane	10.	U	
10061-01-5	Cis-1,3-Dichloropropene	10.	U	
79-01-6	Trichloroethene	10.	U	
124-48-1	Dibromochloromethane	10.	U	
79-00-5	1,1,2-Trichloroethane	10.	U	
71-43-2	Benzene	10.	U	
10061-02-6	Trans-1,3-Dichloropropene	10.	U	
75-25-2	Bromoform	10.	U	
108-10-1	4-Methyl-2-Pentanone	10.	U	
591-78-6	2-Hexanone	~~10~~	~~U~~ R	1
127-18-4	Tetrachloroethene	10.	U	
79-34-5	1,1,2,2-Tetrachloroethane	10.	U	
108-88-3	Toluene	10.	U	
108-90-7	Chlorobenzene	10.	U	
100-41-4	Ethyl Benzene	10.	U	
100-42-5	Styrene	10.	U	
1330-20-7	m,p-Xylene	10.	U	
95-47-6	o-Xylene	10.	U	

018

QC 4/30/97

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
0000228
RF090397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032057

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP052M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

SLC 4/30/97

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000237
RF150397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032041

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP042M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	2.	J
156-59-2	Cis-1,2-Dichloroethene	110.	
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	~~10.~~	~~U~~ R 6
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	~~10.~~	~~U~~ R 1
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10 ~~96.~~	J 45 WS 4/9/9-
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

020

1/30/97

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000238
RF150397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032041

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP042M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

6/10/97

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 0000234

RF150397DL

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032041

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP060M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	100	U
74-83-9	Bromomethane	100.	U
75-01-4	Vinyl Chloride	100.	U
75-00-3	Chloroethane	100.	U
75-09-2	Methylene Chloride	100.	U
67-64-1	Acetone	100.	U
75-15-0	Carbon Disulfide	100.	U
75-35-4	1,1-Dichloroethene	100.	U
75-34-3	1,1-Dichloroethane	100.	U
156-60-5	Trans-1,2-Dichloroethene	100.	U
156-59-2	Cis-1,2-Dichloroethene	130.	D
67-66-3	Chloroform	100.	U
107-06-2	1,2-Dichloroethane	100.	U
78-93-3	2-Butanone	100.	U
71-55-6	1,1,1-Trichloroethane	100.	U
56-23-5	Carbon Tetrachloride	100.	U
75-27-4	Bromodichloromethane	100.	U
78-87-5	1,2-Dichloropropane	100.	U
10061-01-5	Cis-1,3-Dichloropropene	100.	U
79-01-6	Trichloroethene	490.	D
124-48-1	Dibromochloromethane	100.	U
79-00-5	1,1,2-Trichloroethane	100.	U
71-43-2	Benzene	100.	U
10061-02-6	Trans-1,3-Dichloropropene	100.	U
75-25-2	Bromoform	100.	U
108-10-1	4-Methyl-2-Pentanone	100.	U
591-78-6	2-Hexanone	100.	U
127-18-4	Tetrachloroethene	100.	U
79-34-5	1,1,2,2-Tetrachloroethane	100	U
108-88-3	Toluene	100.	U
108-90-7	Chlorobenzene	100.	U
100-41-4	Ethyl Benzene	100.	U
100-42-5	Styrene	100.	U
1330-20-7	m,p-Xylene	100.	U
95-47-6	o-Xylene	100.	U

R 6

R

022

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000255
RF150397DL

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032041

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP060M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

6/30/97

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000257
RF160397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032042

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP043M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	10.	U
156-59-2	Cis-1,2-Dichloroethene	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	~~10.~~	~~U~~ R 1
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

024

4/30/97

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000258
RF160397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032042

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP043M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000280
TB0326

ab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032053

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP048M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10 ~~2.~~	~~BJ~~ U
67-64-1	Acetone	33.	~~B~~ J 2
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	10.	U
156-59-2	Cis-1,2-Dichloroethene	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	2.	J
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	~~10.~~	~~U~~ R 1
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	.7	J
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

026

4/30/97

1E

EPA SAMPLE NO.

0000281
T80326

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032053

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP048M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000299
WP10397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032038

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP039M

Level: (low/med) LOW Date Received: 03/26/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	10.	U
156-59-2	Cis-1,2-Dichloroethene	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	~~10.~~	~~U~~ R 1
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

028

GJC 4/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
0000300
WP10397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032038

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP039M

Level: (low/med) LOW Date Received: 03/26/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0000313

WP20397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032040

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP041M

Level: (low/med) LOW Date Received: 03/26/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	10.	U	
74-83-9	Bromomethane	10.	U	
75-01-4	Vinyl Chloride	10.	U	
75-00-3	Chloroethane	10.	U	
75-09-2	Methylene Chloride	10.	U	
67-64-1	Acetone	10 ~~1.~~	~~U~~ U	
75-15-0	Carbon Disulfide	10.	U	
75-35-4	1,1-Dichloroethene	10.	U	
75-34-3	1,1-Dichloroethane	10.	U	
156-60-5	Trans-1,2-Dichloroethene	10.	U	
156-59-2	Cis-1,2-Dichloroethene	10.	U	
67-66-3	Chloroform	10.	U	
107-06-2	1,2-Dichloroethane	10.	U	
78-93-3	2-Butanone	10.	U	
71-55-6	1,1,1-Trichloroethane	10.	U	
56-23-5	Carbon Tetrachloride	10.	U	
75-27-4	Bromodichloromethane	10.	U	
78-87-5	1,2-Dichloropropane	10.	U	
10061-01-5	Cis-1,3-Dichloropropene	10.	U	
79-01-6	Trichloroethene	10.	U	
124-48-1	Dibromochloromethane	10.	U	
79-00-5	1,1,2-Trichloroethane	10.	U	
71-43-2	Benzene	10.	U	
10061-02-6	Trans-1,3-Dichloropropene	10.	U	
75-25-2	Bromoform	10.	U	
108-10-1	4-Methyl-2-Pentanone	10.	U	
591-78-6	2-Hexanone	~~10.~~	~~U~~	R 1
127-18-4	Tetrachloroethene	10.	U	
79-34-5	1,1,2,2-Tetrachloroethane	10.	U	
108-88-3	Toluene	10.	U	
108-90-7	Chlorobenzene	10.	U	
100-41-4	Ethyl Benzene	10.	U	
100-42-5	Styrene	10.	U	
1330-20-7	m,p-Xylene	10.	U	
95-47-6	o-Xylene	10.	U	

030

4/2/97

1E

EPA SAMPLE NO.

0000314
WP20397

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032040

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP041M

Level: (low/med) LOW Date Received: 03/26/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

6/30/97

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000326

WP30397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032037

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP038M

Level: (low/med) LOW Date Received: 03/26/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	10.	U
156-59-2	Cis-1,2-Dichloroethene	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	~~10.~~	~~U~~ R 1
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

032

4/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. 0000327

WP30397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032037

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP038M

Level: (low/med) LOW Date Received: 03/26/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

4/30/97

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0000339

WP40397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032036

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP037M

Level: (low/med) LOW Date Received: 03/26/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	10.	U	
74-83-9	Bromomethane	10.	U	
75-01-4	Vinyl Chloride	10.	U	
75-00-3	Chloroethane	10.	U	
75-09-2	Methylene Chloride	10.	U	
67-64-1	Acetone	10.	U	
75-15-0	Carbon Disulfide	10.	U	
75-35-4	1,1-Dichloroethene	10.	U	
75-34-3	1,1-Dichloroethane	10.	U	
156-60-5	Trans-1,2-Dichloroethene	2.	J	
156-59-2	Cis-1,2-Dichloroethene	140.		
67-66-3	Chloroform	10.	U	
107-06-2	1,2-Dichloroethane	10.	U	
78-93-3	2-Butanone	10.	U	
71-55-6	1,1,1-Trichloroethane	10.	U	
56-23-5	Carbon Tetrachloride	10.	U	
75-27-4	Bromodichloromethane	10.	U	
78-87-5	1,2-Dichloropropane	10.	U	
10061-01-5	Cis-1,3-Dichloropropene	10.	U	
79-01-6	Trichloroethene	~~200.~~	R	6
124-48-1	Dibromochloromethane	10.	U	
79-00-5	1,1,2-Trichloroethane	10.	U	
71-43-2	Benzene	10.	U	
10061-02-6	Trans-1,3-Dichloropropene	10.	U	
75-25-2	Bromoform	10.	U	
108-10-1	4-Methyl-2-Pentanone	~~10.~~	R	1
591-78-6	2-Hexanone	10.	U	
127-18-4	Tetrachloroethene	10.	U	
79-34-5	1,1,2,2-Tetrachloroethane	10.	U	
108-88-3	Toluene	10.	U	
108-90-7	Chlorobenzene	10.	U	
100-41-4	Ethyl Benzene	10.	U	
100-42-5	Styrene	10.	U	
1330-20-7	m,p-Xylene	10.	U	
95-47-6	o-Xylene	10.	U	

034

1E

EPA SAMPLE NO.

0000340
WP40397

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032036

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP037M

Level: (low/med) LOW Date Received: 03/26/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

gac 5/30/97

035

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0000357

WP40397 DL

b Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032036

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP059M

Level: (low/med) LOW Date Received: 03/26/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 5.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	50.	U
74-83-9	Bromomethane	50.	U
75-01-4	Vinyl Chloride	50.	U
75-00-3	Chloroethane	50.	U
75-09-2	Methylene Chloride	50.	U
67-64-1	Acetone	50.	U
75-15-0	Carbon Disulfide	50.	U
75-35-4	1,1-Dichloroethene	50.	U
75-34-3	1,1-Dichloroethane	50.	U
156-60-5	Trans-1,2-Dichloroethene	50.	U
156-59-2	Cis-1,2-Dichloroethene	140.	D
67-66-3	Chloroform	50.	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50.	U
71-55-6	1,1,1-Trichloroethane	50.	U
56-23-5	Carbon Tetrachloride	50.	U
75-27-4	Bromodichloromethane	50.	U
78-87-5	1,2-Dichloropropane	50.	U
10061-01-5	Cis-1,3-Dichloropropene	50.	U
79-01-6	Trichloroethene	210.	D
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50.	U
71-43-2	Benzene	50.	U
10061-02-6	Trans-1,3-Dichloropropene	50.	U
75-25-2	Bromoform	50.	U
108-10-1	4-Methyl-2-Pentanone	50.	U
591-78-6	2-Hexanone	50.	U
127-18-4	Tetrachloroethene	50.	U
79-34-5	1,1,2,2-Tetrachloroethane	50.	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethyl Benzene	50.	U
100-42-5	Styrene	50.	U
1330-20-7	m,p-Xylene	50.	U
95-47-6	o-Xylene	50.	U

R 6

R

036

1E

EPA SAMPLE NO.

0000358
WP40397 DL

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032036

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP059M

Level: (low/med) LOW Date Received: 03/26/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 5.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000369
WP50397

ab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032043

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP044M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	10.	U	
74-83-9	Bromomethane	10.	U	
75-01-4	Vinyl Chloride	10.	U	
75-00-3	Chloroethane	10.	U	
75-09-2	Methylene Chloride	10	~~U~~	4
67-64-1	Acetone	10	~~U~~	4
75-15-0	Carbon Disulfide	10.	U	
75-35-4	1,1-Dichloroethene	10.	U	
75-34-3	1,1-Dichloroethane	10.	U	
156-60-5	Trans-1,2-Dichloroethene	10.	U	
156-59-2	Cis-1,2-Dichloroethene	10.	U	
67-66-3	Chloroform	10.	U	
107-06-2	1,2-Dichloroethane	10.	U	
78-93-3	2-Butanone	10.	U	
71-55-6	1,1,1-Trichloroethane	10.	U	
56-23-5	Carbon Tetrachloride	10.	U	
75-27-4	Bromodichloromethane	10.	U	
78-87-5	1,2-Dichloropropane	10.	U	
10061-01-5	Cis-1,3-Dichloropropene	10.	U	
79-01-6	Trichloroethene	10.	U	
124-48-1	Dibromochloromethane	10.	U	
79-00-5	1,1,2-Trichloroethane	10.	U	
71-43-2	Benzene	10.	U	
10061-02-6	Trans-1,3-Dichloropropene	10.	U	
75-25-2	Bromoform	10.	U	
108-10-1	4-Methyl-2-Pentanone	10.	U	
591-78-6	2-Hexanone	~~10.~~	~~U~~ R	1
127-18-4	Tetrachloroethene	10.	U	
79-34-5	1,1,2,2-Tetrachloroethane	10.	U	
108-88-3	Toluene	10.	U	
108-90-7	Chlorobenzene	10.	U	
100-41-4	Ethyl Benzene	10.	U	
100-42-5	Styrene	10.	U	
1330-20-7	m,p-Xylene	10.	U	
95-47-6	o-Xylene	10.	U	

038

4/3/97

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000370

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032043

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP044M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

4/3/97

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000384

WT1A0397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032050

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP045M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10 ~~8~~	~~B~~ U 4
67-64-1	Acetone	10 ~~4~~	~~B~~ U 4
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	10.	U
156-59-2	Cis-1,2-Dichloroethene	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

040

4/03/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

0000335

WT1A0397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032050

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP045M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

SAC 4/30/97

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0000395
WT18.0397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032054

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP049M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	10.	U	
74-83-9	Bromomethane	10.	U	
75-01-4	Vinyl Chloride	10.	U	
75-00-3	Chloroethane	10.	U	
75-09-2	Methylene Chloride	10 ~~6~~	~~B~~ U	4
67-64-1	Acetone	10.	U	
75-15-0	Carbon Disulfide	10.	U	
75-35-4	1,1-Dichloroethene	10.	U	
75-34-3	1,1-Dichloroethane	10.	U	
156-60-5	Trans-1,2-Dichloroethene	10.	U	
156-59-2	Cis-1,2-Dichloroethene	10.	U	
67-66-3	Chloroform	10.	U	
107-06-2	1,2-Dichloroethane	10.	U	
78-93-3	2-Butanone	10.	U	
71-55-6	1,1,1-Trichloroethane	10.	U	
56-23-5	Carbon Tetrachloride	10.	U	
75-27-4	Bromodichloromethane	10.	U	
78-87-5	1,2-Dichloropropane	10.	U	
10061-01-5	Cis-1,3-Dichloropropene	10.	U	
79-01-6	Trichloroethene	10.	U	
124-48-1	Dibromochloromethane	10.	U	
79-00-5	1,1,2-Trichloroethane	10.	U	
71-43-2	Benzene	10.	U	
10061-02-6	Trans-1,3-Dichloropropene	10.	U	
75-25-2	Bromoform	10.	U	
108-10-1	4-Methyl-2-Pentanone	10.	U	
591-78-6	2-Hexanone	~~10.~~	~~U~~ R	1
127-18-4	Tetrachloroethene	10.	U	
79-34-5	1,1,2,2-Tetrachloroethane	10.	U	
108-88-3	Toluene	10.	U	
108-90-7	Chlorobenzene	10.	U	
100-41-4	Ethyl Benzene	10.	U	
100-42-5	Styrene	10.	U	
1330-20-7	m,p-Xylene	10.	U	042
95-47-6	o-Xylene	10.	U	

GRC 4/20/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
0000397

WT180397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032054

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP049M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0000406
WT30397

ab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032058

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP061M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	10.	U
156-59-2	Cis-1,2-Dichloroethene	1.	J
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	~~10.~~	~~U~~ R 3
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

044

4/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
0000407
WT30397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032058

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP061M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

gac 6/30/97

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000416

WT40397

ab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032056

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP051M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	10.	U
156-59-2	Cis-1,2-Dichloroethene	2.	J
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	~~10.~~	~~U~~ R
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

1

046

4/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

0000417
WT40397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032056

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP051M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

4/30/97

3807

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000428
WT80397D

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032055

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP050M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	10.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	10.	U
156-59-2	Cis-1,2-Dichloroethene	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	~~10.~~	~~U~~ R 1
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

048

3/90

1E

EPA SAMPLE NO.

0000429
WT80397D

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032055

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP050M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0000446

TRPBLK

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032039

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP040M

Level: (low/med) LOW Date Received: 03/26/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	31.	~~B~~ J
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	10.	U
156-59-2	Cis-1,2-Dichloroethene	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	~~10.~~	~~U~~ R
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	.5	J
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	.2	J
95-47-6	o-Xylene	10.	U

2

1

050

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
0000441
TRPBLK

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032039

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP040M

Level: (low/med) LOW Date Received: 03/26/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000532
WT1AQMS

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032051

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP046M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	.6	BJ
67-64-1	Acetone	4.	BJ
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	53.	
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	10.	U
156-59-2	Cis-1,2-Dichloroethene	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	51.	
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	48.	
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	52.	
108-90-7	Chlorobenzene	53.	
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

052

QC 4/24/97

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000546

WT1AQMSD

ab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix: (soil/water) WATER Lab Sample ID: 032052

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP047M

Level: (low/med) LOW Date Received: 03/27/97

% Moisture: not dec. Date Analyzed: 04/02/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	.9	BJ
67-64-1	Acetone	4.	BJ
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	55.	
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	10.	U
156-59-2	Cis-1,2-Dichloroethene	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	57.	
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	54.	
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	U
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	58.	
108-90-7	Chlorobenzene	60.	
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

053

SAC 10/30/97

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

000058

GW-MW1-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2045

Sample wt/vol: 960.0 (g/mL) ML Lab File ID: M30410S5.D

Level: (low/med) Date Received: 3/26/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	o-Cresol	10	U
108-60-1	Bis(2-chloroisopropyl)ether	10	U
106-44-5	m/p-Cresol	10	U
621-64-7	N-Nitrosodi-n-propyl amine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
00005
GW-MW1-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2045

Sample wt/vol: 960.0 (g/mL) ML Lab File ID: M30410S5.D

Level: (low/med) Date Received: 3/26/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	26	U 2
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	26	U
534-52-1	2-Methyl-4,6-dinitrophenol	26	U 2
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
	Benzo[a]pyrene	10	U
193-39-5	Indeno(1,2,3-c,d)pyrene	10	U
53-70-3	Dibenzo[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-MW1-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2045

Sample wt/vol: 960.0 (g/mL) ML Lab File ID: M30410S5.D

Level: (low/med) Date Received: 3/26/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 2 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	7.28	5	J
2.	Unknown	7.57	10	J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0000594

GW-RFI01-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2033

Sample wt/vol: 980.0 (g/mL) ML Lab File ID: M30410S2.D

Level: (low/med) Date Received: 3/26/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	o-Cresol	10	U
108-60-1	Bis(2-chloroisopropyl)ether	10	U
106-44-5	m/p-Cresol	10	U
621-64-7	N-Nitrosodi-n-propyl amine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

000059

GW-RFI01-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2033

Sample wt/vol: 980.0 (g/mL) ML Lab File ID: M30410S2.D

Level: (low/med) Date Received: 3/26/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	26	U (2)
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	26	U
534-52-1	2-Methyl-4,6-dinitrophenol	26	U (2)
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromoohenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
	Benzo[a]pyrene	10	U
193-39-5	Indeno(1,2,3-c,d)pyrene	10	U
53-70-3	Dibenzo[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-RFI01-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2033

Sample wt/vol: 980.0 (g/mL) ML Lab File ID: M30410S2.D

Level: (low/med) Date Received: 3/26/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 2 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	3.63	6	J NO
2.	Unknown	7.58	8	J NO
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000506
GW-RFI03-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2035

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: M30410S3.D

Level: (low/med) Date Received: 3/26/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	11	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

00005

GW-RFI03-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2035

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: M30410S3.D

Level: (low/med) Date Received: 3/26/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	26	~~U~~ 45 2
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	26	U
534-52-1	2-Methyl-4,6-dinitrophenol	26	~~U~~ 45 2
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo[a]anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo[b]fluoranthene	11	U
207-08-9	Benzo[k]fluoranthene	11	U
	Benzo[a]pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo[a,h]anthracene	11	U
191-24-2	Benzo[g,h,i]perylene	11	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
00005
GW-RFI03-0397

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1208 SAS No.: _____ SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2035

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: M30410S3.D

Level: (low/med) _____ Date Received: 3/26/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 3 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	3.63	8	J
2.	Unknown	7.28	4	J
3.	Unknown	7.57	12	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-RFI07-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1209

Matrix: (soil/water) WATER Lab Sample ID: A03-2059

Sample wt/vol: 930.0 (g/mL) ML Lab File ID: M30410A5.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	27	U
91-58-7	2-Chloronaphthalene	27	U
88-74-4	2-Nitroaniline	27	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	27	U
83-32-9	Acenaphthene	11	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-RFI07-0397 00905

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2059

Sample wt/vol: 930.0 (g/mL) ML Lab File ID: M30410A5.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	27	U
100-02-7	4-Nitrophenol	27	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	27	U
534-52-1	2-Methyl-4,6-dinitrophenol	27	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	27	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	8 U J
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo[a]anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo[b]fluoranthene	11	U
207-08-9	Benzo[k]fluoranthene	11	U
	Benzo[a]pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo[a,h]anthracene	11	U
191-24-2	Benzo[g,h,i]perylene	11	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
000052
GW-RFI07-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2059

Sample wt/vol: 930.0 (g/mL) ML Lab File ID: M30410A5.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 6 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	3.28	6	J NJ
2.	Unknown	3.60	9	J
3.	Unknown	3.63	5	J
4.	Unknown	4.31	9	J
5.	Unknown	4.56	43	J
6.	Unknown	7.64	9	J
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0000533

GW-RFI09-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2057

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: M30410A3.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	o-Cresol	10	U
108-60-1	Bis(2-chloroisopropyl)ether	10	U
106-44-5	m/p-Cresol	10	U
621-64-7	N-Nitrosodi-n-propyl amine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

000054

GW-RFI09-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2057

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: M30410A3.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	2-Methyl-4,6-dinitrophenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U 4/15/97
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
	Benzo[a]pyrene	10	U
193-39-5	Indeno(1,2,3-c,d)pyrene	10	U
53-70-3	Dibenzo[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-RFI09-0397

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1208 SAS No.: _____ SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2057

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: M30410A3.D

Level: (low/med) _____ Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 2 Concentration Units: (ug/L or ug/Kg) ug/L

	CAS Number	Compound Name	RT	Est. Conc.	Q
1.		Unknown	3.28	6	J
2.		Unknown	7.59	6	J
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
GW-W[illegible]

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2036

Sample wt/vol: 955.0 (g/mL) ML Lab File ID: M30410S4.D

Level: (low/med) Date Received: 3/26/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	o-Cresol	10	U
108-60-1	Bis(2-chloroisopropyl)ether	10	U
106-44-5	m/p-Cresol	10	U
621-64-7	N-Nitrosodi-n-propyl amine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000053
GW-WP4-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2036

Sample wt/vol: 955.0 (g/mL) ML Lab File ID: M30410S4.D

Level: (low/med) Date Received: 3/26/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	26	U
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	26	U
534-52-1	2-Methyl-4,6-dinitrophenol	26	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-c,d)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-WP4-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2036

Sample wt/vol: 955.0 (g/mL) ML Lab File ID: M30410S4.D

Level: (low/med) Date Received: 3/26/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 2 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	7.22	4	JP1
2.	Unknown	7.60	9	JN1
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-WTTA-0397 00005

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2050

Sample wt/vol: 970.0 (g/mL) ML Lab File ID: M30410S6.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	o-Cresol	10	U
108-60-1	Bis(2-chloroisopropyl)ether	10	U
106-44-5	m/p-Cresol	10	U
621-64-7	N-Nitrosodi-n-propyl amine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
GW-WTHA-0397 00095

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1208 SAS No.: _____ SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2050

Sample wt/vol: 970.0 (g/mL) ML Lab File ID: M30410S6.D

Level: (low/med) _____ Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	26	U
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	26	U
534-52-1	2-Methyl-4,6-dinitrophenol	26	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
	Benzo[a]pyrene	10	U
193-39-5	Indeno(1,2,3-c,d)pyrene	10	U
53-70-3	Dibenzo[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-WT1A-0397

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1208 SAS No.: _____ SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2050

Sample wt/vol: 970.0 (g/mL) ML Lab File ID: M30410S6.D

Level: (low/med) _____ Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 2 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	3.63	6	J NJ
2.	Unknown	7.57	5	J NJ
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-WT1B-0397 0000834

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2054

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: M30410S9.D

Level: (low/med) Date Received: 3/27/97

% Moisture: .0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	11	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

00005

GW-WT1B-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2054

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: M30410S9.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	26	U
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	26	U
534-52-1	2-Methyl-4,6-dinitrophenol	26	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U 4/15/97
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo[b]fluoranthene	11	U
207-08-9	Benzo[k]fluoranthene	11	U
	Benzo[a]pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo[a,h]anthracene	11	U
191-24-2	Benzo[g,h,i]perylene	11	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-WT1B-0397 0000S

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2054

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: M30410S9.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 6 Concentration Units: (ug/L or ug/Kg) ug/L

	CAS Number	Compound Name	RT	Est. Conc.	Q
1.		Unknown	3.20	6	J NJ
2.		Unknown	3.61	7	J
3.		Unknown	3.63	5	J
4.		Unknown	4.26	29	J
5.		Unknown Hydrocarbon	4.77	6	J
6.		Unknown Hydrocarbon	5.58	5	J
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-WT1B-0397D

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1209

Matrix: (soil/water) WATER Lab Sample ID: A03-2055

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: M30410A1.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	o-Cresol	10	U
108-60-1	Bis(2-chloroisopropyl)ether	10	U
106-44-5	m/p-Cresol	10	U
621-64-7	N-Nitrosodi-n-propyl amine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-WT1B-0397D

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2055

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: M30410A1.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	2-Methyl-4,6-dinitrophenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U 4
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-c,d)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
00007
GW-WT1B-0397D

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1208 SAS No.: _____ SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2055

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: M30410A1.D

Level: (low/med) _____ Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 4 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	3.28	6	J NJ
2.	Unknown	3.63	9	J I
3.	Unknown	7.14	4	J
4.	Unknown	7.52	10	J
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-WT3-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2058

Sample wt/vol: 945.0 (g/mL) ML Lab File ID: M30410A4.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	11	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-WT3-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2058

Sample wt/vol: 945.0 (g/mL) ML Lab File ID: M30410A4.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	26	U
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	26	U
534-52-1	2-Methyl-4,6-dinitrophenol	26	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U (1)
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo[a]anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo[b]fluoranthene	11	U
207-08-9	Benzo[k]fluoranthene	11	U
	Benzo[a]pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo[a,h]anthracene	11	U
191-24-2	Benzo[g,h,i]perylene	11	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-WT3-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2058

Sample wt/vol: 945.0 (g/mL) ML Lab File ID: M30410A4.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 3 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	3.28	7	J
2.	Unknown	3.63	11	J
3.	Unknown	7.60	7	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
GW-WT4 -0397 0000733

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2056

Sample wt/vol: 965.0 (g/mL) ML Lab File ID: M30410A2.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	o-Cresol	10	U
108-60-1	Bis(2-chloroisopropyl)ether	10	U
106-44-5	m/p-Cresol	10	U
621-64-7	N-Nitrosodi-n-propyl amine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
GW-WT4 -0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2056

Sample wt/vol: 965.0 (g/mL) ML Lab File ID: M30410A2.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	26	U
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	26	U
534-52-1	2-Methyl-4,6-dinitrophenol	26	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U 4
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
	Benzo[a]pyrene	10	U
193-39-5	Indeno(1,2,3-c,d)pyrene	10	U
53-70-3	Dibenzo[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
000074
GW-WT4 -0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2056

Sample wt/vol: 965.0 (g/mL) ML Lab File ID: M30410A2.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 2 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	3.29	8	JWS
2.	Unknown	7.55	9	J MS
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-WT1A-0397MS 000080

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2051

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: M30410S7.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	17	
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	40	
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	20	
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	o-Cresol	10	U
108-60-1	Bis(2-chloroisopropyl)ether	10	U
106-44-5	m/p-Cresol	10	U
621-64-7	N-Nitrosodi-n-propyl amine	31	
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	25	
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	48	
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	29	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-WT1A-0397MS 0000803

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2051

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: M30410S7.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	18	
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	29	
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	2-Methyl-4,6-dinitrophenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	62	
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	32	
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
	Benzo[a]pyrene	10	U
193-39-5	Indeno(1,2,3-c,d)pyrene	10	U
53-70-3	Dibenzo[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
GW-WT1A-0397MSD

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No:: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2052

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: M30410S8.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	18	
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	44	
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	23	
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	o-Cresol	10	U
108-60-1	Bis(2-chloroisopropyl)ether	10	U
106-44-5	m/p-Cresol	10	U
621-64-7	N-Nitrosodi-n-propyl amine	34	
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	28	
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	55	
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	32	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

000084

GW-WT1A-0397MSD

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Matrix: (soil/water) WATER Lab Sample ID: A03-2052

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: M30410S8.D

Level: (low/med) Date Received: 3/27/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 3/31/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/10/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	23	
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	32	
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	2-Methyl-4,6-dinitrophenol	25	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	71	
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	36	
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-c,d)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

110397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1E02ET

Matrix (soil/water): WATER Lab Sample ID: 03-2049

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	270		F	P	J6
7440-38-2	Arsenic	2.5	U	F	P	
7440-39-3	Barium	295			P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	110000			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	33.0	B		P	
7440-47-3	Chromium	16.5			P	J6
7440-50-8	Copper	21.5	B		P	
7439-89-6	Iron	1290		F	P	J6
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	3840	B		P	
7439-95-4	Magnesium	30100			P	
7439-96-5	Manganese	952			P	
	Molybdenum	43.0			P	
7440-23-5	Sodium	47100			P	
7440-02-0	Nickel	86.9			P	
7439-92-1	Lead	11.3			P	J6
7440-36-0	Antimony	2.6	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	36.3	U		P	
7440-66-6	Zinc	17.4	B		P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

140397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 180SET

Matrix (soil/water): WATER Lab Sample ID: 03-2044

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	831		*	P	JG
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	84.4	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	99700			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	26.0			P	JG
7440-50-8	Copper	21.4	B		P	
7439-89-6	Iron	3630		*	P	JG
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	7700			P	
7439-95-4	Magnesium	35700			P	
7439-96-5	Manganese	408			P	
	Molybdenum	43.7			P	
7440-23-5	Sodium	25800			P	
7440-02-0	Nickel	50.3			P	
7439-92-1	Lead	4.8			P	JG
7440-36-0	Antimony	6.6	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	21.7			P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

170397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 120SET

Matrix (soil/water): WATER Lab Sample ID: 03-2060

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	11.5			P	J6
7429-90-5	Aluminum	373			P	
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	58.6	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	274000			P	
7440-43-9	Cadmium	6.6			P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	89.1			P	J6
7440-50-8	Copper	41.7			P	
7439-89-6	Iron	1070			P	J6
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	12100			P	
7439-95-4	Magnesium	90800			P	
7439-96-5	Manganese	1040			P	
	Molybdenum	275			P	
7440-23-5	Sodium	109000			P	
7440-02-0	Nickel	40.4			P	J6
7439-92-1	Lead	9.8	B		P	
7440-36-0	Antimony	3.6	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	58.1			P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1-0397

1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1208ET

Matrix (soil/water): WATER Lab Sample ID: 03-2032

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	96.0	B	*	P	J6
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	71.9	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	89600			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	8.4	U		P	
7440-50-8	Copper	14.9	B		P	
7439-89-6	Iron	284		*	P	J6
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	2420	B		P	
7439-95-4	Magnesium	40800			P	
7439-96-5	Manganese	34.5			P	
	Molybdenum	43.0			P	
7440-23-5	Sodium	18800			P	
7440-02-0	Nickel	27.6	U		P	
7439-92-1	Lead	4.8			P	J6
7440-36-0	Antimony	2.7	B		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	5.0	B		P	
7440-62-2	Vanadium	86.3	U		P	
7440-66-6	Zinc	10.6	B		P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIRCFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

2-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1E03ET

Matrix (soil/water): WATER Lab Sample ID: 03-3034

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	316		J	P	J6
7440-38-2	Arsenic	3.1	B		P	
7440-39-3	Barium	16.0	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-70-2	Calcium	197000			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	8.4	U		P	
7440-50-8	Copper	21.1	B		P	
7439-89-6	Iron	3390		J	P	J6
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	2820	B		P	
7439-95-4	Magnesium	70500			P	
7439-96-5	Manganese	299			P	
	Molybdenum	40.0			P	
7440-23-5	Sodium	13300			P	
7440-02-0	Nickel	27.6	U		P	
7439-92-1	Lead	7.8			P	J6 KQS 6/30/97
7440-36-0	Antimony	2.6	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	15.9	B		P	

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

3-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1808ET

Matrix (soil/water): WATER Lab Sample ID: 03-2035.

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	99.3	B	J	P	JG
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	70.0	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	147000			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	8.4	U		P	
7440-50-8	Copper	21.0	B		P	
7439-89-6	Iron	2660		J	P	JG
7439-97-6	Mercury	0.30	U		CV	
7440-09-7	Potassium	3030	B		P	
7439-95-4	Magnesium	41900			P	
7439-96-5	Manganese	946			P	
	Molybdenum	1220			P	
7440-23-5	Sodium	81000			P	
7440-02-0	Nickel	27.6	U		P	
7439-92-1	Lead	3.5			P	JG
7440-36-0	Antimony	2.6	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	8.3	U		P	
7440-66-6	Zinc	34.3			P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

4-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 130SET

Matrix (soil/water): WATER Lab Sample ID: 03-2036

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	7.0	U		P
7429-90-5	Aluminum	95.9	U		P
7440-38-2	Arsenic	2.5	U		P
7440-39-3	Barium	20.3	B		P
7440-41-7	Beryllium	1.8	U		P
7440-70-2	Calcium	125000			P
7440-43-9	Cadmium	5.0	U		P
7440-48-4	Cobalt	17.3	U		P
7440-47-3	Chromium	8.4	U		P
7440-50-8	Copper	14.9	B		P
7439-89-6	Iron	673			P
7439-97-6	Mercury	0.20	U		CV
7440-09-7	Potassium	2450	B		P
7439-95-4	Magnesium	41500			P
7439-96-5	Manganese	67.5			P
	Molybdenum	396			P
7440-23-5	Sodium	63800			P
7440-02-0	Nickel	27.6	U		P
7439-92-1	Lead	2.6	U		P
7440-36-0	Antimony	6.6	U		P
7782-49-2	Selenium	3.9	U		P
7440-28-0	Thallium	3.7	U		P
7440-62-2	Vanadium	26.3	U		P
7440-66-6	Zinc	27.9			P

56

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

S-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1E0EET

Matrix (soil/water): WATER Lab Sample ID: 03-2041

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	7.0	U		P
7429-90-5	Aluminum	226		#	P
7440-38-2	Arsenic	2.5	U	#	P
7440-39-3	Barium	44.3	B		P
7440-41-7	Beryllium	1.8	U		P
7440-70-2	Calcium	138000			P
7440-43-9	Cadmium	5.0	U		P
7440-48-4	Cobalt	17.3	U		P
7440-47-3	Chromium	8.4	U		P
7440-50-8	Copper	17.8	B		P
7439-89-6	Iron	598		#	P
7439-97-6	Mercury	0.20	U		CV
7440-09-7	Potassium	3690	B		P
7439-95-4	Magnesium	49000			P
7439-96-5	Manganese	181			P
	Molybdenum	43.0			P
7440-23-5	Sodium	18600			P
7440-02-0	Nickel	27.6	U		P
7439-92-1	Lead	2.9	B		P
7440-36-0	Antimony	2.6	U		P
7782-49-2	Selenium	3.9	U		P
7440-28-0	Thallium	2.7	U		P
7440-62-2	Vanadium	26.3	U		P
7440-66-6	Zinc	13.4	B		P

JG

JG

JG KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

S-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 120SET

Matrix (soil/water): WATER Lab Sample ID: 03-2042

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	364		J	P	SO
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	60.0	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	131000			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	8.4	U		P	
7440-50-8	Copper	16.7	B		P	
7439-89-6	Iron	1840		J	P	SO
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	2470	B		P	
7439-95-4	Magnesium	40900			P	
7439-96-5	Manganese	385			P	
	Molybdenum	588			P	
7440-23-5	Sodium	76100			P	
7440-02-0	Nickel	37.6	U		P	
7439-92-1	Lead	3.1			P	SO
7440-36-0	Antimony	2.6	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	18.7	B		P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIRCFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

7-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1208ET

Matrix (soil/water): WATER Lab Sample ID: 03-2059

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	12.7			P	
7429-90-5	Aluminum	495		≠	P	J6
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	132	B		P	
7440-41-7	Beryllium	1.9	U		P	
7440-70-2	Calcium	202000			P	
7440-43-9	Cadmium	8.4			P	
7440-48-4	Cobalt	26.5	B		P	
7440-47-3	Chromium	69.1			P	J6
7440-50-8	Copper	37.4			P	
7439-89-6	Iron	774		≠	P	J6
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	16600			P	
7439-95-4	Magnesium	59600			P	
7439-96-5	Manganese	807			P	
	Molybdenum	711			P	
7440-23-5	Sodium	138000			P	
7440-02-0	Nickel	72.8			P	
7439-92-1	Lead	3.1			P	J6
7440-36-0	Antimony	2.6	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	24.3			P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
9-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1E0SET

Matrix (soil/water): WATER Lab Sample ID: 03-2057

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	10.2			P	
7429-90-5	Aluminum	388		J	P	J6
7440-38-2	Arsenic	26.9			P	
7440-39-3	Barium	59.9	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	128000			P	
7440-43-9	Cadmium	5.8			P	
7440-48-4	Cobalt	17.4	B		P	
7440-47-3	Chromium	8.4	U		P	
7440-50-8	Copper	26.9			P	
7439-89-6	Iron	579		J	P	J6
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	1230	B		P	
7439-95-4	Magnesium	36200			P	
7439-96-5	Manganese	842			P	
	Molybdenum	413			P	
7440-23-5	Sodium	44100			P	
7440-02-0	Nickel	31.4	B		P	
7439-92-1	Lead	8.2			P	J6
7440-36-0	Antimony	3.6	B		P	
7782-49-2	Selenium	25.1			P	
7440-28-0	Thallium	27.6			P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	20.2			P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

A-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 120SET

Matrix (soil/water): WATER Lab Sample ID: 03-2050

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	10.2			P	
7429-90-5	Aluminum	179	B	#	P	J6
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	73.1	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	106000			P	
7440-43-9	Cadmium	5.4			P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	10.3			P	J6
7440-50-8	Copper	21.1	B		P	
7439-89-6	Iron	931		#	P	J6
7439-97-6	Mercury	0.80	U		CV	
7440-09-7	Potassium	1330	B		P	
7439-95-4	Magnesium	35400			P	
7439-96-5	Manganese	1840			P	
	Molybdenum	272			P	
7440-23-5	Sodium	82900			P	
7440-02-0	Nickel	37.8	B		P	
7439-92-1	Lead	3.9			P	J6
7440-36-0	Antimony	4.4	B		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	3.7	U		P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	31.3			P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

B-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 180SET

Matrix (soil/water): WATER Lab Sample ID: 08-2054

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	347		#	P	J6
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	61.6	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	154000			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	15.9			P	J6
7440-50-8	Copper	26.5			P	
7439-89-6	Iron	867		#	P	J6
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	2380	B		P	
7439-95-4	Magnesium	40500			P	
7439-96-5	Manganese	258			P	
	Molybdenum	103			P	
7440-23-5	Sodium	60100			P	
7440-02-0	Nickel	27.7	B		P	
7439-92-1	Lead	3.3			P	J6
7440-36-0	Antimony	2.6	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	8.7	U		P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	11.8	B		P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

010397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1208ET

Matrix (soil/water): WATER Lab Sample ID: 08-8033

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	2270		J	P	JS
7440-38-2	Arsenic	3.7	B		P	
7440-39-3	Barium	121	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	104000			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	10.8			P	JS
7440-50-8	Copper	31.1			P	
7439-89-6	Iron	7270		J	P	JS
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	1790	B		P	
7439-95-4	Magnesium	31500			P	
7439-96-5	Manganese	297			P	
	Molybdenum	43.0			P	
7440-23-5	Sodium	18700			P	
7440-02-0	Nickel	27.6	U		P	
7439-92-1	Lead	29.3			P	JS
7440-36-0	Antimony	2.6	U		P	
7782-49-2	Selenium	3.3	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	36.2			P	

KRS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

040397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 120SET

Matrix (soil/water): WATER Lab Sample ID: 03-2046

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	186	B	≠	P	JG
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	125	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-70-2	Calcium	93800			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	8.4	U		P	
7440-50-8	Copper	13.8	B		P	
7439-89-6	Iron	315		≠	P	JG
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	2070	B		P	
7439-95-4	Magnesium	47800			P	
7439-96-5	Manganese	28.8			P	
	Molybdenum	43.0			P	
7440-23-5	Sodium	14700			P	
7440-02-0	Nickel	27.6	U		P	
7439-92-1	Lead	2.6	U		P	
7440-36-0	Antimony	2.5	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	16.5	B		P	

KQS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

0000333

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

C-0397

1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 120SET

Matrix (soil/water): WATER Lab Sample ID: 03-2047

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	254		J	P	SG
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	76.1	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	173000			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	8.4	U		P	
7440-50-8	Copper	27.5			P	
7439-89-6	Iron	314		J	P	SG
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	17100			P	
7439-95-4	Magnesium	63600			P	
7439-96-5	Manganese	84.9			P	
	Molybdenum	43.0			P	
7440-23-5	Sodium	105000			P	
7440-02-0	Nickel	27.6	U		P	
7439-92-1	Lead	4.1			P	SG
7440-36-0	Antimony	2.6	U		P	
7782-49-2	Selenium	3.7	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	22.4			P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

P50397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 130SET

Matrix (soil/water): WATER Lab Sample ID: 03-2043

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	321		*	P	J6
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	61.8	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	84100			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	8.4	U		P	
7440-50-8	Copper	12.2	U		P	
7439-89-6	Iron	2090		*	P	J6
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	1590	B		P	
7439-95-4	Magnesium	20500			P	
7439-96-5	Manganese	447			P	
	Molybdenum	43.0			P	
7440-23-5	Sodium	27700			P	
7440-02-0	Nickel	27.6	U		P	
7439-92-1	Lead	4.6			P	J6
7440-36-0	Antimony	4.2	B		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	10.2	B		P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

T30397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 130SET

Matrix (soil/water): WATER Lab Sample ID: 03-2058

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	12.1			P	
7429-90-5	Aluminum	415		*	P	JG
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	21.4	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	173000			P	
7440-43-9	Cadmium	5.9			P	
7440-48-4	Cobalt	19.2	B		P	
7440-47-3	Chromium	13.4			P	JG
7440-50-8	Copper	31.4			P	
7439-89-6	Iron	1680		*	P	JG
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	7710			P	
7439-95-4	Magnesium	55100			P	
7439-96-5	Manganese	699			P	
	Molybdenum	1720			P	
7440-23-5	Sodium	121000			P	
7440-02-0	Nickel	50.3			P	
7439-92-1	Lead	2.6	U		P	
7440-36-0	Antimony	2.6	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	17.4	B		P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

T40397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 180SET

Matrix (soil/water): WATER Lab Sample ID: 03-2054

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	7.0	U		P
7429-90-5	Aluminum	95.9	U	J	P
7440-38-2	Arsenic	2.5	U		P
7440-39-3	Barium	46.3	B		P
7440-41-7	Beryllium	1.8	U		P
7440-70-2	Calcium	126000			P
7440-43-9	Cadmium	5.0	U		P
7440-48-4	Cobalt	17.3	U		P
7440-47-3	Chromium	8.4	U		P
7440-50-8	Copper	19.7	B		P
7439-89-6	Iron	594		J	P
7439-97-6	Mercury	0.20	U		CV
7440-09-7	Potassium	6420			P
7439-95-4	Magnesium	40700			P
7439-96-5	Manganese	520			P
	Molybdenum	136			P
7440-23-5	Sodium	176000			P
7440-02-0	Nickel	27.6	U		P
7439-92-1	Lead	2.6	B		P
7440-36-0	Antimony	2.6	U		P
7782-49-2	Selenium	3.9	U		P
7440-28-0	Thallium	2.7	U		P
7440-62-2	Vanadium	26.3	U		P
7440-66-6	Zinc	88.4			P

J6 KAS 6/30/97

J6

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

W10397

1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1E082T

Matrix (soil/water): WATER Lab Sample ID: 03-2045

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	503		#	P	J6
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	59.2	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	66600			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	22.1			P	J6
7440-50-8	Copper	18.0	B		P	
7439-89-6	Iron	995		#	P	J6
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	19800			P	
7439-95-4	Magnesium	23900			P	
7439-96-5	Manganese	177			P	
	Molybdenum	385			P	
7440-23-5	Sodium	122000			P	
7440-02-0	Nickel	38.8	B		P	
7439-92-1	Lead	8.5			P	J6
7440-36-0	Antimony	2.6	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	36.3	U		P	
7440-66-6	Zinc	15.3	B		P	

KAJ 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

W30397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 120SET

Matrix (soil/water): WATER Lab Sample ID: 03-2061

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	20.1			P	
7429-90-5	Aluminum	615		*	P	SG
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	29.0	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	220000			P	
7440-43-9	Cadmium	9.1			P	
7440-48-4	Cobalt	18.2	B		P	
7440-47-3	Chromium	6010			P	SG
7440-50-8	Copper	46.0			P	
7439-89-6	Iron	1870		*	P	SG KAS 6/30/97
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	3690	B		P	
7439-95-4	Magnesium	61400			P	
7439-96-5	Manganese	214			P	
	Molybdenum	303			P	
7440-23-5	Sodium	424000			P	
7440-02-0	Nickel	39.4	B		P	
7439-92-1	Lead	2.6	U		P	
7440-36-0	Antimony	12.0	B		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	65.1	B		P	
7440-66-6	Zinc	20.5			P	

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

5A
SPIKE SAMPLE RECOVERY

SAMPLE NO.
A-03978

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1E0SET

Matrix (soil/water): WATER Level (low/med): MED
% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Silver	75-125	91.1467		10.8063		50.00	81.9		P
Aluminum	75-125	2091.7994		179.0634	B	2000.00	95.6		P
Arsenic	75-125	1963.0000		2.5000	U	2000.00	98.2		P
Barium	75-125	1920.6072		73.0893	B	2000.00	92.4		P
Beryllium	75-125	46.6822		1.8000	U	50.00	93.4		P
Calcium									NR
Cadmium	75-125	52.6033		5.4445		50.00	94.3		P
Cobalt	75-125	497.1968		17.3000	U	500.00	91.4		P
Chromium	75-125	196.1263		10.2909		200.00	92.9		P
Copper	75-125	253.3083		21.1282	B	250.00	93.7		P
Iron	75-125	1947.6109		931.1726		1000.00	91.6		P
Mercury	75-125	0.9769		0.2000	U	1.00	97.6		CV
Potassium									NR
Magnesium									NR
Manganese	75-125	2332.0141		1939.0848		500.00	98.6		P
Molybdenum									NR
Sodium									NR
Nickel	75-125	519.6894		37.8481	B	500.00	96.4		P
Lead	75-125	467.8700		3.9413		500.00	92.8		P
Antimony	75-125	498.7000		4.3240	B	500.00	98.9		P
Selenium	75-125	1935.4000		3.9000	U	2000.00	96.8		P
Thallium	75-125	1980.2000		2.7000	U	2000.00	99.0		P
Vanadium	75-125	483.3114		26.3000	U	500.00	96.6		P
Zinc	75-125	439.0615		31.3009		500.00	90.6		P

KAS
6/30/97

Comments:

ENVIROFORMS/INORGANIC CLP

6
DUPLICATES

SAMPLE NO.
0-0397D

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1E0EE

Matrix (soil/water): WATER Level (low/med): MED

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Silver		7.0000	U	7.0000	U			P
Aluminum	200.0	253.7194		200.3019		23.5		P
Arsenic		2.5000	U	2.5000	U			P
Barium		76.1065	B	72.1481	B	5.3		P
Beryllium		1.0000	U	1.0000	U			P
Calcium		173265.1700		165789.2900		4.4		P
Cadmium		5.0000	U	5.0000	U			P
Cobalt		17.3000	U	17.3000	U			P
Chromium	10.0	8.4000	U	10.4091		200.0	*	P
Copper	25.0	27.4700		24.5995	B	11.0		P
Iron	100.0	514.4275		370.4210		32.5	*	P
Mercury		0.2000	U	0.2000	U			CV
Potassium	5000.0	17072.4640		16618.1890		2.7		P
Magnesium		63590.1630		61266.4330		3.7		P
Manganese		84.9114		79.7721		6.2		P
Molybdenum		43.0000	U	43.0000	U			P
Sodium		104753.3500		99114.7280		5.5		P
Nickel		27.6000	U	27.6000	U			P
Lead	3.0	4.0690		2.6000	U	200.0	*	P
Antimony		2.6000	U	2.6000	U			P
Selenium		3.9000	U	3.9000	U			P
Thallium		2.7000	U	2.7000	U			P
Vanadium		26.3000	U	26.3000	U			P
Zinc	20.0	22.3543		35.3904		45.8		P

KAS
6/30/97

ENVIROFORMS/INORGANIC CLP

6
DUPLICATES

SAMPLE NO.

B-03970

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1E05ET

Matrix (soil/water): WATER Level (low/med): MED

% Solids for Sample: 0.0 % Solids for Duplicate:

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Silver		7.0000	U	7.0000	U			P
Aluminum	200.0	347.0392		363.9276		47.6	*	P
Arsenic		2.5000	U	2.5000	U			P
Barium		61.9741	B	69.0756	B	11.5		P
Beryllium		1.8000	U	1.8000	U			P
Calcium		154167.0800		154100.6500		0.0		P
Cadmium		5.0000	U	5.0000	U			P
Cobalt		17.3000	U	17.3000	U			P
Chromium	10.0	15.8935		14.6326		8.3		P
Copper	25.0	26.4687		26.4019		0.3		P
Iron		866.5460		969.0585		11.8		P
Mercury		0.2000	U	0.2000	U			CV
Potassium		2380.1383	B	2380.1384	B	0.0		P
Magnesium		40542.9460		39814.1160		1.8		P
Manganese		258.2449		291.3914		12.1		P
Molybdenum		102.9788		109.8207		6.4		P
Sodium		90059.0540		96884.8230		7.3		P
Nickel		27.6846	B	33.2581	B	18.2		P
Lead	3.0	3.8626		2.6000	U	200.0	*	P
Antimony		2.6000	U	2.6000	U			P
Selenium		3.9000	U	3.9000	U			P
Thallium		2.7000	U	2.7000	U			P
Vanadium		26.3000	U	26.3000	U			P
Zinc		11.7943	B	10.9951	B	10.7		P

KAS
6/30/97

ENVIROFORMS/INORGANIC CLP

ICP SERIAL DILUTIONS

SAMPLE NO.

1-0397L

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 180EET

Matrix (soil/water): WATER Level (low/med): MED

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ-ence	Q	M
Silver	7.00	U	35.00	U			P
Aluminum	96.04	B	479.50	U	100.0		P
Arsenic	2.50	U	12.50	U			P
Barium	71.87	B	72.45	B	0.8		P
Beryllium	1.80	U	9.00	U			P
Calcium	89610.34		86300.62		3.7		P
Cadmium	5.00	U	25.00	U			P
Cobalt	17.30	U	86.50	U			P
Chromium	8.40	U	42.00	U			P
Copper	14.85	B	61.00	U	100.0		P
Iron	894.48		883.35	B	0.4		P
Mercury							
Potassium	2421.06	B	2349.17	B	3.3		P
Magnesium	40751.25		39609.44		2.8		P
Manganese	34.54		34.27	B	0.7		P
Molybdenum	43.00	U	215.00	U			P
Sodium	19780.14		19538.11	B	1.3		P
Nickel	27.60	U	138.00	U			P
Lead	4.78		23.95		399.0		P
Antimony	2.70	B	13.00	U	100.0		P
Selenium	3.50	U	17.50	U			P
Thallium	3.70	U	18.50	U			P
Vanadium	26.30	U	131.50	U			P
Zinc	10.56	B	25.50	U	100.0		P

KAS
6/30/97

ENVIROFORMS/INORGANIC CLP

9

ICP SERIAL DILUTIONS

SAMPLE NO.

P50397L

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1203ET

Matrix (soil/water): WATER Level (low/med): MED

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Silver	7.00	U	35.00	U			P
Aluminum	320.63		479.50	U	100.0		P
Arsenic	2.50	U	12.50	U			P
Barium	61.62	B	64.00	U	100.0		P
Beryllium	1.80	U	9.00	U			P
Calcium	84113.39		81342.66		3.3		P
Cadmium	5.00	U	25.00	U			P
Cobalt	17.30	U	86.50	U			P
Chromium	8.40	U	42.00	U			P
Copper	12.20	U	61.00	U			P
Iron	2086.43		2031.91		2.6		P
Mercury							
Potassium	1590.27	B	2078.52	B	30.7		P
Magnesium	20541.18		19956.32	B	2.8		P
Manganese	447.13		438.42		1.9		P
Molybdenum	43.00	U	215.00	U			P
Sodium	27693.91		27329.32		1.3		P
Nickel	27.60	U	138.00	U			P
Lead	4.68		12.00	U	100.0		P
Antimony	4.84	B	13.00	U	100.0		P
Selenium	3.90	U	19.50	U			P
Thallium	3.70	U	18.50	U			P
Vanadium	26.30	U	131.50	U			P
Zinc	10.78	B	25.50	U	100.0		P

KAS
6/30/97

ENVIROFORMS/INORGANIC CLP

9

ICP SERIAL DILUTIONS

SAMPLE NO.

A-0397L

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 120SET

Matrix (soil/water): WATER Level (low/med): MED

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ-ence	Q	M
Silver	10.21	B	37.76	B	269.8		P
Aluminum	179.06	B	479.50	U	100.0		P
Arsenic	2.50	U	12.50	U			P
Barium	79.09	B	88.00	B	12.8		P
Beryllium	1.80	U	9.00	U			P
Calcium	105521.90		104367.98		1.1		P
Cadmium	5.44		25.00	U	100.0		P
Cobalt	17.30	U	86.50	U			P
Chromium	10.88		42.00	U	100.0		P
Copper	21.18	B	61.00	U	100.0		P
Iron	931.17		949.86		2.0		P
Mercury							
Potassium	1389.35	B	2712.87	B	104.2		P
Magnesium	35424.25		35527.81		0.3		P
Manganese	1839.08		1840.19		0.1		P
Molybdenum	271.80		294.97		8.5		P
Sodium	82853.52		82671.15		0.2		P
Nickel	37.85	B	138.00	U	100.0		P
Lead	3.84		13.98	B	260.6		P
Antimony	4.38	B	18.00	U	100.0		P
Selenium	3.90	U	19.50	U			P
Thallium	3.70	U	18.50	U			P
Vanadium	26.30	U	131.50	U			P
Zinc	31.30		40.71	B	30.1		P

KQS
6/30/97

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
040397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 180SED

Matrix (soil/water): WATER Lab Sample ID: 03-2046

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.7			P	J5
7429-90-5	Aluminum	356			P	
7440-38-2	Arsenic	3.9	U		P	
7440-39-3	Barium	137	B		P	
7440-41-7	Beryllium	1.3	U		P	
7440-70-2	Calcium	99500			P	J6
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	10.0			P	J5
7440-50-8	Copper	19.9	B		P	
7439-89-6	Iron	1240			P	
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	2140	B		P	J6
7439-95-4	Magnesium	49800			P	J6
7439-96-5	Manganese	38.6			P	J6
	Molybdenum	43.0	U		P	
7440-23-5	Sodium	14900			P	J6
7440-02-0	Nickel	37.6	U		P	
7439-92-1	Lead	3.6	U		P	
7440-36-0	Antimony	3.6	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	3.7	U		P	
7440-62-2	Vanadium	36.3	U		P	
7440-66-6	Zinc	9.3	B		P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

1-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 120EED

Matrix (soil/water): WATER Lab Sample ID: 03-2033

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	98.2	U		P	
7440-38-2	Arsenic	3.1	B		P	
7440-39-3	Barium	55.9	B		P	
7440-41-7	Beryllium	1.2	U		P	
7440-70-2	Calcium	37000			P	J6
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	3.4	U		P	J5
7440-50-8	Copper	14.1	B		P	
7439-89-6	Iron	67.7	B		P	
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	1280	B		P	J6
7439-95-4	Magnesium	28200			P	J6
7439-96-5	Manganese	130			P	J6
	Molybdenum	43.0	U		P	
7440-23-5	Sodium	18600			P	J6
7440-02-0	Nickel	27.8	U		P	
7439-92-1	Lead	11.0			P	
7440-36-0	Antimony	3.1	B		P	
7782-49-2	Selenium	3.3	U		P	
7440-28-0	Thallium	13.8			P	U2
7440-62-2	Vanadium	59.3	U		P	
7440-66-6	Zinc	10.3	B		P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
2-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1209ED

Matrix (soil/water): WATER Lab Sample ID: 03-E034

Level (low/med): MED Date Received: 03/26/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	10.0			P	
7429-90-5	Aluminium	120	B		P	JS
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	12.8	U		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	159000		E	P	JS
7440-43-9	Cadmium	5.4			P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	9.4	U		P	
7440-50-8	Copper	27.2			P	JS
7439-89-6	Iron	902			P	
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	2920	B		P	
7439-95-4	Magnesium	72000		E	P	JS
7439-96-5	Manganese	354		E	P	JS
	Molybdenum	43.0			P	
7440-23-5	Sodium	13600		E	P	JS
7440-02-0	Nickel	27.6	U		P	
7439-92-1	Lead	4.6			P	
7440-36-0	Antimony	3.8	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	3.4	U		P	U2
7440-62-2	Vanadium	25.3	U		P	
7440-66-6	Zinc	80.8			P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

4-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1203ED

Matrix (soil/water): WATER Lab Sample ID: 03-2044

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.5	B		P	
7429-90-5	Aluminum	93.9	U		P	
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	66.9	B		P	
7440-41-7	Beryllium	1.8	U		P	JG
7440-70-2	Calcium	87300			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.8	U		P	
7440-47-3	Chromium	8.4	U		P	JS
7440-50-8	Copper	17.5	B		P	
7439-89-6	Iron	69.0	B		P	
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	8090			P	JG
7439-95-4	Magnesium	35400			P	JG
7439-96-5	Manganese	183			P	JG
	Molybdenum	56.4			P	
7440-23-5	Sodium	87100			P	JG
7440-02-0	Nickel	37.4	U		P	
7439-92-1	Lead	3.9	U		P	
7440-36-0	Antimony	3.6	U		P	
7782-49-2	Selenium	2.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	86.3	U		P	
7440-66-6	Zinc	40.3	U		P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

S-0397

INORGANIC ANALYSIS DATA SHEET

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 180SED

Matrix (soil/water): WATER Lab Sample ID: 03-2043

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	95.9	U	N	P	
7440-38-2	Arsenic	3.1	B		P	
7440-39-3	Barium	32.8	B		P	
7440-41-7	Beryllium	1.3	U		P	
7440-70-2	Calcium	99100		E	P	J6
7440-43-9	Cadmium	7.0			P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	3.4	U		P	J5
7440-50-8	Copper	17.5	B	N	P	
7439-89-6	Iron	1310			P	
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	1350	B		P	
7439-95-4	Magnesium	24900		E	P	J6
7439-96-5	Manganese	352		E	P	J6
	Molybdenum	43.0			P	J6 KAS 6/30/97
7440-23-5	Sodium	86100		E	P	
7440-02-0	Nickel	27.6	U		P	
7439-92-1	Lead	4.8			P	
7440-36-0	Antimony	8.6	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	6.7	U		P	
7440-62-2	Vanadium	86.3	U		P	
7440-66-6	Zinc	89.8			P	

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

7-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 120EED

Matrix (soil/water): WATER Lab Sample ID: 03-2089

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	15.6			P	
7429-90-5	Aluminum	145	B		P	SS
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	192	B		P	
7440-41-7	Beryllium	1.0	U		P	
7440-70-2	Calcium	836000		*	P	SS
7440-43-9	Cadmium	3.7			P	
7440-48-4	Cobalt	17.0	U		P	
7440-47-3	Chromium	33.8			P	
7440-50-8	Copper	40.0			P	SS
7439-89-6	Iron	61.0	B		P	
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	17300			P	
7439-95-4	Magnesium	69700		*	P	SS
7439-96-5	Manganese	1020		*	P	SS
	Molybdenum	793			P	
7440-23-5	Sodium	1e6000		*	P	SS
7440-02-0	Nickel	90.8			P	
7439-92-1	Lead	2.5	U		P	
7440-31-5	Antimony	4.3	B		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	35.6	U		P	
7440-66-6	Zinc	24.6			P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

B-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 130SED

Matrix (soil/water): WATER Lab Sample ID: 03-2054

Level (low/med): MED Date Received: 03/27/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	
7429-90-5	Aluminum	95.9	U		P	
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	46.4	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	175000		E	P	J6
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	8.4	U		P	
7440-50-8	Copper	86.1		E	P	J5
7439-89-6	Iron	164			P	
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	3610	B		P	
7439-95-4	Magnesium	46900		E	P	J6
7439-96-5	Manganese	324		E	P	J6
	Molybdenum	92.0			P	
7440-23-5	Sodium	69900		E	P	J6
7440-02-0	Nickel	27.6	U		P	
7439-92-1	Lead	2.7	B		P	
7440-36-0	Antimony	2.6	U		P	
7782-49-2	Selenium	3.9	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	86.3	U		P	
7440-66-6	Zinc	12.0	B		P	

KQS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

5A
SPIKE SAMPLE RECOVERY

SAMPLE NO.
B-03978

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 120822

Matrix (soil/water): WATER Level (low/med): MED
% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Silver	75-125	50.6382		7.0000	U	50.00	102.0		P
Aluminum	75-125	3547.1733		95.9000	U	2000.00	427.4	N	P
Arsenic	75-125	2014.3000		2.5000	U	2000.00	100.7		P
Barium	75-125	2001.8633		46.4033	B	2000.00	977.8		P
Beryllium	75-125	48.3573		1.3000	U	50.00	96.7		P
Calcium									NR
Cadmium	75-125	54.3007		5.0000	U	50.00	108.6		P
Cobalt	75-125	484.8873		17.3000	U	500.00	96.9		P
Chromium	75-125	204.1414		3.4000	U	200.00	100.1		P
Copper	75-125	348.0447		26.0732		250.00	128.8	N	P
Iron	75-125	1159.7810		164.0761		1000.00	99.8		P
Mercury									NR
Potassium									NR
Magnesium									NR
Manganese	75-125	741.8066		384.4792		500.00	83.5		P
Molybdenum									NR
Sodium									NR
Nickel	75-125	910.9857		87.6000	U	500.00	186.8		P
Lead	75-125	492.7000		2.6333	B	500.00	98.0		P
Antimony	75-125	510.9100		2.6000	U	500.00	102.3		P
Selenium	75-125	1996.4000		3.9000	U	2000.00	99.8		P
Thallium	75-125	2058.9000		2.7000	U	2000.00	102.9		P
Vanadium	75-125	492.5390		86.3000	U	500.00	98.5		P
Zinc	75-125	516.0999		11.9390	B	500.00	100.8		P

KAS
6/30/97

Comments:

ENVIROFORMS/INORGANIC CLP

6
DUPLICATES

SAMPLE NO.
S-0397D

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1309ED

Matrix (soil/water): WATER Level (low/med): MED

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Silver		7.0000	U	7.0000	U			P
Aluminum		99.8000	U	99.9000	U			P
Arsenic		3.5000	U	3.5000	U			P
Barium		46.4035	B	40.3760	B	13.9		P
Beryllium		1.8000	U	1.8000	U			P
Calcium		174918.5400		139863.9800		22.3	*	P
Cadmium		5.0000	U	5.0000	U			P
Cobalt		17.3000	U	17.3000	U			P
Chromium		9.4000	U	9.4000	U			P
Copper	25.0	26.0792		18.9894	B	31.4		P
Iron	100.0	164.0761		193.4139		17.4		P
Mercury		0.2000	U	0.2000	U			CV
Potassium		2608.9197	B	1996.9996	B	26.6		P
Magnesium		46948.8750		39786.3950		17.0	*	P
Manganese		324.4792		264.0583		20.5	*	P
Molybdenum		92.0104		94.9433		3.		P
Sodium		38864.1430		49489.9030		23.3	*	P
Nickel		27.6000	U	27.6000	U			P
Lead		2.8952	B	2.6000	U	300.0		P
Antimony		2.6000	U	2.6000	U			P
Selenium		3.9000	U	3.9000	U			P
Thallium		2.7000	U	2.7000	U			P
Vanadium		24.3000	U	24.3000	U			P
Zinc		11.9990	B	14.6425	B	19.9		P

KAS
6/30/97

ENVIROFORMS/INORGANIC CLP

9

ICP SERIAL DILUTIONS

SAMPLE NO.

1-0397L

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1208ED

Matrix (soil/water): WATER Level (low/med): MED

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Silver	7.00	U	35.00	U			P
Aluminum	98.90	U	479.50	U			P
Arsenic	3.06	B	12.50	U	100.0		P
Barium	55.86	B	64.00	U	100.0		P
Beryllium	1.80	U	9.00	U			P
Calcium	87088.47		85635.85		1.6		P
Cadmium	5.00	U	25.00	U			P
Cobalt	17.30	U	86.50	U			P
Chromium	8.40	U	47.14	B			P
Copper	14.14	B	61.00	U	100.0		P
Iron	67.68	B	110.50	U	100.0		P
Mercury							
Potassium	1279.38	B	2079.84	B	61.7		P
Magnesium	28284.78		29067.74		2.6		P
Manganese	130.09		122.47		5.9		P
Molybdenum	43.00	U	215.00	U			P
Sodium	18646.38		18657.57	B	0.1		P
Nickel	27.60	U	138.00	U			P
Lead	11.03		13.00	U	100.0		P
Antimony	3.37	B	13.00	U	100.0		P
Selenium	3.90	U	19.50	U			P
Thallium	13.76		25.75	B	87.4		P
Vanadium	26.80	U	134.50	U			P
Zinc	10.83	B	57.62	B	450.5		P

KAS
6/30/97

Table 2
General Data Table
EPA Method 9066(1)
Environmental Strategies Corporation
Antech Ltd. Project No. 97-1208
Groundwater Characterization; Project No. 483803
AlTech; Dunkirk

Antech Sample ID	Client Sample ID	Date Collected	Parameter Identification Phenolics mg/l
9703-2050	ALT-GW-WT1A-0397	3/26/97	<0.0050 UJ4
9703-2051	ALT-GW-WT1A-0397 MS	3/26/97	69%
9703-2052	ALT-GW-WT1A-0397 MSD	3/26/97	66%
9703-2054	ALT-GW-WT1B-0397	3/26/97	<0.0050 UJ4
9703-2055	ALT-GW-WT1B-0397-D	3/26/97	<0.0050 UJ4
9703-2056	ALT-GW-WT4-0397	3/26/97	<0.0050 UJ4
9703-2057	ALT-GW-RFI09-0397	3/26/97	<0.0050 UJ4
9703-2058	ALT-GW-WT3-0397	3/26/97	<0.0050 UJ4
9703-2062	Method Blank	3/27/97	<0.0050 UJ4

(1)U.S. Environmental Protection Agency, 1987, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

KAS
6/30/97

Table 1
General Data Table
Environmental Strategies Corporation
Antech Ltd. Project No. 97-1208
Groundwater Characterization; Project No. 483803
AlTech; Dunkirk

Parameter	Analytical Method	Units	Sample Identification 9703-2032 ALT-GW-B1-0397 (3/24/97)	9703-2033 ALT-GW-RFI01-0397 (3/24/97)	9703-2034 ALT-GW-RFI02-0397 (3/24/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	328	343	404
Chloride	9251(2)	mg/l	3.8	20	3.3
Cyanide (Free)	4500CN-I(3)	mg/kg	<0.0050	<0.0050	<0.0050
Cyanide (Total)	9012(2)	mg/l	<0.0050	<0.0050	<0.0050
Fluoride	340.2(1)	mg/l	0.18	0.22	0.18
Ammonia	350.1(1)	mg/l NH_3-N	0.62	<0.10	<0.10
Nitrate	9200(2)	mg/l NO_3-N	<0.10 U J1	0.22 J1	<0.10 U J1
H	9040(2)	pH units	7.20	7.27	7.03
Sulfate	9038(2)	mg/l	130	57	430
Specific Conductance @ 25°C	9050(2)	µmhos/cm	760	675	1200

See footnotes at end of table.

KAS
6/30/97

Table 1
(Continued)

Parameter	Analytical Method	Units	Sample Identification 9703-2035 ALT-GW-RFI03-0397 (3/24/97)	9703-2036 ALT-GW-WP4-0397 (3/25/97)	9703-2041 ALT-GW-RFI15-0397 (3/25/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	376	422	411
Chloride	9251(2)	mg/l	93	92	43
Cyanide (Free)	4500CN-I(3)	mg/kg	<0.0050	<0.0050	<0.0050
Cyanide (Total)	9012(2)	mg/l	<0.0050	<0.0050	<0.0050
Fluoride	340.2(1)	mg/l	1.1	0.22	0.30
Ammonia	350.1(1)	mg/l NH_3-N	0.24	<0.10	<0.10
Nitrate	9200(2)	mg/l NO_3-N	<0.10 UJ	<0.10 UJ	<0.10 UJ
pH	9040(2)	pH units	7.40	7.13	7.50
Sulfate	9038(2)	mg/l	230	150	140
Specific Conductance @ 25°C	9050(2)	µmhos/cm	1360	1210	721

See footnotes at end of table.

KQS
6/30/97

Table 1
(Continued)

Parameter	Analytical Method	Units	Sample Identification 9703-2042 ALT-GW-RFI16-0397 (3/25/97)	9703-2043 ALT-GW-WP5-0397 (3/25/97)	9703-2044 ALT-GW-RFI14-0397 (3/25/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	444	249	312
Chloride	9251(2)	mg/l	72	46	39
Cyanide (Free)	4500CN-I(3)	mg/kg	<0.0050	<0.0050	<0.0050
Cyanide (Total)	9012(2)	mg/l	0.0066	<0.0050	<0.0050
Fluoride	340.2(1)	mg/l	0.25	0.34	0.38
Ammonia	350.1(1)	mg/l NH_3-N	0.23	1.0	<0.10
Nitrate	9200(2)	mg/l NO_3-N	0.11 J1	0.11 J1	<0.10 UJ1
pH	9040(2)	pH units	7.13	7.15	7.48
Sulfate	9038(2)	mg/l	110	67	59
Specific Conductance @ 25°C	9050(2)	µmhos/cm	1070	634	489

See footnotes at end of table.

KAS
6/30/97

Table 1
(Continued)

Parameter	Analytical Method	Units	Sample Identification 9703-2045 ALT-GW-MW1-0397 (3/25/97)	9703-2046 ALT-GW-RFI04-0397 (3/25/97)	9703-2047 ALT-GW-RFI10-0397 (3/25/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	549	382	309
Chloride	9251(2)	mg/l	42	16	290
Cyanide (Free)	4500CN-I(3)	mg/kg	<0.0050	<0.0050	<0.0050
Cyanide (Total)	9012(2)	mg/l	<0.0050	<0.0050	<0.0050
Fluoride	340.2(1)	mg/l	0.56	0.18	0.24
Ammonia	350.1(1)	mg/l NH_3-N	0.34	0.21	<0.10
Nitrate	9200(2)	mg/l NO_3-N	0.39 J	<0.10 UJ	0.34 J
pH	9040(2)	pH units	7.94	7.33	7.23
Sulfate	9038(2)	mg/l	280	110	150
Specific Conductance @ 25°C	9050(2)	µmhos/cm	1000	767	1660

See footnotes at end of table.

KAS
6/30/97

Table 1
(Continued)

Parameter	Analytical Method	Units	Sample Identification 9703-2048 ALT-GW-RFI10-0397 D (3/25/97)	9703-2049 ALT-GW-RFI11-0397 (3/25/97)	9703-2050 ALT-GW-WT1A-0397 (3/26/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	320	399	351
Chloride	9251(2)	mg/l	320	24	110
Cyanide (Free)	4500CN-I(3)	mg/kg	<0.0050	<0.0050	<0.0050
Cyanide (Total)	9012(2)	mg/l	<0.0050	<0.0050	<0.0050
Fluoride	340.2(1)	mg/l	0.25	0.34	0.59
Ammonia	350.1(1)	mg/l NH_3-N	0.12	<0.10	<0.10
Nitrate	9200(2)	mg/l NO_3-N	0.27 J	<0.10 UJ	0.20 J
pH	9040(2)	pH units	7.32	7.52	7.16
Sulfate	9038(2)	mg/l	140	61	96
Specific Conductance @ 25°C	9050(2)	µmhos/cm	774	3.52	1080

See footnotes at end of table.

KAS
6/30/97

Table 1
(Continued)

Parameter	Analytical Method	Units	Sample Identification 9703-2051 ALT-GW-WT1A-0397 Spike/MS (3/26/97)	9703-2054 ALT-GW-WT1B-0397 (3/26/97)	9703-2055 ALT-GW-WT1B-0397 D (3/26/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	97%	299	263
Chloride	9251(2)	mg/l	89.88%	180	170
Cyanide (Free)	4500CN-I(3)	mg/kg	NAP(4)	<0.0050	<0.0050
Cyanide (Total)	9012(2)	mg/l	97.56 %	<0.0050	<0.0050
Fluoride	340.2(1)	mg/l	92%	0.23	0.22
Ammonia	350.1(1)	mg/l NH_3-N	100.5%	0.28	0.26
Nitrate	9200(2)	mg/l NO_3-N	94.55%	<0.10 U5I	<0.10 U5I
pH	9040(2)	pH units	NAP	7.29	7.23
Sulfate	9038(2)	mg/l	113%	200	210
Specific Conductance @ 25°C	9050(2)	µmhos/cm	NAP	1280	1260

See footnotes at end of table.

KAS
6/30/97

Table 1
(Continued)

0000014

Parameter	Analytical Method	Units	Sample Identification 9703-2056 ALT-GW-WT4-0397 (3/26/97)	9703-2057 ALT-GW-RFI09-0397 (3/26/97)	9703-2058 ALT-GW-WT3-0397 (3/26/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	404	467	413
Chloride	9251(2)	mg/l	45	13	23
Cyanide (Free)	4500CN-I(3)	mg/kg	<0.0050	<0.0050	<0.0050
Cyanide (Total)	9012(2)	mg/l	<0.0050	<0.0050	<0.0050
Fluoride	340.2(1)	mg/l	0.49	0.23	1.1
Ammonia	350.1(1)	mg/l NH_3-N	1.1	<0.10	1.6
Nitrate	9200(2)	mg/l NO_3-N	0.14 J1	<0.10 UJ1	<0.10 UJ1
pH	9040(2)	pH units	7.08	6.88	7.25
Sulfate	9038(2)	mg/l	470	110	620
Specific Conductance @ 25°C	9050(2)	µmhos/cm	1490	908	1700

See footnotes at end of table.

KAS
6/30/97

Table 1
(Continued)

Parameter	Analytical Method	Units	Sample Identification 9703-2059 ALT-GW-RFI07-0397 (3/26/97)	Sample Identification 9703-2060 ALT-GW-RFI17-0397 (3/26/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	348	289
Chloride	9251(2)	mg/l	150	480
Cyanide (Free)	4500CN-I(3)	mg/kg	<0.0050	<0.0050
Cyanide (Total)	9012(2)	mg/l	<0.0050	<0.0050
Fluoride	340.2(1)	mg/l	0.72	0.76
Ammonia	~~350.1(1)~~	mg/l NH_3-N	0.21	0.64
Nitrate	9200(2)	mg/l NO_3-N	12 J1	2.0 J1
pH	9040(2)	pH units	7.06	7.16
Sulfate	9038(2)	mg/l	660	330
Specific Conductance @ 25°C	9050(2)	µmhos/cm	2060	2300

See footnotes at end of table.

KAS
6/30/97

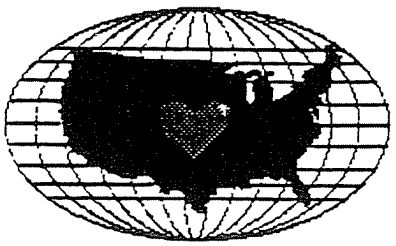
Table 1
(Continued)

Parameter	Analytical Method	Units	Sample Identification 9703-2061 ALT-GW-MW3-0397 (3/26/97)	Sample Identification 9703-2062 Method Blank (3/27/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	396	<2.00
Chloride	9251(2)	mg/l	430	<0.50
Cyanide (Free)	4500CN-I(3)	mg/kg	<0.0050	<0.0050
Cyanide (Total)	9012(2)	mg/l	<0.0050	<0.0050
Fluoride	340.2(1)	mg/l	0.49	<0.10
Ammonia	350.1(1)	mg/l NH_3-N	<0.10	<0.10
Nitrate	9200(2)	mg/l NO_3-N	49 J1	<0.10
pH	9040(2)	pH units	7.17	NAP
Sulfate	9038(2)	mg/l	720	<1.0
Specific Conductance @ 25°C	9050(2)	µmhos/cm	3200	NAP

(1)U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2)U.S. Environmental Protection Agency, 1987, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.
(3)Water Pollution Control Federation, 1989, Standard Methods for the Examination of Water and Wastewater, A. E. Greenbert, R. R. Trussel, L. S. Clesceri, eds., 17th ed., American Public Health Association, and American Water Works Association, Washington, DC.
(4)NAP = Not applicable.

KAS
6/30/97

DATA VALIDATION WORKSHEETS



HEARTLAND
ENVIRONMENTAL SERVICES, INC.

MULTI-MEDIA VOLATILE ORGANIC FRACTION

CASE/SDG NUMBER:	97-1208
LABORATORY:	ANTECH LTD.
CLIENT:	ESC CORP.
PROJECT:	DUNKIRK
REVIEWER:	JACQUELINE A. CLEVELAND
DATE:	July 1, 1997
QA/QC LEVEL:	LEVEL 3
STATEMENT OF WORK:	SW-846 METHOD 8240
ANALYSIS MODIFICATIONS:	NYSDEC 12/91
NUMBER OF SAMPLES:	15
SAMPLE MATRIX:	WATER
NUMBER OF MS/MSDs:	1

MULTI-MEDIA VOLATILE ORGANIC FRACTION
HOLDING TIMES

CLP/SW846:		14 days from date of sampling (If properly preserved)
Region I	:	10 days from VTSR
Region III	:	14 days from date of sampling (If properly preserved)
NYSDEC	:	7 days from date VTSR

Action:	DA - The number of days that the holding time was exceeded.
DA ≤ 5:	Qualify all positive results as estimated (J).
DA > 5 ≤ 15:	Qualify all positive results as estimated (J) and all non detects estimated (UJ).
DA > 15:	Qualify all positive results estimated (J) and reject all non detects.

All associated samples met holding time requirements for analysis. No qualifications are required.

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK BROMOFLUOROBENZENE (BFB).

0000222

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Lab File ID: 97MR580M BFB Injection Date: 03/31/97

Instrument ID.: ELQ400M BFB Injection Time: 09:16

GC Column: RTX-502. ID: .53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	23.7
75	30.0 - 66.0% of mass 95	48.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	.0 (.0)1
174	50.0 - 120.0% of mass 95	68.5
175	4.0 - 9.0 % of mass 174	4.6 (6.7)1
176	93.0 - 101.0% of mass 174	65.3 (95.3)1
177	5.0 - 9.0% of mass 176	4.7 (7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD200		97MR581M	03/31/97	10:20
2	VSTD100		97MR582M	03/31/97	10:56
3	VSTD50		97MR583M	03/31/97	11:27
4	VSTD20		97MR584M	03/31/97	11:58
5	VSTD10		97MR585M	03/31/97	12:29
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

ab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Instrument ID: ELQ400M Calibration Date(s): 03/31/97 03/31/97

Heated Purge: (Y/N) N Calibration Times: 10:20 12:29

GC Column: RTX-502. ID: .53 (mm)

LAB FILE ID: RRF10 = 97MR585M RRF20 = 97MR584M
RRF50 = 97MR583M RRF100= 97MR582M RRF200= 97MR581M

COMPOUND		RRF10	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
Chloromethane		1.970	1.944	2.013	2.014	2.461	2.081	10.3
Bromomethane	*	.964	.960	.979	.901	.728	.907	11.5*
Vinyl Chloride	*	1.157	1.000	.949	1.038	1.006	1.030	7.5*
Chloroethane		.374	.483	.383	.444	.379	.412	11.8
Methylene Chloride		.966	.885	.931	.910	1.016	.942	5.4
Acetone		.751	.740	.608	.752	.577	.686	12.5
Carbon Disulfide		4.146	3.965	4.125	4.116	3.766	4.024	4.0
1,1-Dichloroethene	*	.960	.991	1.041	1.025	1.040	1.011	3.5*
1,1-Dichloroethane	*	1.962	2.070	2.203	2.185	2.361	2.156	7.0*
Trans-1,2-Dichloroethene		.865	.921	1.004	.972	1.090	.970	8.8
Cis-1,2-Dichloroethene		1.847	1.942	2.056	2.081	2.247	2.034	7.4
Chloroform	*	3.881	4.032	4.240	4.284	4.563	4.200	6.2*
1,2-Dichloroethane	*	2.721	2.926	3.383	3.405	3.573	3.202	11.2*
2-Butanone		1.006	1.128	1.283	1.308	1.275	1.200	10.8
1,1,1-Trichloroethane	*	.465	.481	.504	.538	.563	.510	7.9*
Carbon Tetrachloride	*	.417	.420	.440	.459	.480	.443	6.0*
Bromodichloromethane	*	.606	.596	.631	.641	.689	.633	5.8*
1,2-Dichloropropane		.486	.414	.462	.508	.517	.477	8.7
Cis-1,3-Dichloropropene	*	.770	.753	.826	.909	.964	.844	10.7*
Trichloroethene	*	.324	.320	.348	.365	.401	.352	9.5*
Dibromochloromethane	*	.541	.497	.514	.566	.578	.539	6.4*
1,1,2-Trichloroethane	*	.383	.373	.428	.450	.461	.419	9.4*
Benzene	*	1.375	1.387	1.468	1.571	1.689	1.498	8.8*
Trans-1,3-Dichloropropene	*	.585	.521	.631	.694	.752	.637	14.2*
Bromoform	*	.287	.307	.309	.316	.295	.303	3.8*
4-Methyl-2-Pentanone		.052	.110	.220	.313	.339	.207	60.3
2-Hexanone		.071	.093	.017	.064	.128	.075	54.7
Tetrachloroethene	*	.227	.240	.258	.254	.245	.245	5.0*
1,1,2,2-Tetrachloroethane	*	.559	.525	.603	.610	.557	.571	6.2*
Toluene	*	1.366	1.444	1.619	1.656	1.633	1.544	8.4*
Chlorobenzene	*	.996	.996	1.094	1.120	1.128	1.067	6.2*
Ethyl Benzene	*	.419	.462	.522	.557	.553	.503	12.0*
Styrene	*	1.291	1.318	1.345	1.479	1.305	1.348	5.7*
m,p-Xylene	*	.776	.677	.756	.761	.773	.749	5.5*
o-Xylene	*	.765	.721	.759	.817	.755	.764	4.6*
Toluene-d8		1.388	1.308	1.376	1.434	1.408	1.383	3.4
4-Bromofluorobenzene	*	.632	.609	.639	.704	.717	.660	7.2*
1,2-Dichloroethane-d4		2.527	2.952	2.663	3.118	3.238	2.899	10.1

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of .010.

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Lab File ID: 97AP029M BFB Injection Date: 04/02/97

Instrument ID.: ELQ400M BFB Injection Time: 09:00

GC Column: RTX-502. ID: .53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	23.5
75	30.0 - 66.0% of mass 95	48.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	.3 (.4)1
174	50.0 - 120.0% of mass 95	69.2
175	4.0 - 9.0 % of mass 174	5.6 (8.1)1
176	93.0 - 101.0% of mass 174	68.4 (98.8)1
177	5.0 - 9.0% of mass 176	5.1 (7.5)2

1-Value is % mass 174 2-Value is % mass 176

HIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD50.		97AP030M	04/02/97	09:25
2	VBLK1	VBLK1	97AP032M	04/02/97	10:33
3	WP40397.	032036	97AP037M	04/02/97	13:10
4	WP30397.	032037	97AP038M	04/02/97	13:41
5	WP10397.	032038	97AP039M	04/02/97	14:13
6	TRPBLK.	032039	97AP040M	04/02/97	14:44
7	WP20397.	032040	97AP041M	04/02/97	15:17
8	RF150397.	032041	97AP042M	04/02/97	15:46
9	RF160397.	032042	97AP043M	04/02/97	16:18
10	WP50397.	032043	97AP044M	04/02/97	16:49
11	WT1A0397.	032050	97AP045M	04/02/97	17:21
12	WT1A0MS.	032051	97AP046M	04/02/97	17:51
13	WT1A0MSD.	032052	97AP047M	04/02/97	18:22
14	TB0326.	032053	97AP048M	04/02/97	18:53
15	WT180397.	032054	97AP049M	04/02/97	19:25
16	WTB0397D.	032055	97AP050M	04/02/97	19:56
17	WT40397.	032056	97AP051M	04/02/97	20:27
18	RF090397.	032057	97AP052M	04/02/97	20:58
19					
20					
21					
22					

7A

VOLATILE CONTINUING CALIBRATION CHECK

0000480

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Instrument ID: ELQ400M Calibration Date: 04/02/97 Time: 09:25

Lab File ID: 97AP030M Init. Calib. Date(s): 03/31/97 03/31/97

Heated Purge: (Y/N) N Init. Calib. Times: 10:20 12:29

GC Column: RTX-502. ID: .53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D	
Chloromethane	2.081	1.655		20.5		
Bromomethane	.907	.895	.100	1.3	25.0	
Vinyl Chloride	1.030	1.025	.100	.5	25.0	
Chloroethane	.412	.443		-7.5		
Methylene Chloride	.942	.737		21.8		
Acetone	.686	.485		29.3		J+
Carbon Disulfide	4.024	3.159		21.5		
1,1-Dichloroethene	1.011	.835	.100	17.4	25.0	
1,1-Dichloroethane	2.156	1.665	.200	22.8	25.0	
Trans-1,2-Dichloroethene	.970	.768		20.8		
Cis-1,2-Dichloroethene	2.034	1.811		11.0		
Chloroform	4.200	3.624	.200	13.7	25.0	
1,2-Dichloroethane	3.202	2.760	.100	13.8	25.0	
2-Butanone	1.200	1.201		-.1		
1,1,1-Trichloroethane	.510	.510	.100	.0	25.0	
Carbon Tetrachloride	.443	.440	.100	.7	25.0	
Bromodichloromethane	.633	.637	.200	-.6	25.0	
1,2-Dichloropropane	.477	.435		8.8		
Cis-1,3-Dichloropropene	.844	.807	.200	4.4	25.0	
Trichloroethene	.352	.353	.300	-.3	25.0	
Dibromochloromethane	.539	.552	.100	-2.4	25.0	
1,1,2-Trichloroethane	.419	.451	.100	-7.6	25.0	
Benzene	1.498	1.432	.500	4.4	25.0	
Trans-1,3-Dichloropropene	.637	.646	.100	-1.4	25.0	
Bromoform	.303	.317	.100	-4.6	25.0	
4-Methyl-2-Pentanone	.207	.227		-9.7		
2-Hexanone	.075	.012		84.0		J/R
Tetrachloroethene	.245	.238	.200	2.9	25.0	
1,1,2,2-Tetrachloroethane	.571	.597	.500	-4.6	25.0	
Toluene	1.544	1.382	.400	10.5	25.0	
Chlorobenzene	1.067	1.017	.500	4.7	25.0	
Ethyl Benzene	.503	.473	.100	6.0	25.0	
Styrene	1.348	1.252	.300	7.1	25.0	
m,p-Xylene	.749	.626	.300	16.4	25.0	
o-Xylene	.764	.750	.300	1.8	25.0	
Toluene-d8	1.383	1.186		14.2		
4-Bromofluorobenzene	.660	.535	.200	18.9	25.0	
1,2-Dichloroethane-d4	2.899	2.157		25.6		

All other compounds must meet a minimum RRF of .010.

144

VOLATILE CONTINUING CALIBRATION CHECK

0000435

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Instrument ID: ELQ400M Calibration Date: 04/03/97 Time: 09:19

Lab File ID: 97AP056M Init. Calib. Date(s): 03/31/97 03/31/97

Heated Purge: (Y/N) N Init. Calib. Times: 10:20 12:29

GC Column: RTX-502. ID: .53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D	
Chloromethane	2.081	1.566		24.7		
Bromomethane	.907	.835	.100	7.9	25.0	
Vinyl Chloride	1.030	.955	.100	7.3	25.0	
Chloroethane	.412	.407		1.2		
Methylene Chloride	.942	.721		23.5		
Acetone	.686	.468		31.8		J+ NA
Carbon Disulfide	4.024	3.007		25.3		J+
1,1-Dichloroethene	1.011	.785	.100	22.4	25.0	
1,1-Dichloroethane	2.156	1.605	.200	25.6	25.0	J+ NA
Trans-1,2-Dichloroethene	.970	.749		22.8		
Cis-1,2-Dichloroethene	2.034	1.758		13.6		
Chloroform	4.200	3.584	.200	14.7	25.0	
1,2-Dichloroethane	3.202	2.843	.100	11.2	25.0	
2-Butanone	1.200	1.143		4.8		
1,1,1-Trichloroethane	.510	.452	.100	11.4	25.0	
Carbon Tetrachloride	.443	.380	.100	14.2	25.0	
Bromodichloromethane	.633	.544	.200	14.1	25.0	
1,2-Dichloropropane	.477	.403		15.5		
Cis-1,3-Dichloropropene	.844	.765	.200	9.4	25.0	
Trichloroethene	.352	.308	.300	12.5	25.0	
Dibromochloromethane	.539	.493	.100	8.5	25.0	
1,1,2-Trichloroethane	.419	.408	.100	2.6	25.0	
Benzene	1.498	1.306	.500	12.8	25.0	
Trans-1,3-Dichloropropene	.637	.565	.100	11.3	25.0	
Bromoform	.303	.311	.100	-2.6	25.0	
4-Methyl-2-Pentanone	.207	.202		2.4		
2-Hexanone	.075	.012		84.0		~~J~~/R
Tetrachloroethene	.245	.219	.200	10.6	25.0	
1,1,2,2-Tetrachloroethane	.571	.572	.500	-.2	25.0	
Toluene	1.544	1.290	.400	16.5	25.0	
Chlorobenzene	1.067	.979	.500	8.2	25.0	
Ethyl Benzene	.503	.446	.100	11.3	25.0	
Styrene	1.348	1.273	.300	5.6	25.0	
m,p-Xylene	.749	.662	.300	11.6	25.0	
o-Xylene	.764	.736	.300	3.7	25.0	
Toluene-d8	1.383	1.123		18.8		
4-Bromofluorobenzene	.660	.600	.200	9.1	25.0	
1,2-Dichloroethane-d4	2.899	2.129		25.5		

All other compounds must meet a minimum RRF of .010.

SAC 6/30/97

MULTI-MEDIA VOLATILE ORGANIC FRACTION

INTERNAL STANDARD AREA SUMMARY

Is the EICP area for each internal standard in all associated field samples, QC samples, and blanks within - 50% and + 100% of the respective internal standard EICP areas (Yes/No)?YES

If no, the non compliant internal standards have been circled in red.

If the EICP area of one (1) or more internal standard is less than -50%:

- Positive results for those compounds that are quantified using the particular internal standard are flagged as estimated (J).
- Non detected for that fraction are flagged with the sample quantitation limit classified as estimated (UJ).

If the EICP area of one (1) or more internal standards is greater than +100%:

- Positive results for those compounds that are quantified using the particular internal standard are flagged as estimated (J).

The internal standard area form 8's or equivalent have been included.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

0000225

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Lab File ID (Standard): 97AP030M Date Analyzed: 04/02/97

Instrument ID: ELQ400M Time Analyzed: 09:25

GC Column: RTX-502. ID: .53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA	#	RT	#	IS2(DFB) AREA	#	RT	#	IS3(CBZ) AREA	#	RT	#
	12 HOUR STD	67435.		8.98		360990.		13.08		456436.		20.77	
	UPPER LIMIT	134870.		9.48		721980.		13.58		912872.		21.27	
	LOWER LIMIT	33718.		8.48		180495.		12.58		228218.		20.27	
	EPA SAMPLE NO.												
1	V8LK1	62872.		8.98		372966.		13.10		411160.		20.77	
2	WP40397	62083.		9.02		348844.		13.10		449464.		20.77	
3	WP30397	63709.		9.02		374072.		13.10		426708.		20.77	
4	WP10397	64321.		9.02		363778.		13.12		457848.		20.78	
5	TRP8LK	63716.		9.03		379240.		13.10		455736.		20.78	
6	WP20397	63870.		9.03		378910.		13.13		463308.		20.78	
7	RF150397	63841.		9.03		383408.		13.13		464024.		20.77	
8	RF160397	64164.		9.03		364874.		13.13		433348.		20.78	
9	WP50397	63326.		9.05		374596.		13.13		460104.		20.77	
10	WT1A0397	64059.		9.03		365338.		13.13		445312.		20.78	
11	WT1A0MS	65393.		9.07		391252.		13.18		486072.		20.82	
12	WT1A0MSD	64529.		9.02		369424.		13.12		473764.		20.78	
13	T80326	66044.		9.00		387788.		13.12		443764.		20.78	
14	WT1B0397	67186.		9.02		395238.		13.10		496608.		20.75	
15	WT80397D	67663.		9.00		418398.		13.10		513856.		20.75	
16	WT40397	69816.		8.98		432844.		13.08		527816.		20.77	
17	RF090397	71234.		8.98		417954.		13.08		523648.		20.75	
18													
19													
20													
21													
22													

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + .50 minutes of internal standard RT
RT LOWER LIMIT = - .50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

0000226

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Lab File ID (Standard): 97AP056M Date Analyzed: 04/03/97

Instrument ID: ELQ400M Time Analyzed: 09:19

GC Column: RTX-502. ID: .53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	75184.	9.02	444676.	13.12	540912.	20.78
	UPPER LIMIT	150368.	9.52	889352.	13.62	1081824.	21.28
	LOWER LIMIT	37592.	8.52	222338.	12.62	270456.	20.28
	EPA SAMPLE NO.						
1	V8LK2	70480.	9.02	405836.	13.12	511308.	20.78
2	WP40397 DL	68211.	9.05	390764.	13.13	515904.	20.78
3	RF150397DL	68617.	9.03	421304.	13.13	521360.	20.78
4	WT30397	70075.	9.03	401818.	13.13	510092.	20.78
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + .50 minutes of internal standard RT
RT LOWER LIMIT = - .50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

MULTI-MEDIA VOLATILE ORGANIC FRACTION
BLANK SUMMARY

1. Blank qualification guidelines:

   a) If a compound is found in the blank but not in the sample, no action is taken.

   b) Any compound (other than the four (4) listed below) detected in the sample, which was also detected in the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration. For the following four (4) compounds, the results are qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than ten (10) times the blank concentration.

   Common laboratory contaminants: methylene chloride
   acetone
   2-butanone

   c) The reviewer should take note that the blank analysis may not involve the same weights, volumes or dilution factors as associated samples. These factors must be taken into consideration when applying the 5X and 10X criteria.

   d) In addition, the reviewer must review the trip blanks, rinseate blanks and field blanks (if they were submitted with the data package) and all associated samples. Apply the same data validation guidelines used in assessing the method blanks.

   e) Qualification/Action codes:

      U - The sample result is greater than the CRQL and less than ten times (10X) the blank value. Cross out the "B" flag and qualify the sample result with a "U".

      CRQL - The sample result is less than the CRQL and less than ten times (10X) the blank value. Reject the sample result, cross out the "B" flag, and report the CRQL.

      No Action - The sample result is greater than the CRQL and greater than ten times (10X) the blank value.

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Lab File ID: 97AP055M BFB Injection Date: 04/03/97

Instrument ID.: ELQ400M BFB Injection Time: 08:54

GC Column: RTX-502. ID: .53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	23.3
75	30.0 - 66.0% of mass 95	46.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	.6 (.8)1
174	50.0 - 120.0% of mass 95	71.0
175	4.0 - 9.0 % of mass 174	5.7 (8.0)1
176	93.0 - 101.0% of mass 174	69.7 (98.2)1
177	5.0 - 9.0% of mass 176	4.4 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD50.		97AP056M	04/03/97	09:19
2	VBLK2	VBLK2	97AP057M	04/03/97	10:11
3	WP40397 DL•	032036	97AP059M	04/03/97	11:18
4	RF150397DL•	032041	97AP060M	04/03/97	11:49
5	WT30397 •	032058	97AP061M	04/03/97	12:20
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

0000220
V8LK1

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Lab File ID: 97AP032M Lab Sample ID: V8LK1

Date Analyzed: 04/02/97 Time Analyzed: 10:33

GC Column: RTX-502. ID: .53 (mm) Heated Purge: (Y/N) N

Instrument ID: ELQ400M

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED	CH_2Cl_2	acetone
1	WP40397	032036	97AP037M	13:10	—	—
2	WP30397	032037	97AP038M	13:41	—	—
3	WP10397	032038	97AP039M	14:13	—	—
4	TRP8LK	032039	97AP040M	14:44	—	NA
5	WP20397	032040	97AP041M	15:17	—	CRQL
6	RF150397	032041	97AP042M	15:46	—	—
7	RF160397	032042	97AP043M	16:18	—	—
8	WP50397	032043	97AP044M	16:49	CRQL	CRQL
9	WT1A0397	032050	97AP045M	17:21	CRQL	CRQL
10	WT1A0MS	032051	97AP046M	17:51		
11	WT1A0MSD	032052	97AP047M	18:22		
12	T80326	032053	97AP048M	18:53	CRQL	NA
13	WT180397	032054	97AP049M	19:25	CRQL	—
14	WT80397D	032055	97AP050M	19:56	—	—
15	WT40397	032056	97AP051M	20:27	—	—
16	RF090397	032057	97AP052M	20:58	CRQL	—
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

COMMENTS: Methylene chloride 0.9J - action 9.0 ug/L
acetone 2.0J - action 20 ug/L

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
0000221
V8LK2

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Lab File ID: 97AP057M Lab Sample ID: V8LK2

Date Analyzed: 04/03/97 Time Analyzed: 10:11

GC Column: RTX-502. ID: .53 (mm) Heated Purge: (Y/N) N

Instrument ID: ELQ400M

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED	MEC12
1	WP40397 DL	032036	97AP059M	11:18	
2	RF150397DL	032041	97AP060M	11:49	
3	WT30397	032058	97AP061M	12:20	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS: methylene chloride @ 1.0J action @ 10 ug/L

MULTI-MEDIA VOLATILE ORGANIC FRACTION
BLANK SUMMARY - TCL SUMMARY

Type of Blank: TRIP Matrix: WATER

Sample ID: TRPBLK File ID:

#	Compound	Concentration	CRQL	Action Level
1.	ACETONE	31 µg/L	10 µg/L	310 µg/L
2.	TOLUENE	0.5 µg/L	10 µg/L	2.5 µg/L
3.	M,P-XYLENE	0.2 µg/L	10 µg/L	1.0 µg/L
4.				
5.				
6.				
7.				
8.				
9.				
10.				

	1	2	3	4	5	6	7	8	9	10
Sample ID:										

ALL SAMPLES SHIPPED ON 03/25/97

ACETONE IN ASSOCIATED SAMPLES WAS ATTRIBUTED TO METHOD BLANK CONTAMINATION. THERE WAS NO TOLUENE REPORTED IN THE ASSOCIATED SAMPLES. THERE WAS NO M,P-XYLENE REPORTED IN THE ASSOCIATED SAMPLES.

MULTI-MEDIA VOLATILE ORGANIC FRACTION
BLANK SUMMARY - TCL SUMMARY

Type of Blank: TRIP Matrix: WATER

Sample ID: TB0326 File ID:

# Compound	Concentration	CRQL	Action Level
1.ACETONE	33 µg/L	10 µg/L	330 µg/L
2.TOLUENE	0.7 µg/L	10 µg/L	3.5 µg/L
3.2-BUTANONE	2.0 µg/L	10 µg/L	10.0 µg/L
4.			
5.			
6.			
7.			
8.			
9.			
10.			

	1	2	3	4	5	6	7	8	9	10
Sample ID:										

RF150397 CRQL

ACETONE REPORTED IN THE ASSOCIATED SAMPLES WAS ATTRIBUTED TO METHOD BLANK CONTAMINATION. THERE WAS NO 2-BUTANONE REPORTED IN THE ASSOCIATED SAMPLES. THERE WAS NO TOLUENE REPORTED IN THE REST OF THE ASSOCIATED SAMPLES.

ASSOCIATED SAMPLES INCLUDED ALL SAMPLES SHIPPED ON 03/26/97

HEARTLAND ESI VOA 13 HESI94.1

BLANK SUMMARY - TCL SUMMARY
VOLATILE ORGANIC FRACTION

☐ Method Blank ☐ Trip Blank ☑ Rinseate Blank ☐ Field Blank ☐ Other

Sample ID: EB0103Z6 File ID: _____

COMPOUND	CONCENTRATION	CRQL	
acetone	7 ug/L	10 ug/L	70 ug/L
chloroform	11		55
bromodichloromethane	11		55
dibromochloromethane	9		45
bromoform	0.9	↓	4.5

EPA SAMPLE ID				
all samples	- none in assoc. samples			

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
1	V8LK1	106	104	106		0
2	WP40397	99	97	101		0
3	WP30397	105	100	101		0
4	WP10397	97	100	104		0
5	TRPBLK	96	92	103		0
6	WP20397	94	99	102		0
7	RF150397	96	103	104		0
8	RF160397	104	100	99		0
9	WP50397	95	98	102		0
10	WT1A0397	102	102	107		0
11	WT1AOMS	95	90	104		0
12	WT1AOMSD	96	98	110		0
13	TB0326	106	106	105		0
14	WT1B0397	99	97	102		0
15	WT80397D	97	97	110		0
16	WT40397	98	96	109		0
17	RF090397	100	104	109		0
18	V8LK2	99	90	99		0
19	WP40397 DL	96	91	98		0
20	RF150397DL	99	87	107		0
21	WT30397	102	93	99		0
22						
23						
24						
25						
26						
27						
28						
29						
30						

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = 4-Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

0000219

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971208

Matrix Spike - EPA Sample No.: WT1A0397

COMPOUND	SPIKE ADDED (UG/L)	SAMPLE CONCENTRATION (UG/L)	MS CONCENTRATION (UG/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.	0.	53.	106	61-145
Trichloroethene	50.	0.	51.	102	71-120
Benzene	50.	0.	48.	96	76-127
Toluene	50.	0.	52.	104	76-125
Chlorobenzene	50.	0.	53.	106	75-130

COMPOUND	SPIKE ADDED (UG/L)	MSD CONCENTRATION (UG/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.	55.	110	4	14	61-145
Trichloroethene	50.	57.	114	11	14	71-120
Benzene	50.	54.	108	12 *	11	76-127
Toluene	50.	58.	116	11	13	76-125
Chlorobenzene	50.	60.	120	12	13	75-130

No Quals

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS:

MULTI-MEDIA VOLATILE ORGANIC FRACTION
FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: WT1B0397 **Duplicate Sample ID:** WTB0397D

Water: RPD > 30% **Soil:** RPD > 50%

Compound	Sample Conc.	Dup. Sample Conc.	RPD
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??

Comments: NO COMPOUNDS REPORTED

MULTI-MEDIA VOLATILE ORGANIC FRACTIONSAMPLE RESULT VERIFICATION

1. Were the sample results reported within the calibration range (YES/NO)?YES, DILUTIONS WERE REQUIRED.

2. Was the percent moisture reported for all soil samples (YES/NO/NA)? NA

3. Was the data reported on a dry weight basis (YES/NO/NA)? NA

4. Did the GC/MS RIC's and TIC's exhibit interferences, off scale peaks or elevated baseline (YES/NO)? NO

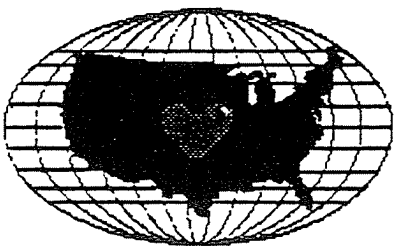
5. Did the data contain elevated detection limits that could not be verified (YES/NO)?NO

6. Were any computational or transcription errors found (YES/NO)? NO

Specific Comments:

FOR SAMPLES RF150397 AND WP40397, THE E-FLAGGED RESULTS ARE REJECTED, R, IN FAVOR OF THE CORRESPONDING D-FLAGGED RESULTS FROM THE DILUTION ANALYSIS. ALL OTHER RESULTS FROM THE DILUTION ANALYSIS ARE REJECTED IN FAVOR OF THE UNDILUTED RESULTS.

Reviewer: Jacqueline A Cleveland Date: 6/30/97



HEARTLAND
ENVIRONMENTAL SERVICES, INC.

MULTI-MEDIA SEMIVOLATILE ORGANIC FRACTION

CASE/SDG NUMBER:	1208
LABORATORY:	ANTECH LTD
CLIENT:	ESC
PROJECT:	DUNKIRK
REVIEWER:	Daniel J. Heil, A.V.P.
DATE:	June 26, 1997
QA/QC LEVEL:	LEVEL III
STATEMENT OF WORK:	SW846-8270
ANALYSIS MODIFICATIONS:	NYSDEC, CALIBRATION STDS AND SAMPLE CONCENTRATIONS
NUMBER OF SAMPLES:	13
SAMPLE MATRIX:	WATER
NUMBER OF MS/MSDs:	1

MULTI-MEDIA SEMIVOLATILE ORGANIC FRACTION

HOLDING TIMES

	Water	soil	Analysis
CLP:	7 days from sampling	14 days from sampling	40 days from VTSR
SW846:	7 days from sampling	14 days from sampling	40 days from VTSR
Region I:	5 days from VTSR	7 days from VTSR	40 days from VTSR
Region III:	7 days from sampling	7 days from sampling	40 days from VTSR
NYSDEC:	5 days form VTSR	5 days from VTSR	40 days From VTSR

Action: DA - The number of days that the holding time was exceeded.

DA ≤ 5: Qualify all positive results as estimated (J).

DA > 5 ≤ 15: Qualify all positive results as estimated (J) and all non detects estimated (UJ).

DA > 15: Qualify all positive results estimated (J) and reject all non detects.

All associated samples met holding time requirements for extraction and/or analysis. No qualifications are required.

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANTECH LTD Contract: _____

Lab Code: ANTECH Case No.: 97-128 SAS No.: _____ SDG No.: 128

Lab File ID: M30326T1 DFTPP Injection Date: 3/26/97

Instrument ID: M3 DFTPP Injection Time: 0919

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	34.7
68	Less than 2.0% of mass 69	0 (0)1
69	Mass 69 relative abundance	43.5
70	Less than 2.0% of mass 69	0 (0)1
127	25.0 - 75.0% of mass 198	47.3
197	Less than 1.0% of mass 198	0
198	Base Peak, 100% relative abundance	100
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	23.4
365	Greater than 0.75% of mass 198	1.9
441	Present, but less than mass 443	76.3
442	40.0 - 110.0% of mass 198	78.6
443	15.0 - 24.0% of mass 442	15.3 (19.4)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD010	10STD	M30326C1	3/26/97	1034
02	SSTD008	8STD	M30326C2	"	1110
03	SSTD004	4STD	M30326C3	"	1146
04	SSTD003	3STD	M30326C4	"	1222
05	SSTD001	1STD	M30326C5	"	1258
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Instrument ID: MS Calibration Date(s): 3/26/97 3/26/97

Calibration Times: 1034 1550

Lab File ID: RRF1.0 M30326C6.D RRF3.0 M30326C4.D
RRF4.0 M30326C3.D RRF8.0 M30326C2.D RRF10.0 M30326C1.D

COMPOUND	RRF1.0	RRF3.0	RRF4.0	RRF8.0	RRF10.0	$\overline{RRF}$	% RSD
Phenol	1.816	1.771	1.845	1.734	1.720	1.777	3.0
Bis(2-chloroethyl)ether	1.505	1.427	1.481	1.392	1.359	1.433	4.2
2-Chlorophenol	1.707	1.570	1.610	1.498	1.490	1.575	5.7
1,3-Dichlorobenzene	1.970	1.726	1.873	1.805	1.622	1.799	7.4
1,4-Dichlorobenzene	2.127	1.816	1.711	1.583	1.804	1.808	11.1
1,2-Dichlorobenzene	1.879	1.613	1.627	1.554	1.522	1.639	8.6
o-Cresol	1.343	1.270	1.330	1.232	1.234	1.282	4.1
Bis(2-chloroisopropyl)ether	1.290	1.179	1.202	1.127	1.139	1.187	5.5
m/p-Cresol	1.439	1.399	1.448	1.366	1.333	1.397	3.5
N-Nitrosodi-n-propyl amine *	0.963	0.894	0.983	0.895	0.869	0.921	5.4
Hexachloroethane	0.713	0.633	0.690	0.652	0.654	0.668	4.8
Nitrobenzene	0.382	0.367	0.379	0.359	0.363	0.370	2.7
Isophorone	0.708	0.683	0.694	0.674	0.672	0.686	2.2
2-Nitrophenol	0.249	0.232	0.255	0.252	0.253	0.248	3.8
2,4-Dimethylphenol	0.208	0.304	0.351	0.243	0.262	0.274	20.2
Bis(2-chloroethoxy)methane	0.532	0.501	0.507	0.489	0.479	0.502	4.0
2,4-Dichlorophenol	0.389	0.350	0.361	0.365	0.372	0.367	4.0
1,2,4-Trichlorobenzene	0.461	0.401	0.408	0.397	0.390	0.411	6.9
Naphthalene	1.444	1.281	1.264	1.198	1.197	1.277	7.9
4-Chloroaniline	0.633	0.603	0.618	0.589	0.594	0.607	3.0
Hexachlorobutadiene	0.247	0.216	0.219	0.220	0.217	0.224	5.8
4-Chloro-3-methylphenol	0.405	0.372	0.398	0.383	0.393	0.390	3.4
2-Methylnaphthalene	0.973	0.865	0.895	0.845	0.857	0.887	5.8
Hexachlorocyclopentadiene	0.129	0.207	0.237	0.158	0.175	0.181	23.2
2,4,6-Trichlorophenol	0.493	0.436	0.469	0.447	0.451	0.459	4.9
2,4,5-Trichlorophenol	0.481	0.424	0.456	0.425	0.433	0.444	5.5
2-Chloronaphthalene	1.457	1.294	1.385	1.319	1.277	1.346	5.5
2-Nitroaniline	0.339	0.334	0.347	0.354	0.352	0.345	2.5
Dimethylphthalate	1.749	1.510	1.542	1.522	1.493	1.563	6.7
Acenaphthylene	2.035	2.050	2.044	2.012	1.962	2.020	1.8
2,6-Dinitrotoluene	0.346	0.340	0.381	0.375	0.387	0.366	5.8
3-Nitroaniline	0.407	0.398	0.425	0.422	0.428	0.416	3.1
Acenaphthene	1.496	1.327	1.361	1.282	1.291	1.351	6.4
2,4-Dinitrophenol	0.100	0.125	0.169	0.187	0.201	0.156	27.2
4-Nitrophenol	0.256	0.205	0.224	0.226	0.228	0.228	8.0
Dibenzofuran	2.183	1.894	1.925	1.845	1.788	1.927	7.9
2,4-Dinitrotoluene	0.468	0.458	0.527	0.513	0.528	0.499	6.7

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

000075

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 1209

Instrument ID: M3 Calibration Date(s): 3/26/97 3/26/97

Calibration Times: 1034 1550

Lab File ID: RRF1.0 M30326C6.D RRF3.0 M30326C4.D
RRF4.0 M30326C3.D RRF8.0 M30326C2.D RRF10.0 M30326C1.D

COMPOUND	RRF1.0	RRF3.0	RRF4.0	RRF8.0	RRF10.0	$\overline{RRF}$	% RSD
Diethylphthalate	1.847	1.540	1.568	1.531	1.474	1.592	9.2
4-Chlorophenyl-phenylether	0.835	0.745	0.760	0.751	0.732	0.765	5.3
Fluorene	1.691	1.499	1.554	1.452	1.411	1.521	7.2
4-Nitroaniline	0.454	0.432	0.474	0.464	0.454	0.456	3.4
2-Methyl-4,6-dinitrophenol	0.102	0.122	0.141	0.148	0.157	0.134	16.7
N-Nitrosodiphenylamine	0.712	0.641	0.635	0.582	0.593	0.633	8.1
4-Bromophenyl phenyl ether	0.292	0.259	0.261	0.254	0.256	0.264	5.9
Hexachlorobenzene	0.339	0.305	0.299	0.290	0.301	0.307	6.1
Pentachlorophenol	0.148	0.159	0.178	0.180	0.191	0.171	10.3
Phenanthrene	1.427	1.286	1.265	1.239	1.246	1.293	6.0
Anthracene	1.085	1.011	1.063	1.008	1.040	1.041	3.2
Carbazole	1.324	1.215	1.238	1.178	1.190	1.229	4.7
Di-n-Butylphthalate	1.692	1.449	1.543	1.469	1.490	1.529	6.4
Fluoranthene	1.417	1.295	1.352	1.296	1.300	1.332	4.0
Pyrene	1.698	1.556	1.593	1.518	1.505	1.574	4.9
Butylbenzylphthalate	0.874	0.743	0.856	0.815	0.827	0.823	6.1
3,3'-Dichlorobenzidine	0.489	0.482	0.539	0.477	0.510	0.499	5.1
Benzo[a]anthracene	1.496	1.369	1.448	1.389	1.397	1.420	3.6
Chrysene	1.460	1.382	1.415	1.356	1.356	1.394	3.2
Bis(2-ethylhexyl)phthalate	1.198	0.976	1.126	1.110	1.100	1.102	7.3
Di-n-octylphthalate	1.905	1.566	1.736	2.076	2.146	1.886	12.7
Benzo[b]fluoranthene	1.510	1.415	1.517	1.746	1.715	1.580	9.1
Benzo[k]fluoranthene	1.461	1.454	1.317	1.635	1.666	1.507	9.5
Benzo[a]pyrene	1.225	1.131	1.172	1.351	1.409	1.257	9.4
Indeno(1,2,3-c,d)pyrene	1.569	1.407	1.474	1.730	1.786	1.593	10.2
Dibenzo(a,h)anthracene	1.274	1.156	1.211	1.421	1.471	1.307	10.3
Benzo(g,h,i)perylene	1.353	1.196	1.277	1.485	1.538	1.370	10.4
2-Fluorophenol	1.156	1.085	1.123	1.095	1.101	1.112	2.5
Phenol-d5	1.388	1.337	1.393	1.353	1.359	1.366	1.7
2-Chlorophenol-d4	1.310	1.169	1.217	1.171	1.173	1.208	5.0
1,2-Dichlorobenzene-d4	0.952	0.828	0.852	0.788	0.817	0.848	7.4
Nitrobenzene-d5	0.325	0.309	0.331	0.311	0.317	0.318	2.9
2-Fluorobiphenyl	1.226	1.076	1.099	1.035	1.006	1.088	7.3
2,4,6-Tribromophenol	0.046	0.038	0.039	0.039	0.039	0.040	7.8
Terphenyl-d14	0.896	0.802	0.846	0.822	0.798	0.833	4.8

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

0000576

Lab Name : ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1208 SAS No.: _____ SDG No.: 1208

Lab File ID: M30410T1.D DFTPP Injection Date: 4/10/97

Instrument ID: M3 DFTPP Injection Time: 0933

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	35.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	43.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	46.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	23.4
365	Greater than 0.75% of mass 198	2.3
441	Present, but less than mass 443	10.6
442	40.0 - 110.0% of mass 198	71.3
443	15.0 - 24.0% of mass 442	13.7 (19.2)2

1-Value is % mass 69 2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD4.0	ACCAL	M30410C1.D	4/10/97	0955
02	SBLK01	AMBLK	M30410S1.D	4/10/97	1044
03	GW-RFI01-0397	A03-2033	M30410S2.D	4/10/97	1122
04	GW-RFI03-0397	A03-2035	M30410S3.D	4/10/97	1201
05	GW-WP4-0397	A03-2036	M30410S4.D	4/10/97	1239
06	GW-MW1-0397	A03-2045	M30410S5.D	4/10/97	1318
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

SEMIVOLATILE CONTINUING CALIBRATION CHECK

00000775

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Instrument ID: M3 Calibration Date: 4/10/97 Time: 0955

Lab File ID: M30410C1.D Init. Calib. Date(s): ~~4/10/97~~ 3/26/97 ~~4/10/00~~ 3/26/97

Init. Calib. Times: ~~0955~~ 10:34 ~~0000~~ 1550 jm 4/30/97

COMPOUND	RRF	RRF4.0	MIN RRF	%D	MAX %D	
Phenol	1.777	1.785		-0.5		
Bis(2-chloroethyl)ether	1.433	1.372		4.3		
2-Chlorophenol	1.575	1.606		-2.0		
1,3-Dichlorobenzene	1.799	1.837		-2.1		
1,4-Dichlorobenzene	1.808	1.715		5.1		
1,2-Dichlorobenzene	1.639	1.632		0.4		
o-Cresol	1.282	1.399		-9.1		
Bis(2-chloroisopropyl)ether	1.187	1.116		6.0		
m/p-Cresol	1.397	1.462		-4.7		
N-Nitrosodi-n-propyl amine	0.921	0.954		-3.6		
Hexachloroethane	0.668	0.696		-4.2		
Nitrobenzene	0.370	0.385		-4.1		
Isophorone	0.686	0.705		-2.8		
2-Nitrophenol	0.248	0.257		-3.6		
2,4-Dimethylphenol	0.274	0.298		-8.8		
Bis(2-chloroethoxy)methane	0.502	0.495		1.4		
2,4-Dichlorophenol	0.367	0.400		-9.0		
1,2,4-Trichlorobenzene	0.411	0.431		-4.9		
Naphthalene	1.277	1.249		2.2		
4-Chloroaniline	0.607	0.606		0.2		
Hexachlorobutadiene	0.224	0.255		-13.8		
4-Chloro-3-methylphenol	0.390	0.436		-11.8		
2-Methylnaphthalene	0.887	0.921		-3.8		
Hexachlorocyclopentadiene	0.181	0.094		(48.1)		JMS
2,4,6-Trichlorophenol	0.459	0.489		-6.5		
2,4,5-Trichlorophenol	0.444	0.430		3.2		
2-Chloronaphthalene	1.346	1.284		4.6		
2-Nitroaniline	0.345	0.360		-4.3		
Dimethylphthalate	1.563	1.570		-0.4		
Acenaphthylene	2.020	1.882		6.8		
2,6-Dinitrotoluene	0.366	0.389		-6.3		
3-Nitroaniline	0.416	0.406		2.4		
Acenaphthene	1.351	1.298		3.9		
2,4-Dinitrophenol	0.156	0.055		(64.7)		J/MJ
4-Nitrophenol	0.228	0.286		-25.4		
Dibenzofuran	1.927	1.907		1.0		
2,4-Dinitrotoluene	0.499	0.527		-5.6		

All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Instrument ID: M3 Calibration Date: 4/10/97 Time: 0955

Lab File ID: M30410C1.D Init. Calib. Date(s): 3/26/97 3/26/97

Init. Calib. Times: 10:34 15:50

COMPOUND	$\overline{RRF}$	RRF4.0	MIN RRF	%D	MAX %D
Diethylphthalate	1.592	1.586		0.4	
4-Chlorophenyl-phenylether	0.765	0.802		-4.8	
Fluorene	1.521	1.492		1.9	
4-Nitroaniline	0.456	0.470		-3.1	
2-Methyl-4,6-dinitrophenol	0.134	0.059		56.0	
N-Nitrosodiphenylamine	0.633	0.637		-0.6	
4-Bromophenyl phenyl ether	0.264	0.287		-8.7	
Hexachlorobenzene	0.307	0.323		-5.2	
Pentachlorophenol	0.171	0.196		-14.6	
Phenanthrene	1.293	1.274		1.5	
Anthracene	1.041	1.000		3.9	
Carbazole	1.229	1.231		-0.2	
Di-n-Butylphthalate	1.529	1.549		-1.3	
Fluoranthene	1.332	1.317		1.1	
Pyrene	1.574	1.501		4.6	
Butylbenzylphthalate	0.823	0.857		-4.1	
3,3'-Dichlorobenzidine	0.499	0.495		0.8	
Benzo[a]anthracene	1.420	1.442		-1.5	
Chrysene	1.394	1.388		0.4	
Bis(2-ethylhexyl)phthalate	1.102	1.176		-6.7	
Di-n-octylphthalate	1.886	1.924		-2.0	
Benzo[b]fluoranthene	1.580	1.573		0.4	
Benzo[k]fluoranthene	1.507	1.503		0.3	
Benzo[a]pyrene	1.257	1.253		0.3	
Indeno(1,2,3-c,d)pyrene	1.593	1.626		-2.1	
Dibenzo[a,h]anthracene	1.307	1.340		-2.5	
Benzo[g,h,i]perylene	1.370	1.437		-4.9	
2-Fluorophenol	1.112	1.134		-2.0	
Phenol-d5	1.366	1.421		-4.0	
2-Chlorophenol-d4	1.208	1.277		-5.7	
1,2-Dichlorobenzene-d4	0.848	0.857		-1.1	
Nitrobenzene-d5	0.318	0.329		-3.5	
2-Fluorobiphenyl	1.088	1.071		1.6	
2,4,6-Tribromophenol	0.040	0.045		-12.5	
Terphenyl-d14	0.833	0.845		-1.4	

JLW

All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1208 SAS No.: _____ SDG No.: 1208

Lab File ID: M30410T2.D DFTPP Injection Date: 4/10/97

Instrument ID: M3 DFTPP Injection Time: 1419

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	37.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	44.5
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	50.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	7.3
275	10.0 - 30.0% of mass 198	23.5
365	Greater than 0.75% of mass 198	2.2
441	Present, but less than mass 443	11.1
442	40.0 - 110.0% of mass 198	75.7
443	15.0 - 24.0% of mass 442	15.1 (19.9)2

1-Value is % mass 69 2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD4.0	ACCAL	M30410C2.D	4/10/97	1441
02	GW-WT1A-0397	A03-2050	M30410S6.D	4/10/97	1520
03	GW-WT1A-0397	A03-2051	M30410S7.D	4/10/97	1559
04	GW-WT1A-0397	A03-2052	M30410S8.D	4/10/97	1638
05	GW-WT1B-0397	A03-2054	M30410S9.D	4/10/97	1716
06	GW-WT1B-0397	A03-2055	M30410A1.D	4/10/97	1755
07	GW-WT4 -0397	A03-2056	M30410A2.D	4/10/97	1834
08	GW-RFI09-0397	A03-2057	M30410A3.D	4/10/97	1912
09	GW-WT3-0397	A03-2058	M30410A4.D	4/10/97	1951
10	GW-RFI07-0397	A03-2059	M30410A5.D	4/10/97	2030
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Instrument ID: M3 Calibration Date: 4/10/97 Time: 1441

Lab File ID: M30410C2.D Init. Calib. Date(s): 3/26/97 3/26/97

Init. Calib. Times: ~~0000~~ 1634 ~~0000~~ 1550 jm 4/30/97

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D	
Phenol	1.777	1.640		7.7		
Bis(2-chloroethyl)ether	1.433	1.316		8.2		
2-Chlorophenol	1.575	1.574		0.1		
1,3-Dichlorobenzene	1.799	1.861		-3.4		
1,4-Dichlorobenzene	1.808	1.564		13.5		
1,2-Dichlorobenzene	1.639	1.603		2.2		
o-Cresol	1.282	1.312		-2.3		
Bis(2-chloroisopropyl)ether	1.187	1.104		7.0		
m/p-Cresol	1.397	1.363		2.4		
N-Nitrosodi-n-propyl amine	0.921	0.905		1.7		
Hexachloroethane	0.668	0.652		2.4		
Nitrobenzene	0.370	0.372		-0.5		
Isophorone	0.686	0.698		-1.7		
2-Nitrophenol	0.248	0.248		0.0		
2,4-Dimethylphenol	0.274	0.278		-1.5		
Bis(2-chloroethoxy)methane	0.502	0.479		4.6		
2,4-Dichlorophenol	0.367	0.396		-7.9		
1,2,4-Trichlorobenzene	0.411	0.426		-3.6		
Naphthalene	1.277	1.260		1.3		
4-Chloroaniline	0.607	0.601		1.0		
Hexachlorobutadiene	0.224	0.250		-11.6		
4-Chloro-3-methylphenol	0.390	0.422		-8.2		
2-Methylnaphthalene	0.887	0.884		0.3		
Hexachlorocyclopentadiene	0.181	0.090		50.3		J
2,4,6-Trichlorophenol	0.459	0.463		-0.9		
2,4,5-Trichlorophenol	0.444	0.465		-4.7		
2-Chloronaphthalene	1.346	1.342		0.3		
2-Nitroaniline	0.345	0.369		-7.0		
Dimethylphthalate	1.563	1.609		-2.9		
Acenaphthylene	2.020	1.961		2.9		
2,6-Dinitrotoluene	0.366	0.381		-4.1		
3-Nitroaniline	0.416	0.413		0.7		
Acenaphthene	1.351	1.348		0.2		
2,4-Dinitrophenol	0.156	0.086		44.9		J
4-Nitrophenol	0.228	0.256		-12.3		
Dibenzofuran	1.927	1.939		-0.6		
2,4-Dinitrotoluene	0.499	0.505		-1.2		

All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE CONTINUING CALIBRATION CHECK

0000785

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Instrument ID: M3 Calibration Date: 4/10/97 Time: 1441

Lab File ID: M30410C2.D Init. Calib. Date(s): ~~4/10/97~~ 3/26/97 ~~1/0/00~~

Init. Calib. Times: 1034 ~~1441~~ 1550 ~~0000~~

JM 4/30/97

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.592	1.640		-3.0	
4-Chlorophenyl-phenylether	0.765	0.806		-5.4	
Fluorene	1.521	1.531		-0.7	
4-Nitroaniline	0.456	0.467		-2.4	
2-Methyl-4,6-dinitrophenol	0.134	0.084		37.3	5
N-Nitrosodiphenylamine	0.633	0.650		-2.7	
4-Bromophenyl phenyl ether	0.264	0.286		-8.3	
Hexachlorobenzene	0.307	0.329		-7.2	
Pentachlorophenol	0.171	0.191		-11.7	
Phenanthrene	1.293	1.309		-1.2	
Anthracene	1.041	1.027		1.3	
Carbazole	0.744	1.262		-69.6	J/45
Di-n-Butylphthalate	1.529	1.615		-5.6	
Fluoranthene	1.332	1.359		-2.0	
Pyrene	1.574	1.528		2.9	
Butylbenzylphthalate	0.823	0.817		0.7	
3,3'-Dichlorobenzidine	0.499	0.485		2.8	
Benzo[a]anthracene	1.420	1.402		1.3	
Chrysene	1.394	1.352		3.0	
Bis(2-ethylhexyl)phthalate	1.102	1.109		-0.6	
Di-n-octylphthalate	1.886	1.934		-2.5	
Benzo[b]fluoranthene	1.580	1.487		5.9	
Benzo[k]fluoranthene	1.507	1.518		-0.7	
Benzo[a]pyrene	1.257	1.269		-1.0	
Indeno(1,2,3-c,d)pyrene	1.593	1.601		-0.5	
Dibenzo[a,h]anthracene	1.307	1.316		-0.7	
Benzo[g,h,i]perylene	1.370	1.391		-1.5	
2-Fluorophenol	1.112	1.032		7.2	
Phenol-d5	1.366	1.275		6.7	
2-Chlorophenol-d4	1.208	1.211		-0.2	
1,2-Dichlorobenzene-d4	0.848	0.846		0.2	
Nitrobenzene-d5	0.318	0.324		-1.9	
2-Fluorobiphenyl	1.088	1.082		0.6	
2,4,6-Tribromophenol	0.040	0.045		-12.5	
Terphenyl-d14	0.833	0.852		-2.3	

All other compounds must meet a minimum RRF of 0.010.

MULTI-MEDIA SEMIVOLATILE ORGANIC FRACTION INTERNAL STANDARD AREA SUMMARY

Is the EICP area for each internal standard in all associated field samples, QC samples, and blanks within - 50% and + 100% of the respective internal standard EICP areas (Yes/No)? YES

If no, the non compliant internal standards have been circled in red.

If the EICP area of one (1) or more internal standard is less than -50%:

- Positive results for those compounds that are quantified using the particular internal standard are flagged as estimated (J).
- Non detected for that fraction are flagged with the sample quantitation limit classified as estimated (UJ).

If the EICP area of one (1) or more internal standards is greater than +100%:

- Positive results for those compounds that are quantified using the particular internal standard are flagged as estimated (J).

The internal standard area form 8's or equivalent have been included.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

0000578

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: - 1208

Lab File ID (Standard): M30410C1.D Date Analyzed: 4/10/97

Instrument ID: M3 Time Analyzed: 0955

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	675053	4.55	2408658	5.36	1607416	6.58
	UPPER LIMIT	1350106	5.05	4817316	5.86	3214832	7.08
	LOWER LIMIT	337527	4.05	1204329	4.86	803708	6.08
	EPA SAMPLE NO.						
01	SBLK01	492522	4.57	1737961	5.37	1100354	6.61
02	GW-RFI01-0397	504829	4.54	1743371	5.32	1136856	6.50
03	GW-RFI03-0397	432745	4.54	1498387	5.32	961779	6.50
04	GW-WP4-0397	374644	4.55	1377994	5.33	855248	6.52
05	GW-MW1-0397	380905	4.54	1363272	5.32	843581	6.50
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

0000579

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: - 1208

Lab File ID (Standard): M30410C1.D Date Analyzed: 4/10/97

Instrument ID: M3 Time Analyzed: 0955

		IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	2702150	7.79	2383701	12.06	2341451	18.02
	UPPER LIMIT	5404300	8.29	4767402	12.56	4682902	18.52
	LOWER LIMIT	1351075	7.29	1191851	11.56	1170726	17.52
	EPA SAMPLE NO.						
01	SBLK01	1822129	7.83	1632323	12.12	1765106	18.07
02	GW-RFI01-0397	1872268	7.70	1679178	11.93	1772389	17.87
03	GW-RFI03-0397	1606973	7.69	1408604	11.93	1487093	17.86
04	GW-WP4-0397	1392884	7.72	1235628	11.97	1285918	17.91
05	GW-MW1-0397	1406904	7.69	1223951	11.93	1270745	17.86
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

0000580

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: - 1208

Lab File ID (Standard): M30410C2.D Date Analyzed: 4/10/97

Instrument ID: M3 Time Analyzed: 1441

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	490152	4.55	1720876	5.33	1100972	6.52
	UPPER LIMIT	980304	5.05	3441752	5.83	2201944	7.02
	LOWER LIMIT	245076	4.05	860438	4.83	550486	6.02
	EPA SAMPLE NO.						
01	GW-WT1A-0397	466020	4.55	1657472	5.32	1046820	6.51
02	GW-WT1A-0397MS	503400	4.55	1784218	5.33	1147996	6.51
03	GW-WT1A-0397MSD	462734	4.54	1648778	5.33	1040488	6.50
04	GW-WT1B-0397	412903	4.54	1506537	5.32	951047	6.49
05	GW-WT1B-0397D	417530	4.54	1505615	5.31	941272	6.47
06	GW-WT4 -0397	477907	4.54	1728130	5.31	1086530	6.49
07	GW-RFI09-0397	463050	4.55	1653454	5.33	1049161	6.52
08	GW-WT3-0397	403577	4.55	1500812	5.33	919126	6.52
09	GW-RFI07-0397	445412	4.56	1596657	5.35	1015833	6.55
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

0000581

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: -1208

Lab File ID (Standard): M30410C2.D Date Analyzed: 4/10/97

Instrument ID: M3 Time Analyzed: 1441

		IS4 AREA #	RT #	IS5 AREA #	RT #	IS6 AREA #	RT #
	12 HOUR STD	1851627	7.71	1654704	11.96	1515621	17.91
	UPPER LIMIT	3703254	8.21	3309408	12.46	3031242	18.41
	LOWER LIMIT	925814	7.21	827352	11.46	757811	17.41
	EPA SAMPLE NO.						
01	GW-WT1A-0397	1695461	7.69	1495542	11.94	1601211	17.87
02	GW-WT1A-0397MS	1920455	7.70	1708911	11.95	1801875	17.89
03	GW-WT1A-0397MSD	1682621	7.69	1551867	11.94	1621779	17.87
04	GW-WT1B-0397	1565625	7.67	1362012	11.91	1453553	17.86
05	GW-WT1B-0397D	1551090	7.64	1367337	11.86	1446811	17.81
06	GW-WT4 -0397	1802882	7.67	1588193	11.89	1668585	17.84
07	GW-RFI09-0397	1716503	7.71	1522611	11.95	1581777	17.89
08	GW-WT3-0397	1524495	7.72	1319456	11.97	1348930	17.92
09	GW-RFI07-0397	1660007	7.76	1448196	12.03	1515661	17.98
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

MULTI-MEDIA SEMIVOLATILE ORGANIC FRACTION
BLANK SUMMARY

1. Blank qualification guidelines:

   a) If a compound is found in the blank but not in the sample, no action is taken.

   b) Any compound (other than listed below) detected in the sample, which was also detected in the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration. For the following compounds, the results are qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than ten (10) times the blank concentration.

   Common laboratory contaminants: phthalates

   c) The reviewer should take note that the blank analysis may not involve the same weights, volumes or dilution factors as associated samples. These factors must be taken into consideration when applying the 5X and 10X criteria.

   d) In addition, the reviewer must review the trip blanks, rinseate blanks and field blanks (if they were submitted with the data package) and all associated samples. Apply the same data validation guidelines used in assessing the method blanks.

   e) Qualification/Action codes:

      U - The sample result is greater than the CRQL and less than ten times (10X) the blank value. Cross out the "B" flag and qualify the sample result with a "U".

      CRQL - The sample result is less than the CRQL and less than ten times (10X) the blank value. Reject the sample result, cross out the "B" flag, and report the CRQL.

      No Action - The sample result is greater than the CRQL and greater than ten times (10X) the blank value.

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK01 000057

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Lab File ID: M30410S1.D Lab Sample ID: AMBLK

Instrument ID: M3 Date Extracted: 3/31/97

Matrix: (soil/water) WATER Date Analyzed: 4/10/97

Level: (low/med) Time Analyzed: 1044

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	GW-RFI01-0397	A03-2033	M30410S2.D	04/10/97
02	GW-RFI03-0397	A03-2035	M30410S3.D	04/10/97
03	GW-WP4-0397	A03-2036	M30410S4.D	04/10/97
04	GW-MW1-0397	A03-2045	M30410S5.D	04/10/97
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS: TIC's only

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
SBLK01

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

Lab File ID: M30410S1.D Lab Sample ID: AMBLK

Instrument ID: M3 Date Extracted: 3/31/97

Matrix: (soil/water) WATER Date Analyzed: 4/10/97

Level: (low/med) Time Analyzed: 1044

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	GW-WT1A-0397	A03-2050	M30410S6.D	04/10/97
02	GW-WT1A-0397MS	A03-2051	M30410S7.D	04/10/97
03	GW-WT1A-0397MSD	A03-2052	M30410S8.D	04/10/97
04	GW-WT1B-0397	A03-2054	M30410S9.D	04/10/97
05	GW-WT1B-0397D	A03-2055	M30410A1.D	04/10/97
06	GW-WT4 -0397	A03-2056	M30410A2.D	04/10/97
07	GW-RFI09-0397	A03-2057	M30410A3.D	04/10/97
08	GW-WT3-0397	A03-2058	M30410A4.D	04/10/97
09	GW-RFI07-0397	A03-2059	M30410A5.D	04/10/97
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

Tiles only

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

0000571

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

	EPA SAMPLE NO.	S1 2PF #	S2 PHE #	S3 2CP #	S4 DCB #	S5 NB5 #	S6 2FB #	S7 DBP #	S8 TPD #	TOT OUT
01	SBLK01	50	30	70	60	70	80	100	90	0
02	GW-RFI01-0397	40	30	60	60	60	70	90	80	0
03	GW-RFI03-0397	50	30	80	70	80	90	110	100	0
04	GW-WP4-0397	30	20	60	60	60	70	90	80	0
05	GW-MW1-0397	40	30	70	70	70	80	90	90	0
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

	QC LIMITS
S1 2PF = 2-Flurophenol	(21-110)
S2 PHE = Phenol-d5	(10-110)
S3 2CP = 2-Chlorophenol-d4	(33-110)
S4 DCB = 1,2-Dichlorobenzene-d4	(18-110)
S5 NB5 = Nitrobenzene-d5	(35-114)
S6 2FB = 2-Fluorobiphenyl	(43-116)
S7 DBP = 2,4,6-Tribromophenol	(10-123)
S8 TPD = Terphenyl-d14	(33-141)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

WATER SEMIVOLATILE SURROGATE RECOVERY

0000572

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1208 SAS No.: SDG No.: 1208

	EPA SAMPLE NO.	S1 2PF #	S2 PHE #	S3 2CP #	S4 DCB #	S5 NB5 #	S6 2FB #	S7 DBP #	S8 TPD #	TOT OUT
01	SBLK01	50	30	70	60	70	80	100	90	0
02	GW-WT1A-0397	50	30	70	60	70	80	100	90	0
03	GW-WT1A-0397	40	30	70	50	70	70	90	80	0
04	GW-WT1A-0397	50	30	70	60	70	80	20	90	0
05	GW-WT1B-0397	40	30	70	60	70	70	90	90	0
06	GW-WT1B-0397	50	30	80	70	80	90	110	100	0
07	GW-WT4 -0397	50	30	70	60	70	80	100	90	0
08	GW-RFI09-0397	50	30	70	70	70	80	90	90	0
09	GW-WT3-0397	40	30	70	60	60	80	90	80	0
10	GW-RFI07-0397	40	30	70	60	70	80	90	80	0
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

	QC LIMITS
S1 2PF = 2-Flurophenol	(21-110)
S2 PHE = Phenol-d5	(10-110)
S3 2CP = 2-Chlorophenol-d4	(33-110)
S4 DCB = 1,2-Dichlorobenzene-d4	(18-110)
S5 NB5 = Nitrobenzene-d5	(35-114)
S6 2FB = 2-Fluorobiphenyl	(43-116)
S7 DBP = 2,4,6-Tribromophenol	(10-123)
S8 TPD = Terphenyl-d14	(33-141)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY 0000573

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1208 SAS No.: _____ SDG No.: ## 1208

Matrix Spike - EPA Sample No.: GW-WT1A-0397

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Phenol	75	0	17	23	(12-110)
2-Chlorophenol	75	0	40	53	(27-123)
1,4-Dichlorobenzene	50	0	20	40	(36-97)
N-Nitrosodi-n-propyl amine	50	0	31	62	(41-116)
1,2,4-Trichlorobenzene	50	0	25	50	(39-98)
4-Chloro-3-methylphenol	75	0	48	64	(23-97)
Acenaphthene	50	0	29	58	(46-118)
4-Nitrophenol	75	0	18	24	(10-80)
2,4-Dinitrotoluene	50	0	29	58	(24-96)
Pentachlorophenol	75	0	62	83	(9-103)
Pyrene	50	0	32	64	(26-127)

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	75	18	24	6	42	(12-110)
2-Chlorophenol	75	44	59	10	40	(27-123)
1,4-Dichlorobenzene	50	23	46	14	28	(36-97)
N-Nitrosodi-n-propyl amine	50	34	68	9	38	(41-116)
1,2,4-Trichlorobenzene	50	28	56	11	28	(39-98)
4-Chloro-3-methylphenol	75	55	73	13	42	(23-97)
Acenaphthene	50	32	64	10	31	(46-118)
4-Nitrophenol	75	23	31	25	50	(10-80)
2,4-Dinitrotoluene	50	32	64	10	38	(24-96)
Pentachlorophenol	75	71	95	14	50	(9-103)
Pyrene	50	36	72	12	31	(26-127)

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

Comments: _____

MULTI-MEDIA SEMIVOLATILE ORGANIC FRACTION SAMPLE RESULT VERIFICATION

1. Were the sample results reported within the calibration range (YES/NO)? YES
2. Was the percent moisture reported for all soil samples (YES/NO/NA)? NA
3. Was the data reported on a dry weight basis (YES/NO/NA)? NA
4. Did the GC/MS RIC's and TIC's exhibit interferences, off scale peaks or elevated baseline (YES/NO)? NO
5. Did the data contain elevated detection limits that could not be verified (YES/NO)?NO
6. Were any computational or transcription errors found (YES/NO)? NO

Specific Comments:

Reviewer Daniel C. Hall AVP Date: 6/26/97

DATA DELIVERABLES (DQO Level IV or D)
INORGANICS - PART I

Site Name: Dunking
Location: ESC
Analytical Fraction: TAL w/C

Client: Ad·Tech - ESE 6/30
Lab: Antech Ltd.

Reviewer: K. Sappington
Date(s): 6/30/97

A.	Control Charts results of the method blank spikes run with each batch of samples processed	: Yes No	(NR)
B.	CLP Form 1s with associated sample results and CLP flagging system. All percent moistures for soils and discussion of sample type	: (Yes) No	NR
C.	CLP Form 2s with Initial and continuing calibration standards (part 1 only)	: (Yes) No	NR
D.	CLP Form 3s with prep and method blanks	: (Yes) No	NR
E.	CLP Form 4s with Interference check sampple data	: (Yes) No	NR
F.	CLP Form 5s with Matrix spike recovery and the postdigestion spike recovery for ICP Metals. Only done if predigest spike recovery exceeds limits	: (Yes) No	NR
G.	CLP Form 6s with Duplicate data results	: (Yes) No	NR
H.	CLP Form 7s with LCS data results	: (Yes) No	NR
I.	CLP Form 8s with GFAA standard addition data	: Yes No	(NR)
J.	CLP Form 9s with Serial Dilution data results	: (Yes) No	NR

DATA DELIVERABLES (DQO Level IV or D)
INORGANICS - PART II

K.	CLP Form 10s with Instrument Detection Data	: (Yes)	No	NR
L.	CLP Forms 11 and 12 with Quarterly Verification of Instrument Parameters	: (Yes)	No	NR
M.	CLP Form 13s with Preparation Log data	: (Yes)	No	NR
N.	CLP Form 14s with Run Log data	: (Yes)	No	NR

HEARTLAND. ESI Form A

DATA DELIVERABLE REQUIREMENTS

A.	Permanently Bound	Yes	(No)	NR
B.	Paginated	(Yes)	No	NR
C.	Table of Contents	Yes	(No)	NR
D.	Digestion Records(internal C-O-C)	(Yes)	No	(NR) 8/30/97
E.	Chain-Of-Custody (external)	(Yes)	No	NR
F.	Case Narrative			
	1. Sample list with Client and Lab IDs cross-referenced (copy attached)	(Yes)	No	NR
	2. All Protocol deviations and QC problems noted	(Yes)	No	NR
	3. Comments:			
G.	Uninitialed Strikeovers	Yes	(No)	NR
H.	Legible Photocopies	(Yes)	No	NR
I.	Consistent Dates	(Yes)	No	NR
J.	Preparation Logs	(Yes)	No	NR
K.	Instrument Run Logs	(Yes)	No	NR
L.	Other Deviations or Comments:			

HEARTLAND ESI Form B

HOLDING TIMES FOR METALS

1. Was the holding time exceeded on any of the Metal Fractions

   ICP/GFAA/FAA - Holding time of 6 months VTSR
   Mercury - Holding time of 28 days VTSR
   Cyanide - Holding time of 14 days VTSR

   (Yes) No

2. If yes, complete the following form for all samples that exceeding holding times.

   Fraction: nitrate

Sample ID	Matrix	VTSR	Date of Analysis	DA	QC Decision
all	H2O	3/27/97	4/1/97	4	UJ
		SAS	6/30/97		

Note: DA = The number of days holding time to analysis is exceeded.

S = Non-aqueous
A = Aqueous
X = Air

QA Decision: Results > IDL - J - estimated

Results < IDL - R - rejected

HEARTLAND ESI Form C-1

INSTRUMENT CALIBRATION AND INITIAL CALIBRATION VERIFICATION (ICV)

Associated Samples all

1. a. Was the ICP instrument properly standardized? (Yes) No
   If no, explain and list action.

   b. Was the ~~furnace~~ instrument properly standardized? If no, were the required standards analyzed immediately after the instrument calibration and results within 95-105% recovery? Yes No — Yes No
   If no, explain and list action. n/a

   c. Were the instruments for the analyses of Cyanide and Mercury properly standardized? (Yes) No
   If no, explain and list action.

2. Was the ICV analyzed immediately after the system(s) were calibrated? (Yes) No
   If no, explain and list action.

3. Was the ICV analyzed for every analyte? (Yes) No
   If no, explain and list action.

4. Do all ICV analytes meet the QC requirements for % recovery? (Yes) No
   If no, list affected analytes, their % recovery, and action for which:

   a. % recovery is between 75-89% (CN, 70-84% or HG, 65-79%)

HEARTLAND ESI Form C-2

b. % recovery is between 111-125% (CN, 116-130% or HG, 121-135%)_____

c. % recovery is less than 75% or greater than 125%(CN, <70 or >130%, Hg <65 or >135)_____

5. a. Show calculation for the % recovery of one ICV analyte by ICP. Lab value 100.6%

Mn

$\frac{150.95}{150.0} \times 100 = 100.6\%$

b. Show calculation for the % recovery of one ICV analyte by furnace AA. Lab value n/a

c. Show calculation for the ICV % recovery of Mercury. Lab Value ~~n/a~~ 106.8%

$\frac{2.67}{2.5} \times 100 = 106.8\%$

d. Show calculation for the ICV % recovery of Cyanide. Lab value 97.6%

$\frac{0.122}{0.125} \times 100 = 97.6\%$

6. Specific comments:_____

HEARTLAND ESI Form D-1

CONTINUING CALIBRATION VERIFICATION (CCV)

Associated Samples All

1. a. Was the CCV performed every two hours or at the 10% frequency? (Yes) No
If no, list action.

b. Was the CCV performed at the beginning and end of the sample analysis? (Yes) No
If no, list action.

2. Were the CCV standards analyzed for all analytes? (Yes) No
If no, list affected analytes, their associated samples and action.

3. Was the same concentration used for CCV throughout the analyses? (Yes) No
If no, list affected analytes, their associated samples and action.

4. Do all CCV analytes meet the QC requirements for % recovery? (Yes) No
If no, list affected analytes, their associated samples and action for which:

a. % recovery is between 75-89%(CN,70-84% or Hg, 65-79%)

b. % recovery is between 111-125%(CN,116-130% or Hg, 121-135%)

c. % recovery is less than 75% or greater than 125%(CN, <70 or >130%, Hg, <65 or <135%)

HEARTLAND ESI Form D-2

5. a. Show calculation for the % recovery of one CCV analyte analyzed by ICP. Sb Lab value 100.7%

$$\frac{100.71}{100.0} \times 100 = 100.7\%$$

b. Show calculation for the % recovery of one CCV analyte analyzed by furnace AA. Lab value N/A

c. Show calculation for the % recovery of one CCV analyte analyzed for Mercury. Lab value 101.6%

$$\frac{2.54}{2.5} \times 100 = 101.6\%$$

d. Show calculation for the % recovery of one CCV analyte for Cyanide. Lab value 96.3%

$$\frac{.289}{.300} \times 100 = 96.3\%$$

6. Specific comments: _____

HEARTLAND ESI Form F

INITIAL & CONTINUING CALIBRATION BLANK

Associated Samples All

1. Were the initial calibration blanks analyzed for all analytes and run after the initial calibration verification? (Yes) No
If no, list affected analytes, and action.

2. Was the absolute value for all analytes in the initial calibration blank below the CRDL? (Yes) No
If no, list affected analytes and reject them.

3. Were the continuing calibration blanks analyzed for all analytes and run after the continuing calibration verification? (Yes) No
If no, list affected analytes, associated samples and action.

4. Was the frequency for the continuing calibration blanks correct? (Yes) No
If no, list affected analytes, associated samples and action.

5. Was the absolute value of all analytes for the continuing calibration blank below the CRDL? Yes (No)
If no, list affected analytes, associated samples and reject them. Ag - no impact on Samples

HEARTLAND ESI Form G

PREPARATION BLANK SUMMARY

Sample Matrix: Soil (Water) Air Preparation Blank ID PBW
Units: mg/kg ug/l ug/m3

1. Did the frequency of the preparation blank analysis meet method requirements? (Yes) No
   If no, explain and note action. _____

Analyte	Conc	<CRDL	Comments/Action
Diss Tl	5.12	yes	0-5x PB rule
Mn	-3.12	↓	0-10x PB rule

KAS 6/30/97

Associated Samples All

CRDL Codes: Yes < CRDL
No > CRDL

HEARTLAND ESI Form H

ICP INTERFERENCE CHECK SAMPLE

Associated Samples All

1. Was an ICP interference check sample performed at the correct frequency? (Yes) No
   If no, note any deviations and action.

2. a. Were the interferents for solution A reported? (Yes) No
      If no, note deviations

   b. Were the analytes and interferents for solution AB reported? (Yes) No
      If no, note deviations

3. Were the concentrations of Al, Ca, Fe and Mg in associated samples found to be significantly less than (i.e., <50%) their respective concentrations in solution A? Yes (No)
   If yes, no action is required.

4. Did all required analytes in solution AB meet the QC limit of 80-120%? (Yes) No
   If no,
   a. List any analytes and their % recovery which are greater than or equal to 30% but less than 80% and action.

   b. List any analytes and their % recovery which are greater than 120% and action.

   c. List any analytes and their % recovery which are less than 30% and action.

5. Show the calculation for % recovery for one analyte in solution AB.
   Lab value 98.4%
   Cd $\frac{983.5}{1000} \times 100 = 98.39\%$ rounding

193

HEARTLAND ESI Form I-1

SAMPLE SPIKE ANALYSIS

Sample Spike Analysis performed on sample A-0397-T
B-0397-D

Matrix: Soil (Water) Air
Units: mg/kg ug/l ug/m3
% Solids /

Associated Samples all

1. Was the sample spike analysis performed at the correct frequency? (Yes) No
If no, note deviations and action.

2. Was the sample spike analysis performed on a field sample? (Yes) No
If no, reject all associated samples.

3. a. Were two analytical methods used to obtain reported values for one analyte? Yes (No)
If yes, list analytes

b. Was sample spike analysis performed using both methods for that analyte? Yes No
If no, reject affected sample(s) which did not have spike analysis performed.

4. Was sample analysis performed at the proper concentration? (Yes) No
If no, list analytes and qualify.

5. Did the % recovery for all analytes meet the criteria of 75-125%? Yes (No)
If no, list only those analytes which % recovery are out and whose sample result (SR) is less than 4 times the sample added (SA). List % recovery in parenthesis next to the analyte out and action. phenolics (69%) - qualify all results as est "J" or "UJ". Al (427.4%) & Cu (125.5%): qualify all ND data results as est "J"

HEARTLAND ESI Form I-2

6. Were outliers for % recovery flagged with the "N" qualifier? (Yes) No

If no, list analytes not flagged. _____

7. a. Show calculation for % recovery for one analyte analyzed by ICP. D Ni Lab value 102.2%

$$\frac{510.9557 - 4}{500.00} \times 100 = 102.2\%$$

b. Show calculation for % recovery for one analyte analyzed by furnace AA. Lab value N/A

c. Show calculation for % recovery for Mercury. Tot Lab value 97.6%

$$\frac{0.9765 - 4}{1.00} \times 100 = 97.6\%$$

d. Show calculation for % recovery for Cyanide. Lab value 91%

No ~~data~~ data avail.

HEARTLAND ESI Form K-1

DUPLICATE ANALYSIS B-0397-T & D

Duplicate Analysis performed on sample O-0397-T

Matrix: Soil (Water) Air
Units: mg/kg (ug/l) ug/m3
% Solids: /

Associated Samples all

1. Were duplicate analyses performed at the correct frequency? (Yes) No
If no, note deviations and action.

2. Was duplicate analysis performed on a field sample? (Yes) No
If no, reject all associated samples.

3. Were two analytical methods used to obtain reported values for one analyte? Yes (No)
If yes,
a. List analytes

b. Were duplicate analysis performed using both methods for that analyte? Yes No
If no, reject affected samples which did not have duplicate analysis performed.

4. Is the laboratory using the correct control limit (i.e. ±CRDL or 20% for water and ±CRDL or 35% for soils criteria) to judge duplicate RPD results? (Yes) No
If no, note deviations.

HEARTLAND ESI Form K-2

5. Do all analytes meet these QC control limits? Yes (No)
If no, list the analytes outside the limits and qualify these analytes. T-Cr, Fe, Al & Pb + D-Ca, Mg, Mn & Na - qualify all RPD results as est, J.

6. Were outliers correctly flagged with the "*" qualifier? (Yes) No
If no, list those analytes not correctly flagged. _____

7. a. Show calculation for RPD for one analyte analyzed by ICP. Lab value 30.5%

Fe-T

$$\frac{514.4275 - 370.4210}{(514.4275 + 370.4210)/2} \times 100 = 30.5\%$$

b. Show calculation for RPD for one analyte analyzed by furnace AA. Lab value n/a

c. Show calculation for RPD for Mercury. Lab value NR

Results are U.

d. Show calculation for RPD for Cyanide. Lab value NR

HEARTLAND ESI Form L

LABORATORY CONTROL SAMPLE

Matrix: Soil (Water) Air
Units: mg/kg (ug/l) ugm3

Associated Samples All

1. Was the laboratory control sample performed at the correct frequency? (Yes) No
   If no, give action. _____

2. Do all analytes meet the QC limits of 80-120% (except Silver, Antimony, Mercury and Cyanide for aqueous samples) or within the control limits established by EPA for soils? (Yes) No
   If no, list analytes, their recovery and action. _____

3. a. Show the calculation for % recovery for at least one analyte by ICP. Cr

$$\frac{198.5}{200.0} \times 100 = 99.2\%$$

rounding

Lab value 99.3%

b. Show the calculation for % recovery for at least one analyte analyzed by furnace AA.

Lab value n/a

c. Show the claculation for % recovery of Mercury (soil only).

Lab value /

HEARTLAND ESI Form N

SAMPLE RESULT VERIFICATION

Associated Samples All

1. Were all samples reported within the calibration range? (Yes) No
   If no, list affected samples and action.

2. Was the % solids analysis performed for all nonaqueous samples? 10 6/30 (Yes) No
   If no, list affected samples and action. n/a

3. Show calculation for % solids for one sample.
   Lab value n/a

4. Was the raw data free of any anomalies? (Yes) No
   If no, list affected samples and action.

5. Was the data package free of any computational or transcriptional errors? (Yes) No
   If no, list affected samples and action.

6. Verify that nonaqueous samples were reported on a dry weight basis by recalculating the results for one analyte in a sample.
   Lab value n/a

HEARTLAND ESI Form O

ICP SERIAL DILUTION

Serial Dilution performed on Sample 1-0397 P 5.0397 A-0397
Dilution Factor 5 T-D

Matrix: Soil (Water) Air
Units: mg/kg (ug/l) ug/m3

Associated Samples All

1. Was a serial dilution performed at the correct frequency? (Yes) No
   If no, give action.

2. Was a field sample used for serial dilution? (Yes) No
   If no, give action.

3. For all analytes greater than fifty times the IDL, was a serial dilution performed? (Yes) No
   If no, lest analytes and reject them.

4. a. For all analytes greater than ten times the IDL, did the the serial dilution analysis meet the QC limit of 10% D? (Yes) No
   If no, list those analytes outside the limits and qualify them.

   b. Show a calculation for % D for one analyte analyzed by ICP.

NO

Lab Value 8.5%

$$\frac{|271.80 - 294.97|}{271.80 + 294.97} \times 100 = 8.5\%$$

15
630

200

HEARTLAND ESI Form P

QUARTERLY VERFICATION OF INSTRUMENT PARAMETERS

1. Was the IDL analyzed and reported quarterly (every three calender months) for each element on Form X. (Yes) No
If no, explain and list action._____

2. Was the IDL below the CRDL for each element? (Yes) No
If no, explain and list action._____

3. Was the ICP interelement correction factor analyzed and reported for each element on Form 11 and 12. (Yes) No
If no, explain and list action._____

4. Was the linear range analyzed and reported annually and quarterly respectfully for each element on Form 11 and 12. (Yes) No
If no, explain and list action._____

HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	1228
Date:	July 1, 1997
Client Name:	Environmental Strategies Corporation
Project/Site Name:	Al Tech - Dunkirk
Date Sampled:	March 26-27, 1997
Number of Samples:	16 Aqueous Sample(s) with 2 MS/MSD(s) 1 Non-aqueous Sample(s) with 0 MS/MSD(s)
Laboratory:	Antech Ltd.
Validation Guidance:	NYSDEC
QA/QC Level:	Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Volatiles, Semivolatiles, TAL Metals, Dissolved TAL Metals, Alkalinity, Chloride, Free Cyanide, Total Cyanide, Fluoride, Ammonia, Nitrate, pH, Phenols, Sulfate, Specific Conductance, Asbestos

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user in urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig H. Scorpo
Eugene M. Watson, Vice President

8/8/97
Date

4127 Plaza 94 South · St. Charles, MO 63304
(314) 936-1332 · Fax (314) 936-1335

SDG# 1228

Samples and Fractions Reviewed

Sample Identifications

Analytical Fractions

ESC ID	Matrix	VOA		SVOA		PHE		TAL		DTAL		ALK		CHL		FCN		TCN		FL		AMM		NIT		PH		SUL		SCON		ASB	
ALT-GW-EB01-0326	WATER	X		X		X		X		X		X		X		X		X		X		X		X		X		X		X			
ALT-GW-TB-0327	WATER	X																															
ALT-GW-RFI05-0397	WATER	X						X				X		X		X		X		X		X		X		X		X		X			
ALT-GW-RFI08-0397	WATER			X				X				X		X		X		X		X		X		X		X		X		X			
ALT-GW-LAE1-0397	WATER	X		X				X		X		X		X		X		X		X		X		X		X		X		X			
ALT-GW-RFI12-0397	WATER			X				X				X		X		X		X		X		X		X		X		X		X			
ALT-GW-RFI06-0397	WATER			X				X				X		X		X		X		X		X		X		X		X		X			
ALT-GW-LAW5-0397	WATER							X				X		X		X		X		X		X		X		X		X		X			
ALT-GW-LAW6-0397	WATER			X				X				X		X		X		X		X		X		X		X		X		X			
ALT-GW-RFI13-0397	WATER							X				X		X		X		X		X		X		X		X		X		X			
ALT-GW-RFI13-0397SPIKE	WATER							X				X		X		X		X		X		X		X		X		X		X			
ALT-GW-RFI13-0397MSD	WATER							X																									
ALT-GW-WT2-0397	WATER	X		X		X		X				X		X		X		X		X		X		X		X		X		X			
ALT-GW-EB02-0327	WATER							X				X		X		X		X		X		X		X		X		X		X			
ALT-SW-S1-0327	WATER			X																													
ALT-SW-S2-0327	WATER			X																													
ALT-SW-S3-0327	WATER			X																													
ALT-SW-S3-0327D	WATER			X																													
ALT-SW-S3-0327MS	WATER			X																													
ALT-SW-S3-0327MSD	WATER			X																													
ALT-SS-GS02-03	SOIL																																
Total Billable Samples (Water/Soil)		5	0	13	0	2	0	13	0	2	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	0	1

VOA Volatiles
SVOA- Semivolatiles
PHE- Phenols
TAL- TAL Metals
DTAL- Dissolved Metals
ALK- Alkalinity
CHL- Chloride
FCN- Free Cyanide
TCN- Total Cyanide
FL- Fluoride
AMM- Ammonia
NIT- Nitrate
PH- pH
SUL- Sulfate
SCON- Specific Conductance
ASB- Asbestos

DATA ASSESSMENT NARRATIVES

DATA ASSESSMENT NARRATIVE

VOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW-846 Method 8260, The NYSDEC-ASP, September 1989, 12/91 Revisions, the National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results.

SDG # 97-1228

Holding Times

All analysis holding times were met. No qualifications were required.

Tuning

All of the BFB tunes in the initial and continuing calibrations met the percent relative abundance criteria. No qualifications are required.

Initial Calibrations

The initial calibrations that were analyzed by the laboratory for these samples were not acceptable for all compound %RSDs. However, there were no samples associated with the non-compliant ICAL. The average RRFs for all of the criteria compounds did meet the initial calibration criteria. No qualifications were required.

Continuing Calibrations

The continuing calibrations that were analyzed by the laboratory for these samples were not acceptable for all compound %Ds. All compound RRFs were not within criteria.

Specific Finding

1. The continuing calibration standard 97AP056M exhibited a non-compliant RRF less than 0.05 for one (1) compound. For the following samples and compound, the reported positive results are qualified as estimated, J, and the non-detect results are rejected, R.

All Samples	2-hexanone

Continuing Calibrations, continued
Specific Findings, continued

2. The continuing calibration standard 97AP056M exhibited one (1) compound with a %D greater than 25% but less than 50% for which qualifications were required. For the following samples and compound, the reported positive results are qualified as estimated, J.

EB010326	acetone
TB0327	

Internal Standards

All of the internal standard EICP areas were acceptable for all samples and blanks. No qualifications were required.

Method Blanks

The method blanks that were analyzed did exhibit contamination for target compounds. The associated samples were compared to the method blanks. Please refer to the glossary of data qualifiers for definition of the blank qualifiers, U, CRQL, and NA.

Specific Finding

3. The following samples were qualified for method blank contamination. The qualifications are for all method blanks.

TB0327	methylene chloride	CRQL

Trip Blanks

Qualifications were required based on contamination in trip blank TB0327. The associated samples were compared to the trip blanks. Please refer to the glossary of data qualifiers for definition of the blank qualifiers, U, CRQL, and NA.

Trip Blanks, continued

Specific Finding

4. The following samples were qualified for trip blank contamination. The qualifications are for all trip blanks.

RF050397	acetone	CRQL
WT20397	acetone	U
WT20397	toluene	CRQL

Rinseate Blanks

The associated rinseate blank EB010326 exhibited contamination for several target compounds. However, qualifications were not required.

Surrogates

Surrogate recoveries for all samples and blanks did meet QA/QC criteria. No qualifications were required.

Matrix Spike/Matrix Spike Duplicate

There was no MS/MSD pair in this SDG. No qualifications were required.

Field Duplicates

There was no field duplicate pair in this SDG. No qualifications were required.

Compound Identification/Quantitation

Specific Finding

5. For the following samples, the e flagged results are rejected, R, in favor of the corresponding D-flagged results from the dilution analysis. All other results from the dilution analysis are rejected, R, in favor of the undiluted results.

LAE40397

System Performance and Overall Assessment

The data, as reported, required qualifications.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

D = Result value is based on dilution analysis

METHOD BLANK QUALIFICATION CODES

CRQL = The sample result for the blank contaminant is less than the sample CRQL and is less than 5X (10X for common lab contaminants) the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that compound is reported.

U = The sample result for the blank contaminant is greater than the sample CRQL and is less than 5X (10X for common lab contaminants) the method blank value. The sample result for the blank contaminant is qualified as non detected at the compound value reported.

No Action = The sample result for the blank contaminant is greater than the sample CRQL and is greater than 5X (10X for common lab contaminants) the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	COMPOUND ID	DL	QL	SPECIFIC FINDINGS
All Samples	2-hexanone	+/-	J/R	1
EB010326 TB0327	acetone	+	J	2
TB0327	methylene chloride	+B	CRQL	3
RF050397	acetone	+	CRQL	4
WT20397	~~acetone~~	+	U	4
WT20397	toluene	+	CRQL	4
LAE40397	All E flagged results	+E	R	5
LAE40397DL	All except corresponding D flagged results	+/-	R	5

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE

SEMIVOLATILE ORGANICS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, surrogate and matrix spike recoveries, GC/MS performance, tuning results, calibration results and internal standard areas. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the U.S. EPA SW846 Method 8270,the NYSDEC Guidelines, The National Functional Guidelines for Organic Data Review, and DQO Level III. All comments made within this report should be considered when examining the analytical results (Form I's).

SDG # 97-1228

Holding Times

All extraction and analysis holding times for all samples were met for all samples per the SOW and National Functional Guidelines. No qualifications are required.

Tuning

All of the DFTPP tunes in the initial and continuing calibrations met the percent relative abundance criteria of the SOW and the Organic Functional Guidelines. No qualifications are required.

Initial Calibrations

The initial calibration that was analyzed by the laboratory for these samples was acceptable for all compound %RSDs. The average RRFs for all of the initial calibrations were within QA/QC calibration criteria. No qualifications are required.

Continuing Calibrations

The continuing calibrations that were analyzed met all calibration requirements for the RRFs. However, qualifications are required for compounds with non compliant %Ds.

Continuing Calibrations (continued)

Specific Findings:

1. The continuing calibration, M30414C1, contained compounds with %Ds greater than 25% D but less than 50% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J).

GWEB010326	4,6-dinitro-2-methylphenol
GWRFI080397	
GWLAE40397	
GWRFI120397	
GWRFI060397	
GWLAW60397	
GWWT20397	
SWS10327	
SWS20327	
SWS30327	
SWS30327D	

2. The continuing calibration, M30414C1, contained compounds with %Ds greater than 50% D but less than 90% D. For the samples and non compliant compounds listed below, qualify all positive results as estimated (J) and all non detects as estimated (UJ).

GWEB010326	hexachlorocyclopentadiene
GWRFI080397	2,4-dinitrophenol
GWLAE40397	
GWRFI120397	
GWRFI060397	
GWLAW60397	
GWWT20397	
SWS10327	
SWS20327	
SWS30327	
SWS30327D	

Internal Standards

All of the blank and sample internal standard EICP areas met the EICP internal standard area QA/QC criteria. No qualifications are required.

Method Blanks

The method blank that was analyzed did not exhibit contamination. No qualifications are required.

Rinseate Blanks

The rinseate blanks that was analyzed did not exhibit contamination. No qualifications are required.

Field Blanks

The associated field blanks were not identified for this SDG. No qualifications are required.

Surrogates

Surrogate recoveries for all samples and blanks did not meet QA/QC criteria. The SOW and the National Functional Guidelines allow one surrogate for each fraction to fall out side the QA/QC criteria as long as the recovery is greater than 10%.

Specific Finding:

3. Sample GWLAW60397, exhibited surrogate recoveries that were less than 10%. Qualify all positive results as estimated (J) and reject all non detects (R).

Matrix Spike/Matrix Spike Duplicate

All spike and RPD recoveries were not within QA/QC limits for MS/MSD SWS30327. The MS/MSD samples exhibited high spike recoveries 4-nitrophenol.

Field Duplicates

No qualifications are required.

Compound Identification/Quantitation

The laboratory analyzed a 16 standard on 4/16/97, two days after the samples were analyzed 4/14/97, and it was used to update the initial calibration analyzed on 3/25/97.

Specific Finding:

4. For the associated samples all positive results greater than the largest standard analyzed on 3/25/97, will be qualified as estimated (J).

System Performance and Overall Assessment

The laboratory did not encounter any large problems. The data as presented required qualification

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported Quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

K = Result is biased high

L = Result is biased low

METHOD BLANK QUALIFICATION CODES

CRQL =	The sample result for the blank contaminant is less than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is rejected and the CRQL for that analyte is reported.
U =	The sample result for the blank contaminant is greater than the sample CRQL and is less than 10X the method blank value. The sample result for the blank contaminant is qualified as non detected at the analyte value reported.
No Action =	The sample result for the blank contaminant is greater than the sample CRQL and is greater than 10X the method blank value. The sample result for the blank contaminant is not qualified with any blank qualifiers.

The specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL	SPECIFIC FINDINGS
GWEB010326 GWRFI080397 GWLAE40397 GWRFI120397 GWRFI060397 GWLAW60397 GWWT20397 SWS10327 SWS20327 SWS30327 SWS30327D	4,6-dinitro-2-methylphenol	+	J	1
GWEB010326 GWRFI080397 GWLAE40397 GWRFI120397 GWRFI060397 GWLAW60397 GWWT20397 SWS10327 SWS20327 SWS30327 SWS30327D	hexachlorocyclopentadiene 2,4-dinitrophenol	+/-	J/UJ	2
GWLAW60397	All results acid fraction	+/-	J/R	3
All samples	All results greater than 80 ug/L	+	J	4

* DL denotes the Form I qualifier supplied by the laboratory
QL denotes the qualifier used by the data validation firm
+ in the DL column denotes a positive result
- in the DL column denotes a non detect result

DATA ASSESSMENT NARRATIVE
Metals, Cyanide, Wet Chemistry & Asbestos

General
The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, calibration standards, blank analysis results and MS/MSD results. A minimum of ten percent of all laboratory calculations are recalculated by the reviewer. All comments made within this report should be considered when examining the analytical results (Form Is).

This data package consisted of results from **ESC, Altech, Ltd. Dunkirk Project, SDG# 1228EV**, the analysis of thirteen (13) water samples (11 total and 2 dissolved) and one (1) Matrix Spike and Duplicate pair for TAL Metals, free and total Cyanide, wet chemistry and asbestos. Overall, the inorganic data quality was fair. All protocol requirements were followed with the exception of the following problems.

Specific QA/QC deficiency **Findings** are listed numerically in the following categories:

Holding Times

1. The Holding Time for Nitrate was exceeded by three (3) days. All positive and non-detect results are qualified as estimated, "J" or "UJ".

Calibration

No deficiencies in this section.

Preparation and Field Blank

No deficiencies in this section.

Interferences

No significant interferences were observed.

Spike Recovery

2. The Matrix Spike Recovery for Silver was below the lower control limits. All positive and non-detect results are qualified as estimated, "J" or "UJ".

Duplicate

3. The Duplicate Recovery for Lead was outside the control limits. All positive results are qualified as estimated, "J".

LCS

No deficiencies in this section.

Serial Dilution

No deficiencies in this section.

SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE	DL	QL	SPECIFIC FINDING
All samples	Nitrate	+/U	J/UJ	1
All samples	Ag	+/U	J/UJ	2
All samples	Pb	+	J	3

DL - denotes laboratory qualifier/reported value
+ denotes positive values
U denotes non-detect values

QL - denotes data validation qualifier

ANNOTATED FORM Is

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

000015

LAE40397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Matrix: (soil/water) WATER Lab Sample ID: 032148

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP065M

Level: (low/med) LOW Date Received: 03/28/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	10.	U	
74-83-9	Bromomethane	10.	U	
75-01-4	Vinyl Chloride	100.		
75-00-3	Chloroethane	10.	U	
75-09-2	Methylene Chloride	10.	U	
67-64-1	Acetone	10.	U	
75-15-0	Carbon Disulfide	10.	U	
75-35-4	1,1-Dichloroethene	11.		
75-34-3	1,1-Dichloroethane	10.	U	
156-60-5	Trans-1,2-Dichloroethene	21.		
156-59-2	Cis-1,2-Dichloroethene	~~795.~~	E	R S
67-66-3	Chloroform	10.	U	
107-06-2	1,2-Dichloroethane	10.	U	
78-93-3	2-Butanone	10.	U	
71-55-6	1,1,1-Trichloroethane	10.	U	
56-23-5	Carbon Tetrachloride	10.	U	
75-27-4	Bromodichloromethane	10.	U	
78-87-5	1,2-Dichloropropane	10.	U	
10061-01-5	Cis-1,3-Dichloropropene	10.	U	
79-01-6	Trichloroethene	~~2800.~~	E	R S
124-48-1	Dibromochloromethane	10.	U	
79-00-5	1,1,2-Trichloroethane	10.	U	
71-43-2	Benzene	10.	U	
10061-02-6	Trans-1,3-Dichloropropene	10.	U	
75-25-2	Bromoform	10.	U	
108-10-1	4-Methyl-2-Pentanone	10.	U	
591-78-6	2-Hexanone	~~10.~~	U	R I
127-18-4	Tetrachloroethene	10.	U	
79-34-5	1,1,2,2-Tetrachloroethane	10.	U	
108-88-3	Toluene	10.	U	
108-90-7	Chlorobenzene	10.	U	
100-41-4	Ethyl Benzene	10.	U	
100-42-5	Styrene	10.	U	
1330-20-7	m,p-Xylene	10.	U	
95-47-6	o-Xylene	10.	U	

018

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000158
LAE40397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Matrix: (soil/water) WATER Lab Sample ID: 032148

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP065M

Level: (low/med) LOW Date Received: 03/28/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	- -	UNKNOWN	14.15	1000.	JN
2.	- -	UNKNOWN	14.80	20.	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
0000124

LAE403970L

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Matrix: (soil/water) WATER Lab Sample ID: 032148

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP067M

Level: (low/med) LOW Date Received: 03/28/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 50.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	~~500.~~	~~U~~
74-83-9	Bromomethane	500.	U
75-01-4	Vinyl Chloride	100.	J D
75-00-3	Chloroethane	500.	U
75-09-2	Methylene Chloride	500.	U
67-64-1	Acetone	500.	U
75-15-0	Carbon Disulfide	500.	U
75-35-4	1,1-Dichloroethene	500.	U
75-34-3	1,1-Dichloroethane	500.	U
156-60-5	Trans-1,2-Dichloroethene	~~500.~~	~~U~~
156-59-2	Cis-1,2-Dichloroethene	860.	D
67-66-3	Chloroform	~~500.~~	~~U~~
107-06-2	1,2-Dichloroethane	500	U
78-93-3	2-Butanone	500.	U
71-55-6	1,1,1-Trichloroethane	500.	U
56-23-5	Carbon Tetrachloride	500.	U
75-27-4	Bromodichloromethane	500.	U
78-87-5	1,2-Dichloropropane	500.	U
10061-01-5	Cis-1,3-Dichloropropene	~~500.~~	~~U~~
79-01-6	Trichloroethene	7300.	D
124-48-1	Dibromochloromethane	~~500.~~	~~U~~
79-00-5	1,1,2-Trichloroethane	500.	U
71-43-2	Benzene	500.	U
10061-02-6	Trans-1,3-Dichloropropene	500.	U
75-25-2	Bromoform	500.	U
108-10-1	4-Methyl-2-Pentanone	500.	U
591-78-6	2-Hexanone	500.	U
127-18-4	Tetrachloroethene	500.	U
79-34-5	1,1,2,2-Tetrachloroethane	500.	U
108-88-3	Toluene	500.	U
108-90-7	Chlorobenzene	500.	U
100-41-4	Ethyl Benzene	500.	U
100-42-5	Styrene	500.	U
1330-20-7	m,p-Xylene	500.	U
95-47-6	o-Xylene	~~500.~~	~~U~~

R 5

R

R

020

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
00000135
LAE40397DL

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Matrix: (soil/water) WATER Lab Sample ID: 032148

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP067M

Level: (low/med) LOW Date Received: 03/28/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 50.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

4/30/97

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0000198

RF050397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971223

Matrix: (soil/water) WATER Lab Sample ID: 032146

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP064M

Level: (low/med) LOW Date Received: 03/28/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	10.	U	
74-83-9	Bromomethane	10.	U	
75-01-4	Vinyl Chloride	10.	U	
75-00-3	Chloroethane	10.	U	
75-09-2	Methylene Chloride	10.	U	
67-64-1	Acetone	~~5~~ 10	~~J~~ U	4
75-15-0	Carbon Disulfide	10.	U	
75-35-4	1,1-Dichloroethene	10.	U	
75-34-3	1,1-Dichloroethane	10.	U	
156-60-5	Trans-1,2-Dichloroethene	10.	U	
156-59-2	Cis-1,2-Dichloroethene	10.	U	
67-66-3	Chloroform	10.	U	
107-06-2	1,2-Dichloroethane	10.	U	
78-93-3	2-Butanone	10.	U	
71-55-6	1,1,1-Trichloroethane	10.	U	
56-23-5	Carbon Tetrachloride	10.	U	
75-27-4	Bromodichloromethane	10.	U	
78-87-5	1,2-Dichloropropane	10.	U	
10061-01-5	Cis-1,3-Dichloropropene	10.	U	
79-01-6	Trichloroethene	10.	U	
124-48-1	Dibromochloromethane	10.	U	
79-00-5	1,1,2-Trichloroethane	10.	U	
71-43-2	Benzene	10.	U	
10061-02-6	Trans-1,3-Dichloropropene	10.	U	
75-25-2	Bromoform	10.	U	
108-10-1	4-Methyl-2-Pentanone	10.	U	
591-78-6	2-Hexanone	~~10.~~	~~U~~ R	1
127-18-4	Tetrachloroethene	10.	U	
79-34-5	1,1,2,2-Tetrachloroethane	10.	U	
108-88-3	Toluene	10.	U	
108-90-7	Chlorobenzene	10.	U	
100-41-4	Ethyl Benzene	10.	U	
100-42-5	Styrene	10.	U	
1330-20-7	m,p-Xylene	10.	U	
95-47-6	o-Xylene	10.	U	

022

SC 7/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
00000193
RF050397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Matrix: (soil/water) WATER Lab Sample ID: 032146

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP064M

Level: (low/med) LOW Date Received: 03/28/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
000020

WT20397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Matrix: (soil/water) WATER Lab Sample ID: 032155

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP068M

Level: (low/med) LOW Date Received: 03/28/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	21.	
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	66.	U
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	3.	J
156-59-2	Cis-1,2-Dichloroethene	64.	
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	9.	J
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	10.	R 1
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10	U 4
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

024

CJC 4/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
0000203
WT20397

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971229

Matrix: (soil/water) WATER Lab Sample ID: 032155

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP068M

Level: (low/med) LOW Date Received: 03/28/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	9.32	100.	JNJ
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

GC 4/30/97

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
00002229

EB010326

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Matrix: (soil/water) WATER Lab Sample ID: 032144

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP062M

Level: (low/med) LOW Date Received: 03/28/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10.	U
67-64-1	Acetone	7.	BJ
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	10.	U
156-59-2	Cis-1,2-Dichloroethene	10.	U
67-66-3	Chloroform	11.	
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	11.	
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	9.	J
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	.9	J
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	[illegible]	R 1
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

026

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
00002230
EB010326

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Matrix: (soil/water) WATER Lab Sample ID: 032144

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP062M

Level: (low/med) LOW Date Received: 03/28/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0000244

T80327

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Matrix: (soil/water) WATER Lab Sample ID: 032145

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP063M

Level: (low/med) LOW Date Received: 03/28/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	10 ~~2.~~	~~U~~ U B
67-64-1	Acetone	30.	U 2
75-15-0	Carbon Disulfide	10.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	Trans-1,2-Dichloroethene	10.	U
156-59-2	Cis-1,2-Dichloroethene	10.	U
67-66-3	Chloroform	10.	U
107-06-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	10.	U
71-55-6	1,1,1-Trichloroethane	10.	U
56-23-5	Carbon Tetrachloride	10.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	Cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
124-48-1	Dibromochloromethane	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
71-43-2	Benzene	10.	U
10061-02-6	Trans-1,3-Dichloropropene	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-Pentanone	10.	U
591-78-6	2-Hexanone	~~10.~~	~~U~~ R 1
127-18-4	Tetrachloroethene	10.	U
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	.5	J
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethyl Benzene	10.	U
100-42-5	Styrene	10.	U
1330-20-7	m,p-Xylene	10.	U
95-47-6	o-Xylene	10.	U

028

4/3/97

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

0000245
TB0327

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Matrix: (soil/water) WATER Lab Sample ID: 032145

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 97AP063M

Level: (low/med) LOW Date Received: 03/28/97

% Moisture: not dec. Date Analyzed: 04/03/97

GC Column: RTX-502. ID: .53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-EB01-0325

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2144

Sample wt/vol: 920.0 (g/mL) ML Lab File ID: M30414S3.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	27	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	27	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	27	U
83-32-9	Acenaphthene	11	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-EB97-0328

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2144

Sample wt/vol: 920.0 (g/mL) ML Lab File ID: M30414S3.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	27	U
100-02-7	4-Nitrophenol	27	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	27	U
534-52-1	2-Methyl-4,6-dinitrophenol	27	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	27	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo[a]anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo[b]fluoranthene	11	U
207-08-9	Benzo[k]fluoranthene	11	U
	Benzo[a]pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo[a,h]anthracene	11	U
191-24-2	Benzo[g,h,i]perylene	11	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-EB01-0326

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2144

Sample wt/vol: 920.0 (g/mL) ML Lab File ID: M30414S3.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-RFI06-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2150

Sample wt/vol: 920.0 (g/mL) ML Lab File ID: M30414S7.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	27	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	27	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	27	U
83-32-9	Acenaphthene	11	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-RF106-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2150

Sample wt/vol: 920.0 (g/mL) ML Lab File ID: M30414S7.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	27	U 2
100-02-7	4-Nitrophenol	27	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	27	U
534-52-1	2-Methyl-4,6-dinitrophenol	27	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	27	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo[a]anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	22	
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo[b]fluoranthene	11	U
207-08-9	Benzo[k]fluoranthene	11	U
	Benzo[a]pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo[a,h]anthracene	11	U
191-24-2	Benzo[g,h,i]perylene	11	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

GW-RFI06-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2150

Sample wt/vol: 920.0 (g/mL) ML Lab File ID: M30414S7.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-RFI08-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2147

Sample wt/vol: 960.0 (g/mL) ML Lab File ID: M30414S4.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	o-Cresol	10	U
108-60-1	Bis(2-chloroisopropyl)ether	10	U
106-44-5	m/p-Cresol	10	U
621-64-7	N-Nitrosodi-n-propyl amine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	10	U

4/17/97

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-RFI08-0397

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2147

Sample wt/vol: 960.0 (g/mL) ML Lab File ID: M30414S4.D

Level: (low/med) _____ Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	26	U
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	26	U
534-52-1	2-Methyl-4,6-dinitrophenol	26	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	13	
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
	Benzo[a]pyrene	10	U
193-39-5	Indeno(1,2,3-c,d)pyrene	10	U
53-70-3	Dibenzo[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-RFI08-0397

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2147

Sample wt/vol: 960.0 (g/mL) ML Lab File ID: M30414S4.D

Level: (low/med) _____ Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0000379

GW-RFI12-0397

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2149

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414S6.D

Level: (low/med) _____ Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	27	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	27	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	27	U
83-32-9	Acenaphthene	11	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-RFI12-03973

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2149

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414S6.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	27	U
100-02-7	4-Nitrophenol	27	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	27	U
534-52-1	2-Methyl-4,6-dinitrophenol	27	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	27	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
00003
GW-RFI12-0397

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2149

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414S6.D

Level: (low/med) _____ Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-LAE4-0397 00003

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2148

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414S5.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	14	
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	27	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	27	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	27	U
83-32-9	Acenaphthene	11	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-LAE4-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2148

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414S5.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	27	U (1)
100-02-7	4-Nitrophenol	27	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	27	U
534-52-1	2-Methyl-4,6-dinitrophenol	27	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	27	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo[a]anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo[b]fluoranthene	11	U
207-08-9	Benzo[k]fluoranthene	11	U
	Benzo[a]pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo[a,h]anthracene	11	U
191-24-2	Benzo[g,h,i]perylene	11	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-LAE4-0397

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2148

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414S5.D

Level: (low/med) _____ Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/L

	CAS Number	Compound Name	RT	Est. Conc.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-LAW6-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2152

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414S8.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q	
108-95-2	Phenol	11	~~U~~ R	3
111-44-4	Bis(2-chloroethyl)ether	11	U	
95-57-8	2-Chlorophenol	11	~~U~~ R	3
541-73-1	1,3-Dichlorobenzene	11	U	
106-46-7	1,4-Dichlorobenzene	11	U	
95-50-1	1,2-Dichlorobenzene	11	U	
95-48-7	o-Cresol	11	~~U~~ R	3
108-60-1	Bis(2-chloroisopropyl)ether	11	U	
106-44-5	m/p-Cresol	11	~~U~~ R	3
621-64-7	N-Nitrosodi-n-propyl amine	11	U	
67-72-1	Hexachloroethane	11	U	
98-95-3	Nitrobenzene	11	U	
78-59-1	Isophorone	11	U	
88-75-5	2-Nitrophenol	11	U	
105-67-9	2,4-Dimethylphenol	11	~~U~~ R	3
111-91-1	Bis(2-chloroethoxy)methane	11	U	
120-83-2	2,4-Dichlorophenol	11	~~U~~ R	3
120-82-1	1,2,4-Trichlorobenzene	11	U	
91-20-3	Naphthalene	11	U	
106-47-8	4-Chloroaniline	11	U	
87-68-3	Hexachlorobutadiene	11	U	
59-50-7	4-Chloro-3-methylphenol	11	~~U~~ R	3
91-57-6	2-Methylnaphthalene	11	U	
77-47-4	Hexachlorocyclopentadiene	11	~~U~~ NJ	2
88-06-2	2,4,6-Trichlorophenol	11	~~U~~ R	3
95-95-4	2,4,5-Trichlorophenol	27	~~U~~ R	3
91-58-7	2-Chloronaphthalene	11	U	
88-74-4	2-Nitroaniline	27	U	
131-11-3	Dimethylphthalate	11	U	
208-96-8	Acenaphthylene	11	U	
606-20-2	2,6-Dinitrotoluene	11	U	
99-09-2	3-Nitroaniline	27	U	
83-32-9	Acenaphthene	11	U	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-LAW6-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2152

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414S8.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	27	U 3,2
100-02-7	4-Nitrophenol	27	U 3
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	27	U
534-52-1	2-Methyl-4,6-dinitrophenol	27	U 3
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	27	U 3
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-LAW6-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2152

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414S8.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 18 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	3.06	20	J
2.	Unknown	3.49	11	J
3.	Unknown	3.51	4	J
4.	Unknown	3.51	9	J
5.	Unknown	4.15	42	J
6.	Unknown	4.31	38	J
7.	Unknown	4.42	34	J
8.	Unknown	4.43	15	J
9.	Unknown	4.44	5	J
10.	Unknown	4.44	5	J
11.	Unknown	5.07	43	J
12.	Unknown	5.12	37	J
13.	Unknown	5.72	43	J
14.	Unknown	5.85	28	J
15.	Unknown	5.86	4	J
16.	Unknown	6.23	41	J
17.	Unknown	6.44	29	J
18.	Unknown	8.89	6	J
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-WT2-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2155

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: M30414S9.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	34	
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	11	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

GW-WT2-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2155

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: M30414S9.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	26	U 2
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	26	U
534-52-1	2-Methyl-4,6-dinitrophenol	26	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo[a]anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo[b]fluoranthene	11	U
207-08-9	Benzo[k]fluoranthene	11	U
	Benzo[a]pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo[a,h]anthracene	11	U
191-24-2	Benzo[g,h,i]perylene	11	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
GW-WT2-0397

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2155

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: M30414S9.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 9 Concentration Units: (ug/L or ug/Kg) ug/L

	CAS Number	Compound Name	RT	Est. Conc.	Q
1.		Unknown	3.22	15	J B
2.		Unknown	3.55	66	J
3.		Unknown	3.61	38	J
4.		Unknown	3.90	5	J
5.		Unknown	4.00	18	J
6.		Unknown	4.18	9	J
7.		Unknown	5.02	31	J
8.		Unknown	6.05	11	J
9.		Unknown	6.35	7	J
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-S1-0327 000047

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2157

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414A1.D

Level: (low/med) _____ Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U 4/15 2
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	27	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	27	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	27	U
83-32-9	Acenaphthene	11	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SW-S1-0327

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2157

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414A1.D

Level: (low/med) _____ Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
51-28-5	2,4-Dinitrophenol	27	U
100-02-7	4-Nitrophenol	27	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	27	U
534-52-1	2-Methyl-4,6-dinitrophenol	27	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	27	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo[a]anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo[b]fluoranthene	11	U
207-08-9	Benzo[k]fluoranthene	11	U
	Benzo[a]pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo[a,h]anthracene	11	U
191-24-2	Benzo[g,h,i]perylene	11	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SW-S1-0327

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2157

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414A1.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-S2-0327

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2158

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414A2.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	27	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	27	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	27	U
83-32-9	Acenaphthene	11	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-S2-0327

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2158

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414A2.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	27	~~U~~ 52
100-02-7	4-Nitrophenol	27	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	27	U
534-52-1	2-Methyl-4,6-dinitrophenol	27	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	27	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SW-S2-0327

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2158

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414A2.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/L

	CAS Number	Compound Name	RT	Est. Conc.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-S3-0327 06003

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2159

Sample wt/vol: 930.0 (g/mL) ML Lab File ID: M30414A3.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	11	U
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	27	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	27	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	27	U
83-32-9	Acenaphthene	11	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-S3-0327

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2159

Sample wt/vol: 930.0 (g/mL) ML Lab File ID: M30414A3.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	27	U
100-02-7	4-Nitrophenol	27	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	27	U
534-52-1	2-Methyl-4,6-dinitrophenol	27	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	27	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo(a)anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo(b)fluoranthene	11	U
207-08-9	Benzo(k)fluoranthene	11	U
	Benzo(a)pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo(a,h)anthracene	11	U
191-24-2	Benzo(g,h,i)perylene	11	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SW-S3-0327 02005

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2159

Sample wt/vol: 930.0 (g/mL) ML Lab File ID: M30414A3.D

Level: (low/med) _____ Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/L

	CAS Number	Compound Name	RT	Est. Conc.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-S3-0327D

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2160D

Sample wt/vol: 960.0 (g/mL) ML Lab File ID: M30414A4.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	Bis(2-chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	o-Cresol	10	U
108-60-1	Bis(2-chloroisopropyl)ether	10	U
106-44-5	m/p-Cresol	10	U
621-64-7	N-Nitrosodi-n-propyl amine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	Bis(2-chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SW-S3-0327D

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2160D

Sample wt/vol: 960.0 (g/mL) ML Lab File ID: M30414A4.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	26	U
100-02-7	4-Nitrophenol	26	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	26	U
534-52-1	2-Methyl-4,6-dinitrophenol	26	U
86-30-6	N-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl phenyl ether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	26	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	Bis(2-ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
	Benzo[a]pyrene	10	U
193-39-5	Indeno(1,2,3-c,d)pyrene	10	U
53-70-3	Dibenzo[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SW-S3-0327D

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2160D

Sample wt/vol: 960.0 (g/mL) ML Lab File ID: M30414A4.D

Level: (low/med) _____ Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N) N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 0 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SW-S3-0327MS

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2161 MS

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: M30414A5.D

Level: (low/med) _____ Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	110	
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	110	
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	76	
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	74	
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	78	
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	130	
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	26	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	26	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	26	U
83-32-9	Acenaphthene	79	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-S3-0327MS

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2161 MS

Sample wt/vol: 950.0 (g/mL) ML Lab File ID: M30414A5.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	26	U
100-02-7	4-Nitrophenol	130	
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	81	
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	26	U
534-52-1	2-Methyl-4,6-dinitrophenol	26	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	150	
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	82	
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo[a]anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo[b]fluoranthene	11	U
207-08-9	Benzo[k]fluoranthene	11	U
	Benzo[a]pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo[a,h]anthracene	11	U
191-24-2	Benzo[g,h,i]perylene	11	U

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-S3-0327MSD

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2162 MSD

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414A6.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	110	
111-44-4	Bis(2-chloroethyl)ether	11	U
95-57-8	2-Chlorophenol	110	
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	71	
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	o-Cresol	11	U
108-60-1	Bis(2-chloroisopropyl)ether	11	U
106-44-5	m/p-Cresol	11	U
621-64-7	N-Nitrosodi-n-propyl amine	76	
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
111-91-1	Bis(2-chloroethoxy)methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	78	
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-methylphenol	120	
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	27	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	27	U
131-11-3	Dimethylphthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U
99-09-2	3-Nitroaniline	27	U
83-32-9	Acenaphthene	77	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-S3-0327MSD

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Matrix: (soil/water) WATER Lab Sample ID: 03-2162 MSD

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: M30414A6.D

Level: (low/med) Date Received: 3/28/97

% Moisture: 0 decanted: (Y/N): N Date Extracted: 4/2/97

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 4/14/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	27	U
100-02-7	4-Nitrophenol	130	
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	81	
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	11	U
100-01-6	4-Nitroaniline	27	U
534-52-1	2-Methyl-4,6-dinitrophenol	27	U
86-30-6	N-Nitrosodiphenylamine	11	U
101-55-3	4-Bromophenyl phenyl ether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	150	
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
86-74-8	Carbazole	11	U
84-74-2	Di-n-Butylphthalate	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	82	
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	11	U
56-55-3	Benzo[a]anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	Bis(2-ethylhexyl)phthalate	11	U
117-84-0	Di-n-octylphthalate	11	U
205-99-2	Benzo[b]fluoranthene	11	U
207-08-9	Benzo[k]fluoranthene	11	U
	Benzo[a]pyrene	11	U
193-39-5	Indeno(1,2,3-c,d)pyrene	11	U
53-70-3	Dibenzo[a,h]anthracene	11	U
191-24-2	Benzo[g,h,i]perylene	11	U

(1) - Cannot be separated from Diphenylamine

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

1T0326

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1223EV

Matrix (soil/water): WATER Lab Sample ID: 03-2144T

Level (low/med): MED Date Received: 03/28/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	U52
7429-90-5	Aluminum	99.9	U		P	
7440-38-2	Arsenic	3.5	U		P	
7440-39-3	Barium	16.8	U		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	478	U		P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.2	U		P	
7440-47-3	Chromium	8.4	U		P	
7440-50-8	Copper	12.2	U		P	
7439-89-6	Iron	46.6	B		P	
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	273	U		P	
7439-95-4	Magnesium	892	U		P	
7439-96-5	Manganese	2.9	U		P	
	Molybdenum	43.0			P	
7440-23-5	Sodium	495	B		P	
7440-02-0	Nickel	27.6	U		P	
7439-92-1	Lead	5.0			P	J3
7440-36-0	Antimony	3.6	U		P	
7782-49-2	Selenium	2.8	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	26.3	U		P	
7440-66-6	Zinc	13.6	B		P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

1-0326

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1223EV

Matrix (soil/water): WATER Lab Sample ID: 03-21440

Level (low/med): MED Date Received: 03/25/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	7.0	U		P
7429-90-5	Aluminum	99.9	U		P
7440-38-2	Arsenic	2.5	U		P
7440-39-3	Barium	12.8	U		P
7440-41-7	Beryllium	1.9	U		P
7440-70-2	Calcium	531	B		P
7440-43-9	Cadmium	5.0	U		P
7440-48-4	Cobalt	17.3	U		P
7440-47-3	Chromium	55.1			P
7440-50-8	Copper	12.8	U		P
7439-89-6	Iron	57.3	B		P
7439-97-6	Mercury	0.20	U		CV
7440-09-7	Potassium	273	U		P
7439-95-4	Magnesium	292	U		P
7439-96-5	Manganese	3.9	U		P
	Molybdenum	43.0			P
7440-23-5	Sodium	3820	B		P
7440-02-0	Nickel	27.6	U		P
7439-92-1	Lead	3.0			P
7440-36-0	Antimony	3.6	U		P
7782-49-2	Selenium	4.9	B		P
7440-28-0	Thallium	3.8	U		P
7440-62-2	Vanadium	35.3	U		P
7440-66-6	Zinc	38.1			P

U52

J3 KAJ 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

2-0327

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1E38EV

Matrix (soil/water): WATER Lab Sample ID: 02-2156

Level (low/med): MED Date Received: 03/28/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	7.0	U		P
7429-90-5	Aluminum	95.9	U		P
7440-38-2	Arsenic	2.5	U		P
7440-39-3	Barium	12.8	U		P
7440-41-7	Beryllium	1.8	U		P
7440-70-2	Calcium	478	U		P
7440-43-9	Cadmium	5.0	U		P
7440-48-4	Cobalt	17.2	U		P
7440-47-3	Chromium	8.4	U		P
7440-50-8	Copper	12.2	U		P
7439-89-6	Iron	35.5	B		P
7439-97-6	Mercury	0.20	U		CV
7440-09-7	Potassium	273	U		P
7439-95-4	Magnesium	292	U		P
7439-96-5	Manganese	2.9	U		P
	Molybdenum	43.0	U		P
7440-23-5	Sodium	832	B		P
7440-02-0	Nickel	37.6	U		P
7439-92-1	Lead	2.2	U		P
7440-36-0	Antimony	2.8	U		P
7782-49-2	Selenium	2.9	U		P
7440-28-0	Thallium	2.2	U		P
7440-62-2	Vanadium	26.3	U		P
7440-66-6	Zinc	5.9	B		P

452

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

2-0397

1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1229EV

Matrix (soil/water): WATER Lab Sample ID: 03-2149

Level (low/med): MED Date Received: 03/28/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	7.0	U		P
7429-90-5	Aluminum	336			P
7440-38-2	Arsenic	2.5	U		P
7440-39-3	Barium	36.8	B		P
7440-41-7	Beryllium	1.8	U		P
7440-70-2	Calcium	61700			P
7440-43-9	Cadmium	5.0	U		P
7440-48-4	Cobalt	17.3	U		P
7440-47-3	Chromium	45.0			P
7440-50-8	Copper	12.2	B		P
7439-89-6	Iron	859			P
7439-97-6	Mercury	0.20	U		CV
7440-09-7	Potassium	5510			P
7439-95-4	Magnesium	25300			P
7439-96-5	Manganese	197			P
	Molybdenum	67.3			P
7440-23-5	Sodium	15700			P
7440-02-0	Nickel	59.5			P
7439-92-1	Lead	2.6	U		P
7440-36-0	Antimony	6.6	U		P
7782-49-2	Selenium	4.2	B		P
7440-28-0	Thallium	2.7	U		P
7440-62-2	Vanadium	86.3	U		P
7440-66-6	Zinc	31.0			P

U52

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

3-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1333EV

Matrix (soil/water): WATER Lab Sample ID: 03-2153

Level (low/med): MED Date Received: 03/25/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	7.0	U		P
7429-90-5	Aluminum	191	B		P
7440-38-2	Arsenic	3.5	U		P
7440-39-3	Barium	59.6	B		P
7440-41-7	Beryllium	1.2	U		P
7440-70-2	Calcium	11000			P
7440-43-9	Cadmium	5.0	U		P
7440-48-4	Cobalt	17.3	U		P
7440-47-3	Chromium	2.3	B		P
7440-50-8	Copper	20.7	B		P
7439-89-6	Iron	348			P
7439-97-6	Mercury	0.20	U		CV
7440-09-7	Potassium	4870	B		P
7439-95-4	Magnesium	44300			P
7439-96-5	Manganese	107			P
	Molybdenum	43.0			P
7440-23-5	Sodium	101000			P
7440-02-0	Nickel	27.3	U		P
7439-92-1	Lead	3.9			P
7440-36-0	Antimony	3.9	U		P
7782-49-2	Selenium	3.9	U		P
7440-28-0	Thallium	2.7	U		P
7440-62-2	Vanadium	36.2	U		P
7440-66-6	Zinc	14.1	B		P

U52

J3 KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

4T0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1233EV

Matrix (soil/water): WATER Lab Sample ID: 03-214ST

Level (low/med): MED Date Received: 03/28/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	7.0	U		P
7429-90-5	Aluminum	3480			P
7440-38-2	Arsenic	2.5	U		P
7440-39-3	Barium	91.2	B		P
7440-41-7	Beryllium	1.2	U		P
7440-70-2	Calcium	138000			P
7440-43-9	Cadmium	5.0	U		P
7440-48-4	Cobalt	17.3	U		P
7440-47-3	Chromium	8.9	B		P
7440-50-8	Copper	51.8			P
7439-89-6	Iron	5540			P
7439-97-6	Mercury	0.20	U		CV
7440-09-7	Potassium	1810	B		P
7439-95-4	Magnesium	32300			P
7439-96-5	Manganese	1220			P
	Molybdenum	43.0			P
7440-23-5	Sodium	44700			P
7440-02-0	Nickel	41.1			P
7439-92-1	Lead	13.3			P
7440-36-0	Antimony	2.6	U		P
7782-49-2	Selenium	3.2	U		P
7440-28-0	Thallium	8.7	U		P
7440-62-2	Vanadium	56.3	U		P
7440-66-6	Zinc	97.5			P

452

53

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIRCFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

4-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1EE3EV

Matrix (soil/water): WATER Lab Sample ID: 03-2148D

Level (low/med): MED Date Received: 03/28/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	7.0	U		P
7429-90-5	Aluminum	95.9	U		P
7440-38-2	Arsenic	2.5	U		P
7440-39-3	Barium	44.9	B		P
7440-41-7	Beryllium	1.2	U		P
7440-70-2	Calcium	112000			P
7440-43-9	Cadmium	5.0	U		P
7440-48-4	Cobalt	17.3	U		P
7440-47-3	Chromium	3.4	U		P
7440-50-8	Copper	14.3	B		P
7439-89-6	Iron	597			P
7439-97-6	Mercury	0.20	U		CV
7440-09-7	Potassium	1030	B		P
7439-95-4	Magnesium	27900			P
7439-96-5	Manganese	975			P
	Molybdenum	43.0			P
7440-23-5	Sodium	49800			P
7440-02-0	Nickel	27.6	U		P
7439-92-1	Lead	2.5	U		P
7440-36-0	Antimony	2.6	U		P
7782-49-2	Selenium	2.9	U		P
7440-28-0	Thallium	2.7	U		P
7440-62-2	Vanadium	26.8	U		P
7440-66-6	Zinc	22.1			P

U52

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

5-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1228EV

Matrix (soil/water): WATER Lab Sample ID: 03-2146

Level (low/med): MED Date Received: 03/28/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	U52
7429-90-5	Aluminum	126	B		P	
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	36.0	B		P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	87000			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.8	U		P	
7440-47-3	Chromium	8.4	U		P	
7440-50-8	Copper	18.8	U		P	
7439-89-6	Iron	210			P	
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	821	B		P	
7439-95-4	Magnesium	20400			P	
7439-96-5	Manganese	8.2	B		P	
	Molybdenum	43.0			P	
7440-23-5	Sodium	32500			P	
7440-02-0	Nickel	27.6	U		P	J3
7439-92-1	Lead	3.6			P	
7440-36-0	Antimony	3.6	U		P	
7782-49-2	Selenium	2.5			P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	86.3	U		P	
7440-66-6	Zinc	16.7	B		P	

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

00006557

ENVIRCFORMS/INORGANIC CLP

SAMPLE NO.

1

INORGANIC ANALYSIS DATA SHEET

6-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1328EV

Matrix (soil/water): WATER Lab Sample ID: 03-2150T

Level (low/med): MED Date Received: 03/28/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	7.0	U		P
7429-90-5	Aluminum	195	B		P
7440-38-2	Arsenic	3.1	B		P
7440-39-3	Barium	29.6	B		P
7440-41-7	Beryllium	1.2	U		P
7440-70-2	Calcium	103000			P
7440-43-9	Cadmium	5.0	U		P
7440-48-4	Cobalt	17.2	U		P
7440-47-3	Chromium	8.4	U		P
7440-50-8	Copper	12.2	U		P
7439-89-6	Iron	700			P
7439-97-6	Mercury	0.20	U		CV
7440-09-7	Potassium	6750			P
7439-95-4	Magnesium	33600			P
7439-96-5	Manganese	168			P
	Molybdenum	43.0			P
7440-23-5	Sodium	88300			P
7440-02-0	Nickel	27.6	U		P
7439-92-1	Lead	2.6	U		P
7440-36-0	Antimony	3.8	U		P
7782-49-2	Selenium	3.9	U		P
7440-28-0	Thallium	2.0	B		P
7440-62-2	Vanadium	26.3	U		P
7440-66-6	Zinc	9.1	U		P

U52.

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

075

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
8-0397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1228EV

Matrix (soil/water): WATER Lab Sample ID: 03-2147

Level (low/med): MED Date Received: 03/28/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	U52
7429-90-5	Aluminum	95.2	U		P	
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	41.5	B		P	
7440-41-7	Beryllium	1.9	U		P	
7440-70-2	Calcium	99900			P	
7440-43-9	Cadmium	9.0			P	
7440-48-4	Cobalt	17.3	U		P	
7440-47-3	Chromium	8.4	U		P	
7440-50-8	Copper	12.4	B		P	
7439-89-6	Iron	198			P	
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	4060	B		P	
7439-95-4	Magnesium	24500			P	
7439-96-5	Manganese	65.9			P	
	Molybdenum	43.0			P	
7440-23-5	Sodium	44600			P	
7440-02-0	Nickel	27.5	U		P	
7439-92-1	Lead	19.2			P	J3
7440-36-0	Antimony	3.5	U		P	
7782-49-2	Selenium	3.7	U		P	
7440-28-0	Thallium	3.7	U		P	
7440-62-2	Vanadium	22.2	U		P	
7440-66-6	Zinc	20.3			P	

KQ 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

T20397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1828EV

Matrix (soil/water): WATER Lab Sample ID: 08-21SBT

Level (low/med): MED Date Received: 08/25/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7440-22-4	Silver	7.0	U		P	UJ
7429-90-5	Aluminum	476			P	
7440-38-2	Arsenic	2.5	U		P	
7440-39-3	Barium	302			P	
7440-41-7	Beryllium	1.8	U		P	
7440-70-2	Calcium	302000			P	
7440-43-9	Cadmium	5.0	U		P	
7440-48-4	Cobalt	17.2	U		P	
7440-47-3	Chromium	25.8			P	
7440-50-8	Copper	33.8			P	
7439-89-6	Iron	246			P	
7439-97-6	Mercury	0.20	U		CV	
7440-09-7	Potassium	14600			P	
7439-95-4	Magnesium	299	U		P	
7439-96-5	Manganese	5.0	B		P	
	Molybdenum	220			P	
7440-23-5	Sodium	3e300			P	
7440-02-0	Nickel	53.1			P	J3
7439-92-1	Lead	3.7			P	
7440-36-0	Antimony	3.8	U		P	
7782-49-2	Selenium	3.8	U		P	
7440-28-0	Thallium	2.7	U		P	
7440-62-2	Vanadium	26.8	U		P	
7440-66-6	Zinc	12.8	B		P	

RAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

W50397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1238EV

Matrix (soil/water): WATER Lab Sample ID: 03-2151

Level (low/med): MED Date Received: 03/28/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	7.0	U	N	P
7429-90-5	Aluminum	99.9	U		P
7440-38-2	Arsenic	2.5	U		P
7440-39-3	Barium	17.3	B		P
7440-41-7	Beryllium	1.8	U		P
7440-70-2	Calcium	226000			P
7440-43-9	Cadmium	5.0	U		P
7440-48-4	Cobalt	17.3	U		P
7440-47-3	Chromium	3100			P
7440-50-8	Copper	27.9			P
7439-89-6	Iron	173			P
7439-97-6	Mercury	0.20	U		CV
7440-09-7	Potassium	4390	B		P
7439-95-4	Magnesium	74600			P
7439-96-5	Manganese	110			P
	Molybdenum	327			P
7440-23-5	Sodium	894000			P
7440-02-0	Nickel	85.0			P
7439-92-1	Lead	2.6	U		P
	Antimony	11.2	B		P
7782-49-2	Selenium	3.9	U		P
7440-28-0	Thallium	2.7	U		P
7440-62-2	Vanadium	86.3	U		P
7440-66-6	Zinc	6.7	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

KAS 6/30/97

ENVIROFORMS/INORGANIC CLP

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

W60397

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1228EV

Matrix (soil/water): WATER Lab Sample ID: 03-2152

Level (low/med): MED Date Received: 03/28/97

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	17.9		X	P
7429-90-5	Aluminum	304			P
7440-38-2	Arsenic	315			P
7440-39-3	Barium	12.8	U		P
7440-41-7	Beryllium	1.8	U		P
7440-70-2	Calcium	9530			P
7440-43-9	Cadmium	6.5			P
7440-48-4	Cobalt	84.6	B		P
7440-47-3	Chromium	48500			P
7440-50-8	Copper	65.4			P
7439-89-6	Iron	93.6	B		P
7439-97-6	Mercury	0.80	U		CV
7440-09-7	Potassium	10400			P
7440-23-5	Sodium	92500			P
7439-96-5	Manganese	2.5	U		P
	Molybdenum	6200			P
7440-02-0	Nickel	95.5			P
7439-92-1	Lead	2.8	U		P
7440-36-0	Antimony	13.			P
7782-49-2	Selenium	17.9			P
7440-28-0	Thallium	7.3	B		P
7440-62-2	Vanadium	291			P
7440-66-6	Zinc	9.5	B		P

52

KAS 6/30/97

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

079

ENVIROFORMS/INORGANIC CLP

5A
SPIKE SAMPLE RECOVERY

SAMPLE NO.
3-03973

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 123ESV

Matrix (soil/water): WATER Level (low/med): MED
% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Silver	75-125	24.7009		7.0000	U	50.00	49.4	N	P
Aluminum	75-125	1667.0704		190.6264	B	2000.00	88.2		P
Arsenic	75-125	2024.3000		2.3000	U	2000.00	101.2		P
Barium	75-125	1879.7350		69.5588	B	2000.00	90.2		P
Beryllium	75-125	43.8207		1.8000	U	50.00	87.6		P
Calcium									CA
Cadmium	75-125	42.3321		5.0000	U	50.00	91.1		P
Cobalt	75-125	420.6402		17.3000	U	500.00	85.1		P
Chromium	75-125	176.3337		9.2911	B	200.00	83.5		P
Copper	75-125	881.4467		20.7481	B	850.00	94.3		P
Iron	75-125	1884.3642		548.1151		1000.00	93.6		P
Mercury	75-125	0.8066		0.2000	U	1.00	80.7		CV
Potassium									NR
Magnesium									NR
Manganese	75-125	563.3281		106.7168		500.00	91.3		P
Molybdenum									NR
Sodium									NR
Nickel	75-125	460.3552		87.6000	U	500.00	92.0		P
Lead	75-125	488.2300		2.9867	B	500.00	97.1		P
Antimony	75-125	429.8100		4.7831	B	500.00	85.0		P
Selenium	75-125	1803.5000		3.9000	U	2000.00	90.2		P
Thallium	75-125	2024.2000		5.2000	U	2000.00	101.2		P
Vanadium	75-125	449.3113		26.3010	B	500.00	84.6		P
Zinc	75-125	501.7414		14.0908	B	500.00	97.5		P

KAS
6/30/97

Comments:

ENVIROFORMS/INORGANIC CLP

6.
DUPLICATES

SAMPLE NO.
3-0397D

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 12288V

Matrix (soil/water): WATER Level (low/med): MED

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Silver		7.0000	U	7.0000	U			P
Aluminum		190.9884	B	187.3854	B	32.5		P
Arsenic		2.5000	U	2.5000	U			P
Barium		69.9988	B	63.8889	B	8.6		P
Beryllium		1.8000	U	1.8000	U			P
Calcium		115852.0500		115899.1400		0.2		P
Cadmium		5.0000	U	5.0000	U			P
Cobalt		17.3000	U	17.3000	U			P
Chromium		9.2911	B	3.4000	U	200.0		P
Copper		20.7481	B	12.7133	B	46.2		P
Iron		946.1151		925.0815		4.3		P
Mercury		0.2000	U	0.2000	U			CV
Potassium		4867.7884	B	4731.4751	B	2.8		P
Magnesium		44388.9110		44260.5440		0.1		P
Manganese		106.9168		102.7079		1.1		P
Molybdenum		43.0000	U	43.0000	U			P
Sodium		100966.1800		101405.8700		0.5		P
Nickel		27.6000	U	27.6000	U			P
Lead	3.0	3.8917	B	8.3000	U	200.0		P
Antimony		4.9381	B	8.3000	U	200.0		P
Selenium		3.9000	U	3.9000	U			P
Thallium		8.7000	U	8.7000	U			P
Vanadium		86.3000	U	86.3000	U			P
Zinc		14.0908	B	14.8573	B	1.3		P

KAS
6/30/97

ENVIROFORMS/INORGANIC CLP

9

ICP SERIAL DILUTIONS

SAMPLE NO.

1-0336L

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 1336EV

Matrix (soil/water): WATER Level (low/med): MED

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Silver	7.00	U	35.00	U			P
Aluminum	95.90	U	479.50	U			P
Arsenic	2.50	U	12.50	U			P
Barium	16.80	U	84.00	U			P
Beryllium	1.80	U	9.00	U			P
Calcium	530.22	B	2350.00	U	100.0		P
Cadmium	5.00	U	25.00	U			P
Cobalt	17.30	U	86.50	U			P
Chromium	55.13		42.00	U	100.0		P
Copper	12.60	U	61.00	U			P
Iron	52.69	B	110.50	U	100.0		P
Mercury							
Potassium	270.00	U	1365.00	U			P
Magnesium	292.00	U	1460.00	U			P
Manganese	2.90	U	14.50	U			P
Molybdenum	40.00	U	215.00	U			P
Sodium	3823.72	B	2745.50	B	8.0		P
Nickel	27.40	U	138.00	U			P
Lead	9.31		13.92		127.7		P
Antimony	6.80	U	34.00	U			P
Selenium	4.37	B	19.30	U	100.0		P
Thallium	3.31	B	12.50	U	100.0		P
Vanadium	26.30	U	131.50	U			P
Zinc	28.14		22.02	B	44.3		P

KAS
6/30/97

ENVIROFORMS/INORGANIC CLP

9

ICP SERIAL DILUTIONS

SAMPLE NO.

3-0397L

Lab Name: Antech Ltd Contract: ENV.STRAT.

Lab Code: ANT Case No.: SAS No.: SDG No.: 133SEV

Matrix (soil/water): WATER Level (low/med): MED

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Silver	7.00	U	35.00	U			P
Aluminum	-190.63	B	479.50	U	100.0		P
Arsenic	2.50	U	12.50	U			P
Barium	69.56	B	64.00	U	100.0		P
Beryllium	1.80	U	9.00	U			P
Calcium	115852.06		114619.26		1.1		P
Cadmium	5.00	U	25.00	U			P
Cobalt	17.30	U	86.50	U			P
Chromium	3.39	B	42.00	U	100.0		P
Copper	20.79	B	61.00	U	100.0		P
Iron	548.12		531.84		3.0		P
Mercury							
Potassium	4867.79	B	-202.68	B	7.6		P
Magnesium	44388.91		44168.99		0.5		P
Manganese	106.98		100.88		5.7		P
Molybdenum	43.00	U	215.00	U			P
Sodium	100866.15		100730.13		0.1		P
Nickel	27.00	U	135.00	U			P
Lead	3.90		19.00	U	100.0		P
Antimony	4.99	B	19.00	U	100.0		P
Selenium	3.90	U	19.50	U			P
Thallium	2.70	U	13.50	U			P
Vanadium	26.30	U	131.50	U			P
Zinc	14.09	B	33.93	B	140.8		P

KAS 6/30/97

Table 2
General Data Table
EPA Method 9066(1)
Environmental Strategies Corporation
Antech Ltd. Project No. 97-1228
Groundwater Characterization; Project No. 483803
AlTech; Dunkirk

Antech Sample ID	Client Sample ID	Date Collected	Parameter Identification: Phenolics mg/l
9703-2144	ALT-GW-EB01-0326	3/26/97	<0.0050
9703-2155	ALT-GW-WT2-0397	3/27/97	0.029
9703-2164	Method Blank	3/28/97	<0.0050

(1) U.S. Environmental Protection Agency, 1987, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

KAS
6/30/97

Table 1
General Data Table
Environmental Strategies Corporation
Antech Ltd. Project No. 97-1228
Groundwater Characterization; Project No. 483803
AlTech; Dunkirk

Parameter	Analytical Method	Units	Sample Identification 9703-2144 ALT-GW-EB01-0326 (3/26/97)	9703-2146 ALT-GW-RFI05-0397 (3/27/97)	9703-2147 ALT-GW-RFI08-0397 (3/27/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	<2.00	259	326
Chloride	9251(2)	mg/l	1.3	12	42
Cyanide (Free)	4500CN-I(3)	mg/l	<0.0050	<0.0050	<0.0050
Cyanide (Total)	9012(2)	mg/l	<0.0050	<0.0050	<0.0050
Fluoride	340.2(1)	mg/l	<0.10	0.21	0.23
Ammonia	350.1(1)	mg/l NH_3-N	<0.10	<0.10	<0.10
Nitrate	9200(2)	mg/l NO_3-N	<0.10 UJ	2.4 J	0.53 J
	9040(2)	pH units	4.34	7.22	7.21
Sulfate	9038(2)	mg/l	5.9	110	89
Specific Conductance @ 25°C	9050(2)	µmhos/cm	26.0	621	812

See footnotes at end of table.

KAS
6/30/97

Table 1
(Continued)

Parameter	Analytical Method	Units	Sample Identification 9703-2148 ALT-GW-LAE4-0397 (3/27/97)	9703-2149 ALT-GW-RFI12-0397 (3/27/97)	9703-2150 ALT-GW-RFI06-0397 (3/26/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	444	225	340
Chloride	9251(2)	mg/l	19	11	50
Cyanide (Free)	4500CN-I(3)	mg/l	<0.0050	<0.0050	<0.0050
Cyanide (Total)	9012(2)	mg/l	<0.0050	<0.0050	<0.0050
Fluoride	340.2(1)	mg/l	0.24	0.49	0.27
Ammonia	350.1(1)	mg/l NH_3-N	0.78	<0.10	1.3
Nitrate	9200(2)	mg/l NO_3-N	<0.10 UJ1	4.9 J1	<0.10 UJ1
pH	9040(2)	pH units	7.05	7.62	7.24
Sulfate	9038(2)	mg/l	150	93	270
Specific Conductance @ 25°C	9050(2)	µmhos/cm	830	601	1100

See footnotes at end of table.

KAS
6/30/97

Table 1
(Continued)

Parameter	Analytical Method	Units	Sample Identification 9703-2151 ALT-GW-LAW5-0397 (3/26/97)	9703-2152 ALT-GW-LAW6-0397 (3/26/97)	9703-2153 ALT-GW-RFI13-0397 (3/26/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	479	3510	409
Chloride	9251(2)	mg/l	280	200	86
Cyanide (Free)	4500CN-I(3)	mg/l	<0.0050	0.011	<0.0050
Cyanide (Total)	9012(2)	mg/l	<0.0050	0.011	<0.0050
Fluoride	340.2(1)	mg/l	0.18	3.8	0.25
Ammonia	350.1(1)	mg/l NH_3-N	1.1	1.4	0.22
Nitrate	9200(2)	mg/l NO_3-N	10 J1	24 J1	6.4 J1
pH	9040(2)	pH units	6.90	9.19	7.22
Sulfate	9038(2)	mg/l	880	2900	150
Specific Conductance @ 25°C	9050(2)	µmhos/cm	2820	9190	1180

See footnotes at end of table.

KAS
6/30/97

Table 1
(Continued)

Parameter	Analytical Method	Units	Sample Identification 9703-2156 ALT-GW-EB02-0327 (3/27/97)	Sample Identification 9703-2164 Method Blank (3/28/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	3.64	<2.00
Chloride	9251(2)	mg/l	<0.50	<0.50
Cyanide (Free)	4500CN-I(3)	mg/l	<0.0050	<0.0050
Cyanide (Total)	9012(2)	mg/l	<0.0050	<0.0050
Fluoride	340.2(1)	mg/l	<0.10	<0.10
Ammonia	350.1(1)	mg/l NH_3-N	<0.10	<0.10
Nitrate	9200(2)	mg/l NO_3-N	<0.10 U5	<0.10
pH	9040(2)	pH units	7.25	NAP
Sulfate	9038(2)	mg/l	<1.0	<1.0
Specific Conductance @ 25°C	9050(2)	µmhos/cm	17.4	NAP

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1987, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.
(3) Water Pollution Control Federation, 1989, Standard Methods for the Examination of Water and Wastewater, A. E. Greenbert, R. R. Trussel, L. S. Clesceri, eds., 17th ed., American Public Health Association, and American Water Works Association, Washington, DC.
(4) NAP = Not applicable.

KAS
6/30/97

Table 1
(Continued)

Parameter	Analytical Method	Units	Sample Identification 9703-2154 ALT-GW-RFI13-0397 Spike (3/26/97)	Sample Identification 9703-2155 ALT-GW-WT2-0397 (3/27/97)
Alkalinity (Total)	310.1(1)	mg/l $CaCO_3$	110%	919
Chloride	9251(2)	mg/l	116.7%	10
Cyanide (Free)	4500CN-I(3)	mg/l	NAP(4)	<0.0050
Cyanide (Total)	9012(2)	mg/l	87.4%	<0.0050
Fluoride	340.2(1)	mg/l	101%	0.20
Ammonia	350.1(1)	mg/l NH_3-N	97.6%	3.6
Nitrate	9200(2)	mg/l NO_3-N	95.51%	<0.10 U5I
pH	9040(2)	pH units	7.22	12.32
Sulfate	9038(2)	mg/l	103%	8.3
Specific Conductance @ 25°C	9050(2)	µmhos/cm	1180	3340

See footnotes at end of table.

KAS
6/30/97

Test R ort

Polarized Light Analysis Results

Project AOH704537

Sample Number / Sample Appearance	Client Sample Number	Asbestos: Chrysotile	Amosite	Crocidolite	Anthophyllite	Tremolite	Actinolite	Cellulose	Nonasbestos: Mineral Wool	Fibrous Glass	Synthetic Fibers	Other Fibers	NonFibrous Material	Run Date / Analyst
057-4169BHPL	2163	-	-	-	-	-	-	1 %	-	-	-	-	99 %	4/16/97
Black														WHP

KAS 4/30/97

Samples received on: Tuesday, April 8, 1997

Authorized Signature _____
William H. Powers, Manager-Optical
Date Thursday, April 17, 1997

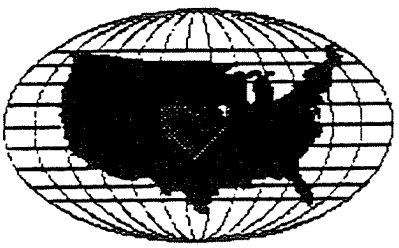
RJ Lee Group, Inc.
Headquarters

350 Hochberg Road
Monroeville, PA 15146

Phone (412) 325-1776
Fax (412) 733-1799

0000025

DATA VALIDATION WORKSHEETS



HEARTLAND
ENVIRONMENTAL SERVICES, INC.

MULTI-MEDIA VOLATILE ORGANIC FRACTION

CASE/SDG NUMBER:	97-1228
LABORATORY:	ANTECH LTD.
CLIENT:	ESC CORP.
PROJECT:	DUNKIRK
REVIEWER:	JACQUELINE A. CLEVELAND
DATE:	July 1, 1997
QA/QC LEVEL:	LEVEL 3
STATEMENT OF WORK:	SW-846 METHOD 8240
ANALYSIS MODIFICATIONS:	NYSDEC 12/91
NUMBER OF SAMPLES:	5
SAMPLE MATRIX:	WATER
NUMBER OF MS/MSDs:	0

MULTI-MEDIA VOLATILE ORGANIC FRACTION
HOLDING TIMES

CLP/SW846:		14 days from date of sampling (If properly preserved)
Region I	:	10 days from VTSR
Region III	:	14 days from date of sampling (If properly preserved)
NYSDEC	:	7 days from date VTSR

Action:	DA - The number of days that the holding time was exceeded.
DA ≤ 5:	Qualify all positive results as estimated (J).
DA > 5 ≤ 15:	Qualify all positive results as estimated (J) and all non detects estimated (UJ).
DA > 15:	Qualify all positive results estimated (J) and reject all non detects.

All associated samples met holding time requirements for analysis. No qualifications are required.

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Lab File ID: 97MR580M BFB Injection Date: 03/31/97

Instrument ID.: ELQ400M BFB Injection Time: 09:16

GC Column: RTX-502. ID: .53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	23.7
75	30.0 - 66.0% of mass 95	48.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	.0 (.0)1
174	50.0 - 120.0% of mass 95	68.5
175	4.0 - 9.0 % of mass 174	4.6 (6.7)1
176	93.0 - 101.0% of mass 174	65.3 (95.3)1
177	5.0 - 9.0% of mass 176	4.7 (7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD200		97MR581M	03/31/97	10:20
2	VSTD100		97MR582M	03/31/97	10:56
3	VSTD50		97MR583M	03/31/97	11:27
4	VSTD20		97MR584M	03/31/97	11:58
5	VSTD10		97MR585M	03/31/97	12:29
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Instrument ID: ELQ400M Calibration Date(s): 03/31/97 03/31/97

Heated Purge: (Y/N) N Calibration Times: 10:20 12:29

GC Column: RTX-502. ID: .53 (mm)

LAB FILE ID: RRF10 = 97MR585M RRF20 = 97MR584M
RRF50 = 97MR583M RRF100= 97MR582M RRF200= 97MR581M

	COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
	Chloromethane	1.970	1.944	2.013	2.014	2.461	2.081	10.3
	Bromomethane	* .964	.960	.979	.901	.728	.907	11.5
	Vinyl Chloride	* 1.157	1.000	.949	1.038	1.006	1.030	7.5
	Chloroethane	.374	.483	.383	.444	.379	.412	11.8
	Methylene Chloride	.966	.885	.931	.910	1.016	.942	5.4
	Acetone	.751	.740	.608	.752	.577	.686	12.5
	Carbon Disulfide	4.146	3.965	4.125	4.116	3.766	4.024	4.0
	1,1-Dichloroethene	* .960	.991	1.041	1.025	1.040	1.011	3.5
	1,1-Dichloroethane	* 1.962	2.070	2.203	2.185	2.361	2.156	7.0
	Trans-1,2-Dichloroethene	.865	.921	1.004	.972	1.090	.970	8.8
	Cis-1,2-Dichloroethene	1.847	1.942	2.056	2.081	2.247	2.034	7.4
	Chloroform	* 3.881	4.032	4.240	4.284	4.563	4.200	6.2
	1,2-Dichloroethane	* 2.721	2.926	3.383	3.405	3.573	3.202	11.2
	2-Butanone	1.006	1.128	1.283	1.308	1.275	1.200	10.8
	1,1,1-Trichloroethane	* .465	.481	.504	.538	.563	.510	7.9
	Carbon Tetrachloride	* .417	.420	.440	.459	.480	.443	5.0
	Bromodichloromethane	* .606	.596	.631	.641	.689	.633	5.8
	1,2-Dichloropropane	.486	.414	.462	.508	.517	.477	8.7
	Cis-1,3-Dichloropropene	* .770	.753	.826	.909	.964	.844	10.7
	Trichloroethene	* .324	.320	.348	.365	.401	.352	9.5
	Dibromochloromethane	* .541	.497	.514	.566	.578	.539	5.4
	1,1,2-Trichloroethane	* .383	.373	.428	.450	.461	.419	9.4
	Benzene	* 1.375	1.387	1.468	1.571	1.689	1.498	8.6
	Trans-1,3-Dichloropropene	* .585	.521	.631	.694	.752	.637	14.2
	Bromoform	* .287	.307	.309	.316	.295	.303	3.9
	4-Methyl-2-Pentanone	.052	.110	.220	.313	.339	.207	60.3
	2-Hexanone	.071	.093	.017	.064	.128	.075	54.7
	Tetrachloroethene	* .227	.240	.258	.254	.245	.245	5.0
	1,1,2,2-Tetrachloroethane	* .559	.525	.603	.610	.557	.571	6.2
	Toluene	* 1.366	1.444	1.619	1.656	1.633	1.544	8.4
	Chlorobenzene	* .996	.996	1.094	1.120	1.128	1.067	6.2
	Ethyl Benzene	* .419	.462	.522	.557	.553	.503	12.0
	Styrene	* 1.291	1.318	1.345	1.479	1.305	1.348	5.7
	m,p-Xylene	* .776	.677	.756	.761	.773	.749	5.8
	o-Xylene	* .765	.721	.759	.817	.755	.764	4.6
	Toluene-d8	1.388	1.308	1.376	1.434	1.408	1.383	3.4
	4-Bromofluorobenzene	* .632	.609	.639	.704	.717	.660	7.2
	1,2-Dichloroethane-d4	2.827	2.952	2.663	3.118	3.238	2.899	8.3

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of .010.

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Lab File ID: 97AP055M BFB Injection Date: 04/03/97

Instrument ID.: ELQ400M BFB Injection Time: 08:54

GC Column: RTX-502. ID: .53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	23.3
75	30.0 - 66.0% of mass 95	46.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	.6 (.8)1
174	50.0 - 120.0% of mass 95	71.0
175	4.0 - 9.0 % of mass 174	5.7 (8.0)1
176	93.0 - 101.0% of mass 174	69.7 (98.2)1
177	5.0 - 9.0% of mass 176	4.4 (6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD50.		97AP056M	04/03/97	09:19
2	V8LK1	V8LK1	97AP057M	04/03/97	10:11
3	E8010326	032144	97AP062M	04/03/97	12:51
4	TB0327	032145	97AP063M	04/03/97	13:22
5	RF050397	032146	97AP064M	04/03/97	13:52
6	LAE40397	032148	97AP065M	04/03/97	14:23
7	LAE40397DL	032148	97AP067M	04/03/97	15:23
8	WT20397	032155	97AP068M	04/03/97	16:03
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Instrument ID: ELQ400M Calibration Date: 04/03/97 Time: 09:19

Lab File ID: 97AP056M Init. Calib. Date(s): 03/31/97 03/31/97

Heated Purge: (Y/N) N Init. Calib. Times: 10:20 12:29

GC Column: RTX-502. ID: .53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D	
Chloromethane	2.081	1.566		24.7		
Bromomethane	.907	.835	.100	7.9	25.0	
Vinyl Chloride	1.030	.955	.100	7.3	25.0	
Chloroethane	.412	.407		1.2		
Methylene Chloride	.942	.721		23.5		
Acetone	.686	.468		31.8		J+
Carbon Disulfide	4.024	3.007		25.3		J+ NA
1,1-Dichloroethene	1.011	.785	.100	22.4	25.0	
1,1-Dichloroethane	2.156	1.605	.200	25.6	25.0	J+ NA
Trans-1,2-Dichloroethene	.970	.749		22.8		
Cis-1,2-Dichloroethene	2.034	1.758		13.6		
Chloroform	4.200	3.584	.200	14.7	25.0	
1,2-Dichloroethane	3.202	2.843	.100	11.2	25.0	
2-Butanone	1.200	1.143		4.8		
1,1,1-Trichloroethane	.510	.452	.100	11.4	25.0	
Carbon Tetrachloride	.443	.380	.100	14.2	25.0	
Bromodichloromethane	.633	.544	.200	14.1	25.0	
1,2-Dichloropropane	.477	.403		15.5		
Cis-1,3-Dichloropropene	.844	.765	.200	9.4	25.0	
Trichloroethene	.352	.308	.300	12.5	25.0	
Dibromochloromethane	.539	.493	.100	8.5	25.0	
1,1,2-Trichloroethane	.419	.408	.100	2.6	25.0	
Benzene	1.499	1.306	.500	12.8	25.0	
Trans-1,3-Dichloropropene	.637	.565	.100	11.3	25.0	
Bromoform	.303	.311	.100	-2.6	25.0	
4-Methyl-2-Pentanone	.207	.202		2.4		
2-Hexanone	.075	.012		84.0		J/R
Tetrachloroethene	.245	.219	.200	10.6	25.0	
1,1,2,2-Tetrachloroethane	.571	.572	.500	-.2	25.0	
Toluene	1.544	1.290	.400	16.5	25.0	
Chlorobenzene	1.067	.979	.500	8.2	25.0	
Ethyl Benzene	.503	.446	.100	11.3	25.0	
Styrene	1.348	1.273	.300	5.6	25.0	
m,p-Xylene	.749	.662	.300	11.6	25.0	
o-Xylene	.764	.736	.300	3.7	25.0	
Toluene-d8	1.383	1.123		18.8		
4-Bromofluorobenzene	.660	.600	.200	9.1	25.0	
1,2-Dichloroethane-d4	2.899	2.129		*26.6		

All other compounds must meet a minimum RRF of .010.

MULTI-MEDIA VOLATILE ORGANIC FRACTION

INTERNAL STANDARD AREA SUMMARY

Is the EICP area for each internal standard in all associated field samples, QC samples, and blanks within - 50% and + 100% of the respective internal standard EICP areas (Yes/No)?YES

If no, the non compliant internal standards have been circled in red.

If the EICP area of one (1) or more internal standard is less than -50%:

- Positive results for those compounds that are quantified using the particular internal standard are flagged as estimated (J).
- Non detected for that fraction are flagged with the sample quantitation limit classified as estimated (UJ).

If the EICP area of one (1) or more internal standards is greater than +100%:

- Positive results for those compounds that are quantified using the particular internal standard are flagged as estimated (J).

The internal standard area form 8's or equivalent have been included.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

0000155

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Lab File ID (Standard): 97AP056M Date Analyzed: 04/03/97

Instrument ID: ELQ400M Time Analyzed: 09:19

GC Column: RTX-502. ID: .53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA	#	RT	#	IS2(DFB) AREA	#	RT	#	IS3(CBZ) AREA	#	RT	#
	12 HOUR STD	75184.		9.02		444676.		13.12		540912.		20.78	
	UPPER LIMIT	150368.		9.52		889352.		13.62		1081824.		21.28	
	LOWER LIMIT	37592.		8.52		222338.		12.62		270456.		20.28	
	EPA SAMPLE NO.												
1	V8LK1	70480.		9.02		405836.		13.12		511308.		20.78	
2	EB010326	69946.		9.05		407904.		13.13		532312.		20.78	
3	TB0327	69464.		9.05		421992.		13.13		535192.		20.78	
4	RFOS0397	70457.		9.07		428170.		13.15		535296.		20.78	
5	LAE40397	70091.		9.05		406790.		13.15		534256.		20.78	
6	LAE40397DL	69613.		9.07		416476.		13.17		527824.		20.82	
7	WT20397	68183.		9.07		408346.		13.15		499848.		20.80	
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + .50 minutes of internal standard RT
RT LOWER LIMIT = - .50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

099

MULTI-MEDIA VOLATILE ORGANIC FRACTION
BLANK SUMMARY

1. Blank qualification guidelines:

   a) If a compound is found in the blank but not in the sample, no action is taken.

   b) Any compound (other than the four (4) listed below) detected in the sample, which was also detected in the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration. For the following four (4) compounds, the results are qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than ten (10) times the blank concentration.

      Common laboratory contaminants: methylene chloride
      acetone
      2-butanone

   c) The reviewer should take note that the blank analysis may not involve the same weights, volumes or dilution factors as associated samples. These factors must be taken into consideration when applying the 5X and 10X criteria.

   d) In addition, the reviewer must review the trip blanks, rinseate blanks and field blanks (if they were submitted with the data package) and all associated samples. Apply the same data validation guidelines used in assessing the method blanks.

   e) Qualification/Action codes:

      U - The sample result is greater than the CRQL and less than ten times (10X) the blank value. Cross out the "B" flag and qualify the sample result with a "U".

      CRQL - The sample result is less than the CRQL and less than ten times (10X) the blank value. Reject the sample result, cross out the "B" flag, and report the CRQL.

      No Action - The sample result is greater than the CRQL and greater than ten times (10X) the blank value.

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

V8LK1

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

Lab File ID: 97AP057M Lab Sample ID: V8LK1

Date Analyzed: 04/03/97 Time Analyzed: 10:11

GC Column: RTX-502. ID: .53 (mm) Heated Purge: (Y/N) N

Instrument ID: ELQ400M

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED	MeCl2
1	EB010326	032144	97AP062M	12:51	CRQL
2	TB0327	032145	97AP063M	13:22	
3	RF050397	032146	97AP064M	13:52	
4	LAE40397	032148	97AP065M	14:23	
5	LAE40397DL	032148	97AP067M	15:25	
6	WT20397	032155	97AP068M	16:03	
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

COMMENTS: Methylene chloride @ 1 µg/L · action @ 10 µg/L

MULTI-MEDIA VOLATILE ORGANIC FRACTION
BLANK SUMMARY - TCL SUMMARY

Type of Blank: TRIP Matrix: WATER

Sample ID: TB0327 File ID:

# Compound	Concentration	CRQL	Action Level
1.ACETONE	30 µg/L	10 µg/L	300 µg/L
2.TOLUENE	0.5 µg/L	10 µg/L	2.5 µg/L
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

	1	2	3	4	5	6	7	8	9	10
Sample ID:										
RF050397	CRQL	—								
WT20397	U	CRQL								
LAE40397	—	—								

HEARTLAND ESI VOA

MULTI-MEDIA VOLATILE ORGANIC FRACTION
BLANK SUMMARY - TCL SUMMARY

Type of Blank: RINSEATE Matrix: WATER

Sample ID: EB010326 File ID:

#	Compound	Concentration	CRQL	Action Level
1.	acetone	7 µg/L	10 µg/L	70 µg/L
2.	chloroform	11 µg/L	10 µg/L	55 µg/L
3.	bromodichloromethane	11 µg/L	10 µg/L	55 µg/L
4.	dibromochloromethane	9 µg/L	10 µg/L	45 µg/L
5.	bromoform	0.9 µg/L	10 µg/L	4.5 µg/L
6.				
7.				
8.				
9.				
10.				

Sample ID:	1	2	3	4	5	6	7	8	9	10
LAE40397	ATTB									
RF050397	ATTB									
WT20397										

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Antech Ltd. Contract:

Lab Code: ANTECH Case No.: SAS No.: SDG No.: 971228

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
1	VBLK1	99	90	99		0
2	EB010326	96	89	98		0
3	TB0327	99	86	100		0
4	RF050397	93	87	102		0
5	LAE40397	98	87	97		0
6	LAE40397DL	97	88	102		0
7	WTZ0397	101	89	93		0
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = 4-Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

MULTI-MEDIA VOLATILE ORGANIC FRACTIONSAMPLE RESULT VERIFICATION

1. Were the sample results reported within the calibration range (YES/NO)?YES, DILUTIONS WERE REQUIRED.

2. Was the percent moisture reported for all soil samples (YES/NO/NA)? NA

3. Was the data reported on a dry weight basis (YES/NO/NA)? NA

4. Did the GC/MS RIC's and TIC's exhibit interferences, off scale peaks or elevated baseline (YES/NO)? NO

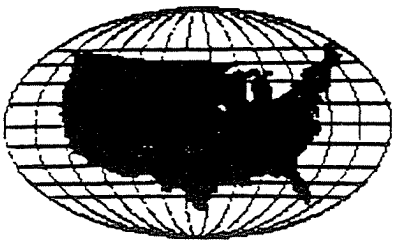
5. Did the data contain elevated detection limits that could not be verified (YES/NO)?NO

6. Were any computational or transcription errors found (YES/NO)? NO

Specific Comments:

FOR SAMPLE LAE40397, THE E-FLAGGED RESULTS ARE REJECTED, R, IN FAVOR OF THE CORRESPONDING D-FLAGGED RESULTS FROM THE DILUTION ANALYSIS. ALL OTHER RESULTS FROM THE DILUTION ANALYSIS ARE REJECTED IN FAVOR OF THE UNDILUTED RESULTS.

Reviewer: Jacqueline A. Cleveland Date: 63097



HEARTLAND
ENVIRONMENTAL SERVICES, INC.

MULTI-MEDIA SEMIVOLATILE ORGANIC FRACTION

CASE/SDG NUMBER:	1228
LABORATORY:	ANTECH LTD
CLIENT:	ESC
PROJECT:	DUNKIRK
REVIEWER:	Daniel J. Heil, A.V.P.
DATE:	June 26, 1997
QA/QC LEVEL:	LEVEL III
STATEMENT OF WORK:	SW846-8270
ANALYSIS MODIFICATIONS:	NYSDEC, CALIBRATION STDS AND SAMPLE CONCENTRATION
NUMBER OF SAMPLES:	11
SAMPLE MATRIX:	WATER
NUMBER OF MS/MSDs:	1

MULTI-MEDIA SEMIVOLATILE ORGANIC FRACTION

HOLDING TIMES

	Water	soil	Analysis
CLP:	7 days from sampling	14 days from sampling	40 days from VTSR
SW846:	7 days from sampling	14 days from sampling	40 days from VTSR
Region I:	5 days from VTSR	7 days from VTSR	40 days from VTSR
Region III:	7 days from sampling	7 days from sampling	40 days from VTSR
NYSDEC:	5 days form VTSR	5 days from VTSR	40 days From VTSR

Action: DA - The number of days that the holding time was exceeded.

DA ≤ 5:	Qualify all positive results as estimated (J).
DA > 5 ≤ 15:	Qualify all positive results as estimated (J) and all non detects estimated (UJ).
DA > 15:	Qualify all positive results estimated (J) and reject all non detects.

All associated samples met holding time requirements for extraction and/or analysis. No qualifications are required.

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Lab File ID: M30326T1.D DFTPP Injection Date: 3/25/97

Instrument ID: M3 DFTPP Injection Time: 0919

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	34.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	44.2
70	Less than 2.0% of mass 69	0.7 (1.6)1
127	25.0 - 75.0% of mass 198	47.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	23.4
365	Greater than 0.75% of mass 198	1.9
441	Present, but less than mass 443	11.7
442	40.0 - 110.0% of mass 198	78.6
443	15.0 - 24.0% of mass 442	15.3 (19.4)2

1-Value is % mass 69 2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD008	SSTD008	M30326C2.D	3/25/97	1110
02	SSTD004	SSTD004	M30326C3.D	3/25/97	1146
03	SSTD003	SSTD003	M30326C4.D	3/25/97	1222
04	SSTD001	SSTD001	M30326C6.D	3/25/97	1550
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Lab File ID: M30416T1.D DFTPP Injection Date: 4/16/97

Instrument ID: M3 DFTPP Injection Time: 1114

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	32.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	40.8
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	25.0 - 75.0% of mass 198	46.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	23.0
365	Greater than 0.75% of mass 198	1.8
441	Present, but less than mass 443	11.2
442	40.0 - 110.0% of mass 198	76.6
443	15.0 - 24.0% of mass 442	15.3 (20.0)2

1-Value is % mass 69 2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD016	SSTD016	M30416C2.D	4/16/97	1214
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

0000542

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Instrument ID: M3 Calibration Date(s): 3/25/97 4/16/97

Calibration Times: 1110 1214

Lab File ID: RRF1.0= M30326C6.D RRF3.0= M30326C4.D
RRF4.0= M30326C3.D RRF8.0= M30326C2.D RRF16.0= M30416C2.D

COMPOUND	RRF1.0	RRF3.0	RRF4.0	RRF8.0	RRF16.0	$\overline{RRF}$	% RSD
Phenol	1.614	1.771	1.845	1.734	1.816	1.756	5.1
Bis(2-chloroethyl)ether	1.235	1.427	1.481	1.392	1.505	1.408	7.5
2-Chlorophenol	1.474	1.570	1.610	1.498	1.707	1.572	5.9
1,3-Dichlorobenzene	1.628	1.726	1.873	1.805	1.970	1.801	7.3
1,4-Dichlorobenzene	1.579	1.816	1.711	1.583	2.127	1.763	12.8
1,2-Dichlorobenzene	1.456	1.613	1.627	1.554	1.879	1.626	9.6
o-Cresol	1.250	1.270	1.330	1.232	1.343	1.285	3.8
Bis(2-chloroisopropyl)ether	1.002	1.179	1.202	1.127	1.290	1.160	9.2
m/p-Cresol	1.384	1.399	1.448	1.366	1.439	1.407	2.5
N-Nitrosodi-n-propyl amine	0.912	0.894	0.983	0.895	0.963	0.929	4.4
Hexachloroethane	0.626	0.633	0.690	0.652	0.713	0.663	5.7
Nitrobenzene	0.338	0.367	0.379	0.359	0.382	0.365	4.8
Isophorone	0.603	0.683	0.694	0.674	0.708	0.672	6.1
2-Nitrophenol	0.237	0.232	0.255	0.252	0.249	0.245	4.1
2,4-Dimethylphenol	0.267	0.304	0.351	0.243	0.208	0.275	20.0
Bis(2-chloroethoxy)methane	0.430	0.501	0.507	0.489	0.532	0.492	7.7
2,4-Dichlorophenol	0.372	0.350	0.361	0.365	0.389	0.367	4.0
1,2,4-Trichlorobenzene	0.393	0.401	0.408	0.397	0.461	0.412	6.8
Naphthalene	1.033	1.281	1.264	1.198	1.444	1.244	12.0
4-Chloroaniline	0.536	0.603	0.618	0.589	0.633	0.596	6.2
Hexachlorobutadiene	0.224	0.216	0.219	0.220	0.247	0.225	5.5
4-Chloro-3-methylphenol	0.390	0.372	0.398	0.383	0.405	0.390	3.4
2-Methylnaphthalene	0.788	0.865	0.895	0.845	0.973	0.873	7.8
Hexachlorocyclopentadiene	0.117	0.207	0.237	0.158	0.129	0.169	30.2
2,4,6-Trichlorophenol	0.444	0.436	0.469	0.447	0.493	0.458	5.1
2,4,5-Trichlorophenol	0.395	0.424	0.456	0.425	0.481	0.436	7.6
2-Chloronaphthalene	1.169	1.294	1.385	1.319	1.457	1.325	8.1
2-Nitroaniline	0.329	0.334	0.347	0.354	0.339	0.341	2.9
Dimethylphthalate	1.370	1.510	1.542	1.522	1.749	1.539	8.8
Acenaphthylene	1.691	2.050	2.044	2.012	2.035	1.966	7.9
2,6-Dinitrotoluene	0.374	0.340	0.381	0.375	0.346	0.363	5.1
3-Nitroaniline	0.391	0.398	0.425	0.422	0.407	0.408	3.6
Acenaphthene	1.162	1.327	1.361	1.282	1.496	1.326	9.2
2,4-Dinitrophenol	0.082	0.125	0.169	0.187	0.100	0.133	33.5
4-Nitrophenol	0.214	0.205	0.224	0.226	0.256	0.225	8.6
Dibenzofuran	1.616	1.894	1.925	1.845	2.183	1.893	10.7
2,4-Dinitrotoluene	0.506	0.458	0.527	0.513	0.468	0.494	6.0

N/A

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Instrument ID: M3 Calibration Date(s): 3/25/97 4/16/97

Calibration Times: 1110 1214

Lab File ID: RRF1.0= M30326C6.D RRF3.0= M30326C4.D
RRF4.0= M30326C3.D RRF8.0= M30326C2.D RRF16.0= M30416C2.D

COMPOUND	RRF1.0	RRF3.0	RRF4.0	RRF8.0	RRF16.0	$\overline{RRF}$	% RSD
Diethylphthalate	1.326	1.540	1.568	1.531	1.847	1.563	11.9
4-Chlorophenyl-phenylether	0.715	0.745	0.760	0.751	0.835	0.761	5.9
Fluorene	1.244	1.499	1.554	1.452	1.691	1.488	11.0
4-Nitroaniline	0.425	0.432	0.474	0.464	0.454	0.450	4.6
2-Methyl-4,6-dinitrophenol	0.076	0.122	0.141	0.148	0.102	0.118	25.0
N-Nitrosodiphenylamine	0.539	0.641	0.635	0.582	0.712	0.622	10.5
4-Bromophenyl phenyl ether	0.259	0.259	0.261	0.254	0.292	0.265	5.8
Hexachlorobenzene	0.294	0.305	0.299	0.290	0.339	0.305	6.4
Pentachlorophenol	0.185	0.159	0.178	0.180	0.148	0.170	9.3
Phenanthrene	1.109	1.286	1.265	1.239	1.427	1.265	9.0
Anthracene	0.933	1.011	1.063	1.008	1.085	1.020	5.7
Carbazole	1.078	1.215	1.238	1.178	1.324	1.207	7.4
Di-n-Butylphthalate	1.267	1.449	1.543	1.469	1.692	1.484	10.4
Fluoranthene	1.196	1.295	1.352	1.296	1.417	1.311	6.2
Pyrene	1.338	1.556	1.593	1.518	1.698	1.541	8.5
Butylbenzylphthalate	0.782	0.743	0.856	0.815	0.874	0.814	6.6
3,3'-Dichlorobenzidine	0.477	0.482	0.539	0.477	0.489	0.493	5.3
Benzo[a]anthracene	1.343	1.369	1.448	1.389	1.496	1.409	4.4
Chrysene	1.290	1.382	1.415	1.356	1.460	1.381	4.6
Bis(2-ethylhexyl)phthalate	1.058	0.976	1.126	1.110	1.198	1.094	7.6
Di-n-octylphthalate	2.022	1.566	1.736	2.076	1.905	1.861	11.3
Benzo[b]fluoranthene	1.599	1.415	1.517	1.746	1.510	1.557	8.0
Benzo[k]fluoranthene	1.636	1.454	1.317	1.635	1.461	1.501	9.1
Benzo[a]pyrene	1.357	1.131	1.172	1.351	1.225	1.247	8.3
Indeno(1,2,3-c,d)pyrene	1.665	1.407	1.474	1.730	1.569	1.569	8.5
Dibenzo[a,h]anthracene	1.357	1.156	1.211	1.421	1.274	1.284	8.3
Benzo[g,h,i]perylene	1.438	1.196	1.277	1.485	1.353	1.350	8.7
2-Fluorophenol	1.088	1.085	1.123	1.095	1.156	1.109	2.7
Phenol-d5	1.309	1.337	1.393	1.353	1.388	1.356	2.6
2-Chlorophenol-d4	1.167	1.169	1.217	1.171	1.310	1.207	5.1
1,2-Dichlorobenzene-d4	0.804	0.828	0.852	0.788	0.952	0.845	7.6
Nitrobenzene-d5	0.301	0.309	0.331	0.311	0.325	0.315	3.9
2-Fluorobiphenyl	0.928	1.076	1.099	1.035	1.226	1.073	10.1
2,4,6-Tribromophenol	0.040	0.038	0.039	0.039	0.046	0.040	7.8
Terphenyl-d14	0.773	0.802	0.846	0.822	0.896	0.828	5.6

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : ANTECH LTD Contract: .

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Lab File ID: M30414T1.D DFTPP Injection Date: 4/14/97

Instrument ID: M3 DFTPP Injection Time: 1001

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	35.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	41.7
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	25.0 - 75.0% of mass 198	45.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	24.4
365	Greater than 0.75% of mass 198	2.4
441	Present, but less than mass 443	12.5
442	40.0 - 110.0% of mass 198	85.8
443	15.0 - 24.0% of mass 442	16.6 (19.3)2

1-Value is % mass 69 2-Value is % mass 442

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD004	SSTD004	M30414C1.D	4/14/97	1022
02	SBLK01	MBLK	M30414S2.D	4/14/97	1139
03	GW-EB01-0326	03-2144	M30414S3.D	4/14/97	1218
04	GW-RFI08-0397	03-2147	M30414S4.D	4/14/97	1257
05	GW-LAE4-0397	03-2148	M30414S5.D	4/14/97	1335
06	GW-RFI12-0397	03-2149	M30414S6.D	4/14/97	1414
07	GW-RFI06-0397	03-2150	M30414S7.D	4/14/97	1453
08	GW-LAW6-0397	03-2152	M30414S8.D	4/14/97	1531
09	GW-WT2-0397	03-2155	M30414S9.D	4/14/97	1610
10	SW-S1-0327	03-2157	M30414A1.D	4/14/97	1655
11	SW-S2-0327	03-2158	M30414A2.D	4/14/97	1733
12	SW-S3-0327	03-2159	M30414A3.D	4/14/97	1812
13	SW-S3-0327D	03-2160D	M30414A4.D	4/14/97	1851
14	SW-S3-0327MS	03-2161	M30414A5.D	4/14/97	1929
15	SW-S3-0327MSD	03-2162	M30414A6.D	4/14/97	2008
16					
17					
18					
19					
20					
21					
22					

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Instrument ID: M3 Calibration Date: 4/14/97 Time: 1022

Lab File ID: M30414C1.D Init. Calib. Date(s): 3/25/97 4/14/97

Init. Calib. Times: 1110 1214

COMPOUND	RRF	RRF4.0	MIN RRF	%D	MAX %D	
Phenol	1.756	1.680		4.3		
Bis(2-chloroethyl)ether	1.408	1.293		8.2		
2-Chlorophenol	1.572	1.542		1.9		
1,3-Dichlorobenzene	1.801	1.741		3.3		
1,4-Dichlorobenzene	1.763	1.638		7.1		
1,2-Dichlorobenzene	1.626	1.584		2.6		
o-Cresol	1.285	1.235		3.9		
Bis(2-chloroisopropyl)ether	1.160	1.065		8.2		
m/p-Cresol	1.407	1.350		4.1		
N-Nitrosodi-n-propyl amine	0.929	0.888		4.4		
Hexachloroethane	0.663	0.657		0.9		
Nitrobenzene	0.365	0.373		-2.2		
Isophorone	0.672	0.691		-2.8		
2-Nitrophenol	0.245	0.244		0.4		
2,4-Dimethylphenol	0.275	0.256		6.9		
Bis(2-chloroethoxy)methane	0.492	0.482		2.0		
2,4-Dichlorophenol	0.367	0.393		-7.1		
1,2,4-Trichlorobenzene	0.412	0.433		-5.1		
Naphthalene	1.244	1.235		0.7		
4-Chloroaniline	0.596	0.591		0.8		
Hexachlorobutadiene	0.225	0.253		-12.4		
4-Chloro-3-methylphenol	0.390	0.424		-8.7		
2-Methylnaphthalene	0.873	0.881		-0.9		
Hexachlorocyclopentadiene	0.169	0.077		(54.4)		JLS
2,4,6-Trichlorophenol	0.458	0.495		-8.1		
2,4,5-Trichlorophenol	0.436	0.470		-7.8		
2-Chloronaphthalene	1.325	1.337		-0.9		
2-Nitroaniline	0.340	0.346		-1.8		
Dimethylphthalate	1.539	1.625		-5.6		
Acenaphthylene	1.966	1.882		4.3		
2,6-Dinitrotoluene	0.363	0.370		-1.9		
3-Nitroaniline	0.408	0.389		4.7		
Acenaphthene	1.326	1.302		1.8		
2,4-Dinitrophenol	0.133	0.055		(58.6)		JLS
4-Nitrophenol	0.225	0.242		-7.6		
Dibenzofuran	1.893	1.925		-1.7		
2,4-Dinitrotoluene	0.494	0.485		1.8		

All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE CONTINUING CALIBRATION CHECK

0000566

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Instrument ID: M3 Calibration Date: 4/14/97 Time: 1022

Lab File ID: M30414C1.D Init. Calib. Date(s): 3/25/97 4/16/97

Init. Calib. Times: 1110 1214

COMPOUND	$\overline{RRF}$	RRF4.0	MIN RRF	%D	MAX %D
Diethylphthalate	1.563	1.621		-3.7	
4-Chlorophenyl-phenylether	0.761	0.796		-4.6	
Fluorene	1.488	1.498		-0.7	
4-Nitroaniline	0.450	0.443		1.6	
2-Methyl-4,6-dinitrophenol	0.118	0.073		38.1	
N-Nitrosodiphenylamine	0.622	0.646		-3.9	
4-Bromophenyl phenyl ether	0.265	0.285		-7.5	
Hexachlorobenzene	0.305	0.332		-8.9	
Pentachlorophenol	0.170	0.167		1.8	
Phenanthrene	1.265	1.324		-4.7	
Anthracene	1.020	0.998		2.2	
Carbazole	1.207	1.221		-1.2	
Di-n-Butylphthalate	1.484	1.573		-6.0	
Fluoranthene	1.311	1.338		-2.1	
Pyrene	1.541	1.505		2.3	
Butylbenzylphthalate	0.814	0.802		1.5	
3,3'-Dichlorobenzidine	0.493	0.432		12.4	
Benzo[a]anthracene	1.409	1.415		-0.4	
Chrysene	1.381	1.372		0.7	
Bis(2-ethylhexyl)phthalate	1.094	1.077		1.6	
Di-n-octylphthalate	1.861	1.855		0.3	
Benzo[b]fluoranthene	1.557	1.507		3.2	
Benzo[k]fluoranthene	1.501	1.587		-5.7	
Benzo[a]pyrene	1.247	1.231		1.3	
Indeno(1,2,3-c,d)pyrene	1.569	1.551		1.1	
Dibenzo[a,h]anthracene	1.284	1.238		3.6	
Benzo[g,h,i]perylene	1.350	1.333		1.3	
2-Flurophenol	1.109	1.058		4.6	
Phenol-d5	1.356	1.341		1.1	
2-Chlorophenol-d4	1.207	1.198		0.7	
1,2-Dichlorobenzene-d4	0.845	0.826		2.2	
Nitrobenzene-d5	0.315	0.324		-2.9	
2-Fluorobiphenyl	1.073	1.072		0.1	
2,4,6-Tribromophenol	0.040	0.045		-12.5	
Terphenyl-d14	0.828	0.827		0.1	

5

All other compounds must meet a minimum RRF of 0.010.

MULTI-MEDIA SEMIVOLATILE ORGANIC FRACTION INTERNAL STANDARD AREA SUMMARY

Is the EICP area for each internal standard in all associated field samples, QC samples, and blanks within - 50% and + 100% of the respective internal standard EICP areas (Yes/No)? YES

If no, the non compliant internal standards have been circled in red.

If the EICP area of one (1) or more internal standard is less than -50%:

- Positive results for those compounds that are quantified using the particular internal standard are flagged as estimated (J).
- Non detected for that fraction are flagged with the sample quantitation limit classified as estimated (UJ).

If the EICP area of one (1) or more internal standards is greater than +100%:

- Positive results for those compounds that are quantified using the particular internal standard are flagged as estimated (J).

The internal standard area form 8's or equivalent have been included.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Lab File ID (Standard): M30414C1.D Date Analyzed: 4/14/97

Instrument ID: M3 Time Analyzed: 1022

		IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	513437	4.56	1781454	5.34	1135941	6.53
	UPPER LIMIT	1026874	5.06	3562908	5.84	2271882	7.03
	LOWER LIMIT	256719	4.06	890727	4.84	567971	6.03
	EPA SAMPLE NO.						
01	SBLK01	365133	4.55	1303032	5.33	803449	6.50
02	GW-EB01-0326	436849	4.55	1572357	5.32	988099	6.49
03	GW-RFI08-0397	343380	4.55	1251773	5.33	737240	6.52
04	GW-LAE4-0397	345523	4.55	1218524	5.33	760594	6.52
05	GW-RFI12-0397	473519	4.55	1703800	5.32	1059714	6.49
06	GW-RFI06-0397	435592	4.55	1554332	5.33	975196	6.51
07	GW-LAW6-0397	335328	4.55	1225183	5.33	740856	6.50
08	GW-WT2-0397	384154	4.55	1838793	5.32	893680	6.49
09	SW-S1-0327	436323	4.56	1568446	5.35	962188	6.55
10	SW-S2-0327	429467	4.55	1556680	5.33	971855	6.50
11	SW-S3-0327	431431	4.54	1489771	5.32	950373	6.48
12	SW-S3-0327D	448141	4.55	1574135	5.33	971790	6.50
13	SW-S3-0327MS	405936	4.55	1446001	5.34	913543	6.53
14	SW-S3-0327MSD	424899	4.56	1510306	5.35	938779	6.56
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = 1,4-Dichorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

00000321

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Lab File ID (Standard): M30414C1.D Date Analyzed: 4/14/97

Instrument ID: M3 Time Analyzed: 1022

		IS4 AREA	#	RT	#	IS5 AREA	#	RT	#	IS6 AREA	#	RT	#
	12 HOUR STD	1887021		7.73		1695846		11.99		1538508		17.94	
	UPPER LIMIT	3774042		8.23		3391692		12.49		3077016		18.44	
	LOWER LIMIT	943511		7.23		847923		11.49		769254		17.44	
	EPA SAMPLE NO.												
01	SBLK01	1329082		7.69		1122653		11.92		1148372		17.87	
02	GW-EB01-0326	1605561		7.66		1384315		11.90		1385573		17.84	
03	GW-RFI08-0397	1238769		7.71		1032148		11.96		1024970		17.90	
04	GW-LAE4-0397	1239054		7.70		1065165		11.95		1084735		17.90	
05	GW-RFI12-0397	1754377		7.68		1524135		11.91		1523500		17.87	
06	GW-RFI06-0397	1625394		7.70		1371884		11.94		1378531		17.90	
07	GW-LAW6-0397	1238809		7.68		1043661		11.93		1017508		17.87	
08	GW-WT2-0397	1456979		7.67		1239531		11.92		1256560		17.86	
09	SW-S1-0327	1633948		7.75		1358892		12.02		1336054		18.00	
10	SW-S2-0327	1587564		7.69		1359712		11.94		1347768		17.91	
11	SW-S3-0327	1528128		7.65		1314946		11.89		1305124		17.84	
12	SW-S3-0327D	1625613		7.68		1381976		11.93		1372487		17.88	
13	SW-S3-0327MS	1500595		7.72		1276129		11.98		1279633		17.93	
14	SW-S3-0327MSD	1558285		7.77		1344450		12.05		1345036		17.99	
15													
16													
17													
18													
19													
20													
21													
22													

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-D12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

MULTI-MEDIA SEMIVOLATILE ORGANIC FRACTION BLANK SUMMARY

1. Blank qualification guidelines:

   a) If a compound is found in the blank but not in the sample, no action is taken.

   b) Any compound (other than listed below) detected in the sample, which was also detected in the associated blank, must be qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than five (5) times the blank concentration. For the following compounds, the results are qualified by elevating the limit of detection or adjusting the limit of detection to the sample result, when the sample concentration is less than ten (10) times the blank concentration.

      Common laboratory contaminants: phthalates

   c) The reviewer should take note that the blank analysis may not involve the same weights, volumes or dilution factors as associated samples. These factors must be taken into consideration when applying the 5X and 10X criteria.

   d) In addition, the reviewer must review the trip blanks, rinseate blanks and field blanks (if they were submitted with the data package) and all associated samples. Apply the same data validation guidelines used in assessing the method blanks.

   e) Qualification/Action codes:

      U - The sample result is greater than the CRQL and less than ten times (10X) the blank value. Cross out the "B" flag and qualify the sample result with a "U".

      CRQL - The sample result is less than the CRQL and less than ten times (10X) the blank value. Reject the sample result, cross out the "B" flag, and report the CRQL.

      No Action - The sample result is greater than the CRQL and greater than ten times (10X) the blank value.

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
SBLK01

Lab Name: ANTECH LTD Contract:

Lab Code: Case No.: 97-1228 SAS No.: SDG No.: 1228

Lab File ID: M30414S2.D Lab Sample ID: MBLK

Instrument ID: M3 Date Extracted: 4/2/97

Matrix: (soil/water) WATER Date Analyzed: 4/14/97

Level: (low/med) Time Analyzed: 1139

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	GW-EB01-0326	03-2144	M30414S3.D	04/14/97
02	GW-RFI08-0397	03-2147	M30414S4.D	04/14/97
03	GW-LAE4-0397	03-2148	M30414S5.D	04/14/97
04	GW-RFI12-0397	03-2149	M30414S6.D	04/14/97
05	GW-RFI06-0397	03-2150	M30414S7.D	04/14/97
06	GW-LAW6-0397	03-2152	M30414S8.D	04/14/97
07	GW-WT2-0397	03-2155	M30414S9.D	04/14/97
08	SW-S1-0327	03-2157	M30414A1.D	04/14/97
09	SW-S2-0327	03-2158	M30414A2.D	04/14/97
10	SW-S3-0327	03-2159	M30414A3.D	04/14/97
11	SW-S3-0327D	03-2160D	M30414A4.D	04/14/97
12	SW-S3-0327MS	03-2161	M30414A5.D	04/14/97
13	SW-S3-0327MSD	03-2162	M30414A6.D	04/14/97
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

MULTI-MEDIA SEMIVOLATILE ORGANIC FRACTION
BLANK SUMMARY - TCL SUMMARY

Type of Blank: RINSEATE Matrix: WATER

Sample ID: GW-EB01-0326 File ID:

#	Compound	Concentration	CRQL	Action Level
1.	NONE			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

	1	2	3	4	5	6	7	8	9	10
Sample ID:										

ALL ASSOCIATED SAMPLES

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

0000314

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

	EPA SAMPLE NO.	S1 2PF #	S2 PHE #	S3 2CP #	S4 DCB #	S5 NB5 #	S6 2FB #	S7 TBP #	S8 TPD #	TOT OUT
01	SBLK01	78	81	85	88	71	97	86	96	
02	GW-EB01-0326	88	90	93	94	87	100	109	84	
03	GW-RFI08-0397	88	91	93	95	85	108	108	63	
04	GW-LAE4-0397	88	92	94	93	88	103	114	68	
05	GW-RFI12-0397	82	85	85	90	82	94	102	81	
06	GW-RFI06-0397	85	87	89	92	85	98	102	98	
07	GW-LAW6-0397	3 *	0 *	7 *	98	95	108	60	65	3
08	GW-WT2-0397	94	98	103	100	72	104	131 *	97	1
09	SW-S1-0327	87	89	89	93	86	98	106	94	
10	SW-S2-0327	84	91	92	90	87	100	110	87	
11	SW-S3-0327	84	87	90	91	89	97	106	59	
12	SW-S3-0327D	86	88	91	92	88	101	106	82	
13	SW-S3-0327MS	93	93	96	98	95	104	110	56	
14	SW-S3-0327MSD	88	90	92	93	90	103	109	94	
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

JR
NA

	QC LIMITS
S1 2PF = 2-Flurophenol	(21-110)
S2 PHE = Phenol-d5	(10-110)
S3 2CP = 2-Chlorophenol-d4	(33-110)
S4 DCB = 1,2-Dichlorobenzene-d4	(18-110)
S5 NB5 = Nitrobenzene-d5	(35-114)
S6 2FB = 2-Fluorobiphenyl	(43-116)
S7 DBP = 2,4,6-Tribromophenol	(10-123)
S8 TPD = Terphenyl-d14	(33-141)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ANTECH LTD Contract: _____

Lab Code: _____ Case No.: 97-1228 SAS No.: _____ SDG No.: 1228

Matrix Spike - EPA Sample No.: SW-S3-0327

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Phenol	160	0	110	69	(12-110)
2-Chlorophenol	160	0	110	69	(27-123)
1,4-Dichlorobenzene	110	0	76	69	(36-97)
N-Nitrosodi-n-propyl amine	110	0	74	67	(41-116)
1,2,4-Trichlorobenzene	110	0	78	71	(39-98)
4-Chloro-3-methylphenol	160	0	130	81	(23-97)
Acenaphthene	110	0	79	72	(46-118)
4-Nitrophenol	160	0	130	81 *	(10-80)
2,4-Dinitrotoluene	110	0	81	74	(24-96)
Pentachlorophenol	160	0	150	94	(9-103)
Pyrene	110	0	82	75	(26-127)

NA

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
Phenol	160	110	69	0	42	(12-110)
2-Chlorophenol	160	110	69	0	40	(27-123)
1,4-Dichlorobenzene	110	71	65	7	28	(36-97)
N-Nitrosodi-n-propyl amine	110	76	69	3	38	(41-116)
1,2,4-Trichlorobenzene	110	78	71	0	28	(39-98)
4-Chloro-3-methylphenol	160	120	75	8	42	(23-97)
Acenaphthene	110	77	70	3	31	(46-118)
4-Nitrophenol	160	130	81 *	0	50	(10-80)
2,4-Dinitrotoluene	110	81	74	0	38	(24-96)
Pentachlorophenol	160	150	94	0	50	(9-103)
Pyrene	110	82	75	0	31	(26-127)

NA

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 2 out of 22 outside limits

Comments: _____

MULTI-MEDIA SEMIVOLATILE ORGANIC FRACTION
FIELD DUPLICATE SAMPLE SUMMARY

Sample ID: SW-S3-0327 **Dupliacte Sample ID:** SW-S3-0327D

Water: **RPD > 30%** **Soil:** **RPD > 50%**

Compound	Sample Conc.	Dup. Sample Conc.	RPD
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??
			??

Comments: No qualifications are required.

MULTI-MEDIA SEMIVOLATILE ORGANIC FRACTION SAMPLE RESULT VERIFICATION

1. Were the sample results reported within the calibration range (YES/NO)? YES

2. Was the percent moisture reported for all soil samples (YES/NO/NA)? NA

3. Was the data reported on a dry weight basis (YES/NO/NA)? NA

4. Did the GC/MS RIC's and TIC's exhibit interferences, off scale peaks or elevated baseline (YES/NO)? NO

5. Did the data contain elevated detection limits that could not be verified (YES/NO)?NO

6. Were any computational or transcription errors found (YES/NO)? NO

Specific Comments:

Reviewer Daniel J. Heil AVP Date: 6/26/97

1228

DATA DELIVERABLES (DQO Level IV or D)
INORGANICS - PART I

Site Name: Dunkirk

Client: Al Tech - ~~ESE~~ 15 6/30

Location: ESC

Lab: Antech Ltd.

Analytical Fraction: TAL w/CN + asbestos

Reviewer: K. Sappington

Date(s): 6/30/97

A.	Control Chart - results of the method blank spikes run with each batch of samples processed	: Yes No	(NR)
B.	CLP Form 1s with associated sample results and CLP flagging system. All percent moistures for soils and discussion of sample type	: (Yes) No	NR
C.	CLP Form 2s with Initial and continuing calibration standards (part 1 only)	: (Yes) No	NR
D.	CLP Form 3s with prep and method blanks	: (Yes) No	NR
E.	CLP Form 4s with Interference check sample data	: (Yes) No	NR
F.	CLP Form 5s with Matrix spike recovery and the postdigestion spike recovery for ICP Metals. Only done if predigest spike recovery exceeds limits	: (Yes) No	NR
G.	CLP Form 6s with Duplicate data results	: (Yes) No	NR
H.	CLP Form 7s with LCS data results	: (Yes) No	NR
I.	CLP Form 8s with GFAA standard addition data	: Yes No	(NR)
J.	CLP Form 9s with Serial Dilution data results	: (Yes) No	NR

DATA DELIVERABLES (DQO Level IV or D)
INORGANICS - PART II

K.	CLP Form 10s with Instrument Detection Data	(Yes)	No	NR
L.	CLP Forms 11 and 12 with Quarterly Verification of Instrument Parameters	(Yes)	No	NR
M.	CLP Form 13s with Preparation Log data	(Yes)	No	NR
N.	CLP Form 14s with Run Log data	(Yes)	No	NR

HEARTLAND ESI Form A

DATA DELIVERABLE REQUIREMENTS

A.	Permanently Bound	Yes	(No)	NR
B.	Paginated	(Yes)	No	NR
C.	Table of Contents	Yes	(No)	NR
D.	Digestion Records ~~(internal C-O-C)~~	(Yes)	No	(NR) KC 6/30/97
E.	Chain-Of-Custody (external)	(Yes)	No	NR
F.	Case Narrative			
	1. Sample list with Client and Lab IDs cross-referenced (copy attached)	(Yes)	No	NR
	2. All Protocol deviations and QC problems noted	(Yes)	No	NR
	3. Comments:			
G.	Uninitialed Strikeovers	(Yes)	No	NR p. 67-69 C1
H.	Legible Photocopies	(Yes)	No	NR
I.	Consistent Dates	(Yes)	No	NR
J.	Preparation Logs	(Yes)	No	NR
K.	Instrument Run Logs	(Yes)	No	NR
L.	Other Deviations or Comments:			

HEARTLAND ESI Form B

HOLDING TIMES FOR METALS

1. Was the holding time exceeded on any of the Metal Fractions

   ICP/GFAA/FAA - Holding time of 6 months VTSR
   Mercury - Holding time of 28 days VTSR
   Cyanide - Holding time of 14 days VTSR

   (Yes) No

2. If yes, complete the following form for all samples that exceeding holding times.

   Fraction: nitrate

Sample ID	Matrix	VTSR	Date of Analysis	DA	QC Decision
All	H2O	3/28/97	4/1/97	3	UJ
			4/30/97		
		KAS			

Note: DA = The number of days holding time to analysis is exceeded.

S = Non-aqueous
A = Aqueous
X = Air

QA Decision: Results > IDL - J - estimated

Results < IDL - R - rejected

HEARTLAND ESI Form C-1

INSTRUMENT CALIBRATION AND INITIAL CALIBRATION VERIFICATION (ICV)

Associated Samples all

1. a. Was the ICP instrument properly standardized? (Yes) No
   If no, explain and list action. _____

   b. Was the furnace instrument properly standardized? If no, were the required standards analyzed immediately after the instrument calibration and results within 95-105% recovery? Yes No
   If no, explain and list action. n/a

   c. Were the instruments for the analyses of Cyanide and Mercury properly standardized? (Yes) No
   If no, explain and list action. _____

2. Was the ICV analyzed immediately after the system(s) were calibrated? (Yes) No
   If no, explain and list action. _____

3. Was the ICV analyzed for every analyte? (Yes) No
   If no, explain and list action. _____

4. Do all ICV analytes meet the QC requirements for % recovery? (Yes) No
   If no, list affected analytes, their % recovery, and action for which:

   a. % recovery is between 75-89% (CN, 70-84% or HG, 65-79%)

HEARTLAND ESI Form C-2

b. % recovery is between 111-125% (CN, 116-130% or HG, 121-135%)_____

c. % recovery is less than 75% or greater than 125%(CN, <70 or >130%, Hg <65 or >135)_____

5. a. Show calculation for the % recovery of one ICV analyte by ICP. Lab value 99.69%

$$\frac{9962.90}{10000.0} \times 100 = 99.69\%$$

b. Show calculation for the % recovery of one ICV analyte by furnace AA. Lab value n/a

c. Show calculation for the ICV % recovery of Mercury. Lab Value 104.8%

$$\frac{2.62}{2.5} \times 100 = 104.8\%$$

d. Show calculation for the ICV % recovery of Cyanide. Lab value ~~104.34%~~ 97.69%

$$\frac{0.122}{0.125} \times 100 = 97.69\% \qquad \frac{0.313}{0.3} \times 100 = 104.34\%$$

6/30/97

6. Specific comments:_____

HEARTLAND ESI Form D-1

CONTINUING CALIBRATION VERIFICATION (CCV)

Associated Samples All

1. a. Was the CCV performed every two hours or at the 10% frequency? (Yes) No
If no, list action.

b. Was the CCV performed at the beginning and end of the sample analysis? (Yes) No
If no, list action.

2. Were the CCV standards analyzed for all analytes? (Yes) No
If no, list affected analytes, their associated samples and action.

3. Was the same concentration used for CCV throughout the analyses? (Yes) No
If no, list affected analytes, their associated samples and action.

4. Do all CCV analytes meet the QC requirements for % recovery? (Yes) No
If no, list affected analytes, their associated samples and action for which:

a. % recovery is between 75-89%(CN,70-84% or Hg, 65-79%)

b. % recovery is between 111-125%(CN,116-130% or Hg, 121-135%)

c. % recovery is less than 75% or greater than 125%(CN, <70 or >130%, Hg, <65 or <135%)

HEARTLAND ESI Form D-2

5. a. Show calculation for the % recovery of one CCV analyte analyzed by ICP. V

Lab value 97.2%

$\frac{971.61}{1000.0} \times 100 = 97.2\%$

b. Show calculation for the % recovery of one CCV analyte analyzed by furnace AA.

Lab value N/A

c. Show calculation for the % recovery of one CCV analyte analyzed for Mercury.

Lab value 94.0%

$\frac{2.35}{2.5} \times 100 = 94.0\%$

d. Show calculation for the % recovery of one CCV analyte for Cyanide.

Lab value 110 ~~84~~ 113%

$\frac{0.113}{0.1} \times 100 = 113\%$ ~~$\frac{0.277}{0.25} \times 100 = 110.8\%$~~ 15 6/30/97

6. Specific comments: _____

HEARTLAND ESI Form F

INITIAL & CONTINUING CALIBRATION BLANK

Associated Samples All

1. Were the initial calibration blanks analyzed for all analytes and run after the initial calibration verification? (Yes) No
   If no, list affected analytes, and action.

2. Was the absolute value for all analytes in the initial calibration blank below the CRDL? (Yes) No
   If no, list affected analytes and reject them.

3. Were the continuing calibration blanks analyzed for all analytes and run after the continuing calibration verification? (Yes) No
   If no, list affected analytes, associated samples and action.

4. Was the frequency for the continuing calibration blanks correct? (Yes) No
   If no, list affected analytes, associated samples and action.

5. Was the absolute value of all analytes for the continuing calibration blank below the CRDL? (Yes) No
   If no, list affected analytes, associated samples and reject them.

HEARTLAND ESI Form G

PREPARATION BLANK SUMMARY

Sample Matrix: Soil (Water) Air Preparation Blank ID PBW
Units: mg/kg (ug/l) ug/m3

1. Did the frequency of the preparation blank analysis meet method requirements? (Yes) No
If no, explain and note action.

Analyte	: Conc	: <CRDL	: Comments/Action
	:	:	:
	:	:	:
	:	:	:
	:	:	:
	:	:	:
	:	:	:
	:	:	:
	:	:	:
	:	:	:
	:	:	:
	:	:	:
	:	:	:

KAS 6/30/97

Associated Samples

CRDL Codes: Yes < CRDL
No > CRDL

HEARTLAND ESI Form H

ICP INTERFERENCE CHECK SAMPLE

Associated Samples all

1. Was an ICP interference check sample performed at the correct frequency? (Yes) No
   If no, note any deviations and action.

2. a. Were the interferents for solution A reported? (Yes) No
      If no, note deviations

   b. Were the analytes and interferents for solution AB reported? (Yes) No
      If no, note deviations

3. Were the concentrations of Al, Ca, Fe and Mg in associated samples found to be significantly less than (i.e., < 50%) their respective concentrations in solution A? Yes (No)
   If yes, no action is required.

4. Did all required analytes in solution AB meet the QC limit of 80-120%? (Yes) No
   If no,
   a. List any analytes and their % recovery which are greater than or equal to 30% but less than 80% and action.

   b. List any analytes and their % recovery which are greater than 120% and action.

   c. List any analytes and their % recovery which are less than 30% and action.

5. Show the calculation for % recovery for one analyte in solution AB.
   Pb $\frac{98.3}{100} \times 100 = 95.6\%$. Lab value 95.6%

HEARTLAND ESI Form I-1

SAMPLE SPIKE ANALYSIS

Sample Spike Analysis performed on sample 3-0397 -Tal
3-2154 - w/C

Matrix:	Soil	(Water) circled	Air
Units:	mg/kg	ug/l	ug/m3

% Solids /

Associated Samples All

1. Was the sample spike analysis performed at the correct frequency? **(Yes)** No
   If no, note deviations and action.

2. Was the sample spike analysis performed on a field sample? **(Yes)** No
   If no, reject all associated samples.

3. a. Were two analytical methods used to obtain reported values for one analyte? Yes **(No)**
   If yes, list analytes

   b. Was sample spike analysis performed using both methods for that analyte? Yes No
   If no, reject affected sample(s) which did not have spike analysis performed.

4. Was sample analysis performed at the proper concentration? **(Yes)** No
   If no, list analytes and qualify.

5. Did the % recovery for all analytes meet the criteria of 75-125%? Yes **(No)**
   If no, list only those analytes which % recovery are out and whose sample result (SR) is less than 4 times the sample added (SA). List % recovery in parenthesis next to the analyte out and action. Ag (49.4%) - qualify All results as est 'J' a 415.

HEARTLAND ESI Form I-2

6. Were outliers for % recovery flagged with the "N" qualifier? (Yes) No
If no, list analytes not flagged. _____

7. a. Show calculation for % recovery for one analyte analyzed by ICP. Cr Lab value 83.5%

$$\frac{176.2237 - 9.2911}{200.00} \times 100 = 83.5\%$$

b. Show calculation for % recovery for one analyte analyzed by furnace AA. Lab value n/a

c. Show calculation for % recovery for Mercury. Lab value 80.7%

$$\frac{0.8066 - 4}{1.00} \times 100 = 80.7\%$$

d. Show calculation for % recovery for Cyanide. Lab value 106%

Data not avail.

HEARTLAND ESI Form K-1

DUPLICATE ANALYSIS

Duplicate Analysis performed on sample 3-0397

Matrix: Soil (Water) Air
Units: mg/kg (ug/l) ug/m3
% Solids: /

Associated Samples all

1. Were duplicate analyses performed at the correct frequency? (Yes) No
   If no, note deviations and action.

2. Was duplicate analysis performed on a field sample? (Yes) No
   If no, reject all associated samples.

3. Were two analytical methods used to obtain reported values for one analyte? Yes (No)
   If yes,
   a. List analytes
   b. Were duplicate analysis performed using both methods for that analyte? Yes No
      If no, reject affected samples which did not have duplicate analysis performed.

4. Is the laboratory using the correct control limit (i.e. ±CRDL or 20% for water and ±CRDL or 35% for soils criteria) to judge duplicate RPD results? (Yes) No
   If no, note deviations.

HEARTLAND ESI Form K-2

5. Do all analytes meet these QC control limits? Yes (No)
If no, list the analytes outside the limits and qualify these analytes. Pb - qualify all pD results as est "J".

6. Were outliers correctly flagged with the "*" qualifier? (Yes) No
If no, list those analytes not correctly flagged.

7. a. Show calculation for RPD for one analyte analyzed by ICP. Lab value 1.3%

Zn

$$\frac{|14.0902 - 14.2678|}{(14.0902 + 14.2678)/2} \times 100 = 1.2\%$$

rounding

b. Show calculation for RPD for one analyte analyzed by furnace AA. Lab value N/A

c. Show calculation for RPD for Mercury. Lab value NR

d. Show calculation for RPD for Cyanide. Lab value NR

HEARTLAND ESI Form L

LABORATORY CONTROL SAMPLE

Matrix: Soil (Water) Air
Units: mg/kg ug/l ugm3

Associated Samples All

1. Was the laboratory control sample performed at the correct frequency? (Yes) No
   If no, give action.

2. Do all analytes meet the QC limits of 80-120% (except Silver, Antimony, Mercury and Cyanide for aqueous samples) or within the control limits established by EPA for soils? (Yes) No
   If no, list analytes, their recovery and action.

3. a. Show the calculation for % recovery for at least one analyte by ICP. BL

   Lab value 93.8%

   $\frac{46.91}{50.0} \times 100 = 93.8\%$

   b. Show the calculation for % recovery for at least one analyte analyzed by furnace AA.

   Lab value N/A

   c. Show the clacuiation for % recovery of Mercury (soil only).

   Lab value /

HEARTLAND ESI Form N

SAMPLE RESULT VERIFICATION

Associated Samples All

1. Were all samples reported within the calibration range? (Yes) No
   If no, list affected samples and action.

2. Was the % solids analysis performed for all nonaqueous samples? Yes No
   If no, list affected samples and action. N/a

3. Show calculation for % solids for one sample.
   Lab value N/a

4. Was the raw data free of any anomalies? (Yes) No
   If no, list affected samples and action.

5. Was the data package free of any computational or transcriptional errors? (Yes) No
   If no, list affected samples and action.

6. Verify that nonaqueous samples were reported on a dry weight basis by recalculating the results for one analyte in a sample.
   Lab value N/a

HEARTLAND ESI Form O

ICP SERIAL DILUTION

Serial Dilution performed on Sample 1-0326 & 3-0397
Dilution Factor 5

Matrix: Soil (Water) Air
Units: mg/kg ug/l ug/m3

Associated Samples All

1. Was a serial dilution performed at the correct frequency? (Yes) No
   If no, give action.

2. Was a field sample used for serial dilution? (Yes) No
   If no, give action.

3. For all analytes greater than fifty times the IDL, was a serial dilution performed? (Yes) No
   If no, test analytes and reject them.

4. a. For all analytes greater than ten times the IDL, did the the serial dilution analysis meet the QC limit of 10% D? (Yes) No
   If no, list those analytes outside the limits and qualify them.

   b. Show a calculation for % D for one analyte analyzed by ICP.

Mn

Lab Value 5.7%

$$\frac{106.92 - 100.82}{106.92} \times 100 = 5.7\%$$

HEARTLAND ESI Form P

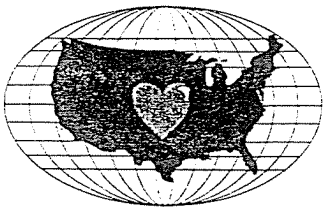
QUARTERLY VERFICATION OF INSTRUMENT PARAMETERS

1. Was the IDL analyzed and reported quarterly (every three calender months) for each element on Form X. (Yes) No
   If no, explain and list action._____

2. Was the IDL below the CRDL for each element? (Yes) No
   If no, explain and list action._____

3. Was the ICP interelement correction factor analyzed and reported for each element on Form 11 and 12. (Yes) No
   If no, explain and list action._____

4. Was the linear range analyzed and reported annually and quarterly respectfully for each element on Form 11 and 12. (Yes) No
   If no, explain and list action._____



HEARTLAND
ENVIRONMENTAL SERVICES, INC.

Data Validation Report

SDG#:	483803
Date:	November 19, 1997
Client Name:	ESC
Project/Site Name:	Al Tech - Dunkirk
Date Sampled:	October 2, 1997
Number of Samples:	7 Non-aqueous Sample(s) with 1 MS/MSD(s)
Laboratory:	Upstate Laboratories, Inc.
Validation Guidance:	NYSDEC
QA/QC Level:	Level III
Method(s) Utilized:	SW846 Third Edition
Analytical Fractions:	Hexavalent Chromium, pH, % Solids

Analytical data in this report were screened to determine usability of results and also to determine contractual compliance relative to these requirements and deliverables. This screening assumes analytical results are correct as reported and merely provides an interpretation of the reported quality control results. A minimum of 10% of all laboratory calculations have been verified as part of this validation. All instrument output, i.e. spectra, chromatograms, etc., for each sample have been carefully reviewed. The end-user is urged to review the Specific Findings and associated Data Qualifications presented in this report. Annotated Form 1s or spreadsheets for all samples reviewed are included after the Data Assessment Narratives. Form 1s for MS/MSD samples or spreadsheets are not annotated.

The release of this Data Validation Report is authorized by the following signature:

Craig G. Sexton

Eugene M. Watson, Vice President

11/19/97

Date

4127 Plaza 94 South · St. Charles, MO 63304
(314) 936-1332 · Fax (314) 936-1335

SDG# 483803

Samples and Fractions Reviewed

Sample Identifications Analytical Fractions

ESC ID	Matrix	W/C	
ALT-BS01R-0003	SOIL		X
ALT-BS02R-0003	SOIL		X
ALT-BS03R-0003	SOIL		X
ALT-BS04R-0003	SOIL		X
ALT-BS05R-0003	SOIL		X
ALT-BS06R-0003	SOIL		X
ALT-BS07R-0003	SOIL		X
ALT-BS07R-0003MS	SOIL		X
ALT-BS07R-0003MSD	SOIL		X
Total Billable Samples (Water/Soil)		0	9

W/C=Hexavalent Chromium, pH, % Solids

DATA ASSESSMENT NARRATIVE
Hexavalent Chromium, pH and Solids

General

The inorganic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike and LCS recoveries, matrix duplicates and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the SW 846 Methods; the Functional Guidelines for Inorganic Data Validation, New York State modifications and DQO Level IV requirements. All comments made within this report should be considered when examining the analytical results. Please refer the specific findings found in each category to the Summary of Data Qualification table.

SDG # 27697071

A validation was performed on the Hexavalent Chromium, pH and Solids Data from SDG 27697071. The data was evaluated based on the following parameters.

*	●	Data Completeness
*	●	Holding Times
*	●	Calibrations
*	●	Blanks
	●	Matrix Spike Recovery
*	●	Matrix Duplicates
*	●	Laboratory Control Samples

* - All criteria were met for this parameter.

Matrix Spike Recovery

1. The Matrix Spike recovery for Hexavalent Chromium (4*%) was below the lower control limits (>30% but <75%). All positive and non-detect results are qualified as estimated, "J" or "UJ".

SUMMARY OF DATA QUALIFICATIONS

Sample ID	Analyte	DL	QL
1. All soil samples	Hex Cr.	+/U	J/UJ

DATE: 10/21/97

U[illegible]te Laboratories, Inc.
An[illegible]ysis Results
Report Number: 27697071
Client I.D.: ANTECH, LTD.

APPROVAL:
QC:
Lab I.D.: 10170
Sampled by: ENV. STRATEGIES CORP.

ID:27697071 Mat:Soil 483803 AL TECH DUNKIRK NY ALT-BSO1R-0003 0800H 10/02/97

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
pH	5.3SU	10/06/97		WB9099
Hexavalent Chromium	<1.6mg/kg dw UJ	10/03/97		WB9081
Percent Solids	64%	10/03/97		WB9092

ID:27697072 Mat:Soil 483803 AL TECH DUNKIRK NY ALT-BSO2R-0003 0810H 10/02/97

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
pH	5.1SU	10/06/97		WB9099
Hexavalent Chromium	<1.6mg/kg dw UJ	10/03/97		WB9081
Percent Solids	64%	10/03/97		WB9092

ID:27697073 Mat:Soil 483803 AL TECH DUNKIRK NY ALT-BSO3R-0003 0815H 10/02/97

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
pH	6.0SU	10/06/97		WB9099
Hexavalent Chromium	<1.5mg/kg dw UJ	10/03/97		WB9081
Percent Solids	68%	10/03/97		WB9092

ID:27697074 Mat:Soil 483803 AL TECH DUNKIRK NY ALT-BSO4R-0003 0845H 10/02/97

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
pH	6.4SU	10/06/97		WB9099
Hexavalent Chromium	<1.3mg/kg dw UJ	10/03/97		WB9081
Percent Solids	80%	10/03/97		WB9092

ID:27697075 Mat:Soil 483803 AL TECH DUNKIRK NY ALT-BSO5R-0003 0840H 10/02/97

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
pH	5.6SU	10/06/97		WB9099
Hexavalent Chromium	<1.4mg/kg dw UJ	10/03/97		WB9081
Percent Solids	71%	10/03/97		WB9091

ID:27697076 Mat:Soil 483803 AL TECH DUNKIRK NY ALT-BSO6R-0003 0835H 10/02/97

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
pH	5.0SU	10/06/97		WB9099
Hexavalent Chromium	<1.5mg/kg dw UJ	10/03/97		WB9081
Percent Solids	67%	10/03/97		WB9092

dw = Dry weight

11/19/97

DATE: 10/21/97

Up ce Laboratories, Inc.
Analysis Results
Report Number: 27697071
Client I.D.: ANTECH, LTD.

APPROVAL: _____
QC: _____
Lab I.D.: 10170
Sampled by: ENV. STRATEGIES CORP.

ID:27697077 Mat:Soil 483803 AL TECH DUNKIRK NY ALT-BSO7R-0003 0830H 10/02/97

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
pH	4.8SU	10/06/97		WB9099
Hexavalent Chromium	<1.6mg/kg dw UJ	10/03/97		WB9081
Percent Solids	61%	10/03/97		WB9092

dw = Dry weight

11/19/97

004

0000005

HEXAVALENT CHROMIUM

UPSTATE LABORATORIES, INC.
QUALITY CONTROL

Batch/File No. WB9081

QC Samples:

Instrument No.	25
Date Analyzed	10/3/97
Matrix	water
Units	mg/l

Calibration Curve:

Instrument No.	25
Date Analyzed	8/12/97

Method Blank PQL = 0.01 mg/l

The Method blank is a continuing calibration blank (CCB) in this procedure and it is used to zero the spectrophotometer. It is also analyzed at intervals during the analysis to measure the potential drift of the instrument.

Reference Sample Units: mg/l Batch No.1) –

ULI ID Number (Batch/File No. & "RS")	Spike Added	RS Conc.	RS % Rec.		Control Limits 2)
WB9081RS	0.690	0.710	103		90 – 110
					90 – 110

Matrix Spikes Units: mg/L Batch No.1) –

ULI ID Number (ULI ID No. & "MS")	Spike Added	Sample Conc.	MS Conc.	MS % Rec. 3)	Control Limits 2)
27697077MS	81	<1.5	39	48	90 – 110

11 AD 11/17

Duplicates Units: mg/L Batch No.1) –

ULI ID Number (ULI ID No. & "DP")	1st Value	2nd Value	RPD 4)		Control Limits 2)
27697077DP	<1.5	<1.5	–		10

Footnotes:

1) If a MS, RS and/or DP was not analyzed with this batch, record the Batch/File No. of the RS, MS and/or DP analyzed previously that supports this data.

2) ULI in-house control limits

3) The 75-125% criteria does not apply when the sample concentration exceeds spike concentration by a factor of four or more. (NYSDEC ASP 10/95, Page E-132).

4) If the sample result is less than 5x the PQL, the duplicate sample result should be within the range of the sample result + or – the PQL (NYSDEC ASP 10/95 Page E-134).

11/14

Cr+6

UPSTATE LABORATORIES, INC.
RESULT SHEET

Data Entry:
Cr+6 Cr+6

WB9081

Samples:
Instrument No. ULI25
Date analyzed 10/3/97
Matrix Soil
Units mg/kg DW

Calibration Curve:
Instrument No. uli24
Date Analyzed 8/12/97

ULI ID Number	Result	Key
27697071	<1.6 ~~<1.5~~	<
27697072	<1.6 ~~<1.5~~	1
~~27697073~~	~~<1.5 <1.4~~	1
27697074	<1.3 ~~<1.1~~	1
27697075	<1.4	1
27697076	<1.5 ~~<1.3~~	1
27697077	<1.6 ~~<1.5~~	1
27697046	15,000	

P. 2 of 2

11/19/97

Prepared by: CS Date: 10/3/97
Reviewed by: [illegible] Date: 10/15
Entered by: WP Date: 10/15/97
Entry checked by: _____ Date: _____

006

0000008

Cr+6

UPSTATE LABORATORIES, INC.

QUALITY CONTROL SHEET

Batch/file No.WB9081

QC Samples:
- Instrument No. ULI25
- Date Analyzed 10/3/97
- Matrix Water
- Units mg/L

Calibration Curve:
- Instrument No. uli24
- Date Analyzed 8/12/97

Method Blank

ULI ID Number	Test Result	ULI PQL	MDL
WB9081MB	<0.01	0.01	0.007

Stk. Sol. No. W5862

Reference Sample — Batch No. 1)

ULI ID Number	Spike Added	RS Conc.	RS % Rec.	Control Limits 2)
WB9081RS1	.69	.71	103.0	90-110
WB9081RS2	.69	.71	103.0	90-110

Stk. Sol. No. W5426

Matrix Spikes — Batch No. 1)

ULI ID Number	Spike Added	Sample Conc.	MS Conc.	MS % Rec.	Control Limits 2)
					90-110
					90-110
					90-110

Duplicates — Batch No. 1)

ULI ID Number	1st Value	2nd Value	RPD	Control Limits 2)
				10
				10
				10

DB 11/12/97

Footnotes:
1) If a MS, RS and/or Dup. was not analyzed with this batch, record the Batch/File number of the MS, RS and/or DUP. analyzed previously that supports this data
2) ULI in-house control limits

Prepared by: CS Date Prepared: 10/3/97

Data Entered: _____ Date Entered: _____

Cr+6

UPSTATE LABORATORIES, INC.

QUALITY CONTROL SHEET

WB9081

QC Samples:
- Instrument No. ULI25
- Date Analyzed 10/3/97
- Matrix Soil
- Units mg/kg DW

Calibration Curve:
- Instrument No. uli24
- Date Analyzed 8/12/97

Method Blank

ULI ID Number	Test Result	ULI PQL	MDL
		20	

Stk. Sol. No. W5862

Reference Sample

Batch No. 1) _____

ULI ID Number	Spike Added	~~RS~~ Conc.	RS % Rec.	Control Limits 2)
				82-110

Stk. Sol. No. W5426

Matrix Spikes

Batch No. 1) _____

ULI ID Number	Spike Added	Sample Conc.	MS Conc.	MS % Rec.	Control Limits 2)
27697077	81	<1.5	39	48	41-136
					41-136
					41-136

Duplicates

Batch No. 1) _____

ULI ID Number	1st Value	2nd Value	RPD	Control Limits 2)
27697077	<1.5	<1.5	N/A	22
				22
				22

11/19/97

Footnotes:

1) If a MS, RS and/or Dup. was not analyzed with this batch, record the Batch/File number of the MS, RS and/or DUP. analyzed previously that supports this data

2) ULI in-house control limits

Prepared by: CS Date Prepared: 10/3/97

Data Entered: _____ Date Entered: _____

Cr+6

Batch/file Number WB9081

UPSTATE LABORATORIES, INC.
WORK SHEET

Today's Analysis:
Instrument No. ULI25
Date Analyzed 10/3/97
CCV Stk. Sol. No. W5426
Units mg/l

Initial Calibration:
Instrument No. uli24
Date Analyzed 8/12/97
Slope 0.8143
Y Intercept 0.0076

ULI ID Number	Absorbance	Initial Value Off Curve	Initial Dilution	Secondary Dilution	Percent Solids (%)	Final Result	Continuing Calibration & Comments
WB9081ICB	0.000	-0.009	100	1	100	<0.01	
WB9081ICV	0.418	0.504	100	1	100	0.50	
WB9081MB	0.000	-0.009	100	1	100	<0.01	
WB9081RS1	0.583	0.707	100	1	100	0.71	
WB9081RS2	0.584	0.708	100	1	100	0.71	
27597016	0.000	-0.009	100	1	100	<0.01	
27697010	0.000	-0.009	100	1	100	<0.01	
27697046	0.537	0.650	1	995	100	65000.00	
27697085	0.000	-0.009	100	1	100	<0.01	
27697086	0.000	-0.009	100	1	100	<0.01	
27697095	0.000	-0.009	100	1	100	<0.01	
27997002	0.000	-0.009	100	1	100	<0.01	
27997003	0.000	-0.009	100	1	100	<0.01	
27997012	0.000	-0.009	100	1	100	<0.01	
27997023	0.000	-0.009	100	1	100	<0.01	
27997049	0.000	-0.009	100	1	100	<0.01	
27997051	0.000	-0.009	100	1	100	<0.01	
27997091	0.000	-0.009	100	1	100	<0.01	
27697046DP	0.536	0.649	1	995	100	65000.00	
27697071	0.000	-0.009	100	97	64	~~<1.5~~ <1.6	sc 10/15/97 Reanalysis Error
27697072	0.000	-0.009	100	97	64	~~<1.5~~ <1.6	
27697073	0.000	-0.009	100	96	68	~~<1.4~~ <1.5	
27697074	0.000	-0.009	100	91	80	~~<1.1~~ <1.3	
27697075	0.000	-0.009	100	96	71	<1.4	
27697076	0.000	-0.009	100	86	67	~~<1.3~~ <1.5	
27697077	0.000	-0.009	100	93	61	~~<1.5~~ <1.6	
27697077DP	0.000	-0.009	100	93	61	~~<1.5~~ <1.6	
27697077MS	0.203	0.240	100	99	61	39.00	
CCV	0.419	0.505	100	1	100	0.51	
CCB	0.000	-0.009	100	1	100	<0.01	
			100	1	100		
			100	1	100		

Prepared by: CS

RS Stock soln'n no. W5862 True Value 0.60 ppm
MS Stock soln'n no. W5426 True Value 0.5 Vol.used(mls) 1 Final Vol.(mls) 100
MS Stock soln' conc. 50 mg/l

11/14/97

009

0000011

Cr+6

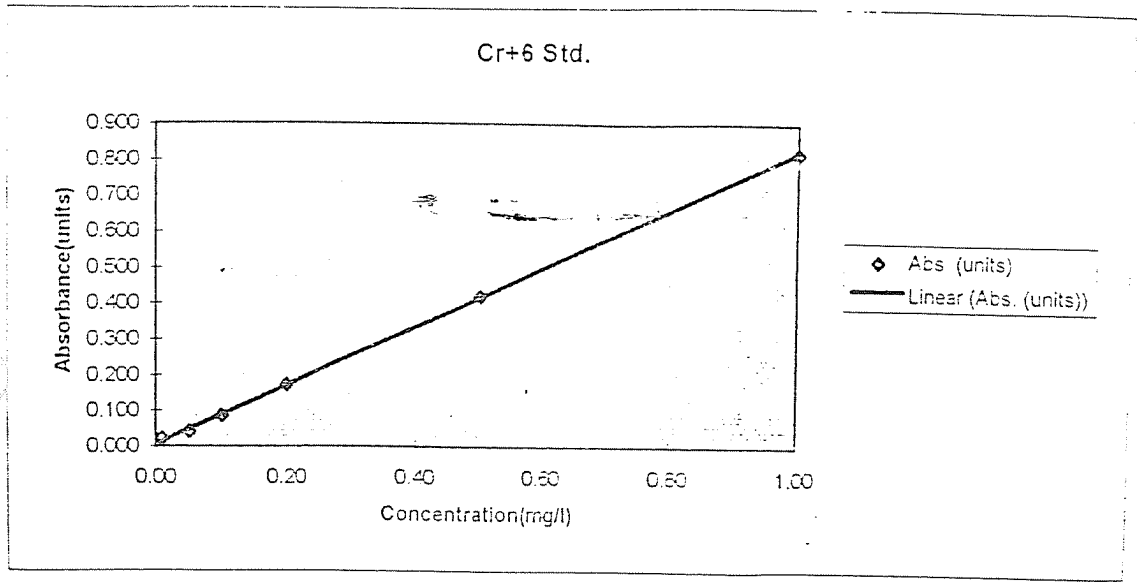
Calibration Curve

540

Small cuvette

Concentration (mg/l)	Abs. (units)	Calculated Value (mg/l)
0.01	0.021	0.017
0.05	0.042	0.042
0.10	0.086	0.096
0.20	0.172	0.202
0.50	0.419	0.505
1.00	0.820	0.998

Instrument No.	uli24
Date Analyzed	8/12/97
Correlation	0.9999
Slope	0.8143
y-int.	0.0076
Stock solution #	W5426
Concentration	50 mg/l



11/19/97

No. 003809

CHAIN OF CUSTODY RECORD

Page 1 of

PROJECT NO.	PROJECT NAME AND LOCATION:

SAMPLERS: *(Signature)*	PRINT NAME:

SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	NO. OF CONTAINERS							REMARKS

Relinquished by: *(Signature)*	Date Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date Time	Received by: *(Signature)*
Received for Laboratory by: *(Signature)*	PRINT NAME:	Date Time

LAB NAME:	
CITY:	
COURIER:	NA
AIRBILL NO.	NA
CUSTODY SEAL NOS:	NA
COOLER NO:	1

ENVIRONMENTAL STRATEGIES CORPORATION
11911 Freedom Drive
Reston, Virginia 22090
(703) 709-6500

ESC

ATTENTION LAB: SEND ANALYTICAL RESULTS TO THE FOLLOWING ESC STAFF MEMBER:

CA MA PA MN

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT; COPY TO ESC FILES