169783 R-3

REPORT

Allied Paper, Inc.
Operable Unit

Addendum to
Technical Memorandum 7
Volume 2 of 2

Allied Paper, Inc./Portage Creek/
Kalamazoo River Superfund Site
Kalamazoo, Michigan

October 1999

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engineers & scientists

Appendix E

Data Review Reports

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE

SDG# 39726

VOLATILE, SEMIVOLATILE, PESTICIDE/PCB, AND INORGANICS ANALYSES

ALLIED OPERABLE UNIT

Analyses performed by:

Aquatec, Inc.
Colchester, Vermont

Review performed by:

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the data package for SDG# 39726 for the Allied Operable Unit sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis			
				VOA	BNA	Pest	TAL[1]
A66000	198792	water	9/28/93	X	X	X	X
A66001	198793	water	9/28/93	X	X	X	X
A66002	198794	water	9/28/93	X	X	X	X
TB1	198795	water	9/27/93	X			X
A66003	199034	water	9/29/93	X	X	X	X
A66004	199035	water	9/29/93	X	X	X	X
A66005	199036	water	9/29/93	X	X	X	X
A66006	199037	water	9/29/93	X	X	X	X
A66007	199038	water	9/29/93	X	X	X	X
A66008	199039	water	9/29/93	X	X	X	X
A66009	199040	water	9/29/93	X	X	X	X
TB2	199041	water	9/29/93	X			X
A66010	199158	water	9/30/93	X	X	X	X
A66011	199159	water	9/30/93	X	X	X	X
A66012	199160	water	9/30/93	X	X	X	X
A66013	199161	water	9/30/93	X	X	X	X
A66014	199218	water	9/30/93	X	X	X	X
A66015*	199162	water	9/30/93	X	X	X	X
A66016	199219	water	10/1/93	X	X	X	X
TB3	199164	water	10/1/93	X			X

* MS/MSD/DUP performed on sample

[1] Conventional chemistry analyses includes chemical oxygen demand, nitrate/nitrite, alkalinity, chloride, sulfate, total suspended solids, and total organic carbon performed on all samples except trip blanks.

PESTICIDE/PCB ANALYSES

Introduction

Analyses were performed according to the USEPA CLP SOW OLM01.8.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- C Identification confirmed by GC/MS.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The QAPP-specified holding time for semivolatile analyses of water samples is 5 days from sample receipt to extraction and 40 days from the start of extraction to analysis. The techincal holding times are 7 days from date of collection to extraction and 40 days to analysis. No deviations from these holding times were noted.

2. Blank Contamination

Quality assurance blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross contamination of samples during field operations.

No target compounds were detected in either the method blanks or instrument blanks.

3. System Performance

The resolution and compound breakdown was within acceptable limits for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

4.1 Initial Calibration

A maximum RSD of 20% is allowed. The initial calibration was within the specified limit.

4.2 Continuing Calibration

A maximum RPD of 25% is allowed. All continuing calibrations were within the specified limit.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate recoveries were outside specified limits, qualifications may be applied to the samples.

One surrogate was low on one column in samples A66010 and A66016. No qualifiers have been added to the samples based on the recovery. All other surrogate recoveries and retention times were within acceptable limits.

6. Compound Identification

The retention times of pesticide/PCB compounds must fall within the calculated retention time windows for both the primary and confirmation columns.

All compounds fell within the appropriate retention time windows.

The quantitated concentrations between the two columns exceeded the 25% difference limit for the following samples and compounds:

A66013	Aroclor 1016	32.0%
A66016	alpha-BHC	999.9%

Data for Aroclor 1016 in sample A66013 has been qualified as estimated. Since the alpha-BHC data for sample A66016 is an estimated number below the CRDL, it has not been rejected.

7. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All percent recoveries and relative percent differences (RPD) between recoveries were within acceptable limits.

8. Field Duplicates

Results for duplicate samples are summarized below:

Sample	Result	Duplicate Sample	Result	RPD
A66011	ND	A66012	ND	--

The samples replicate through non-detection.

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Pesticide/PCB Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Were the method blanks reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 24			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of 12			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	X		

	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Do any trip/field/rinse blanks have positive results?			X
Are there field/rinse/equipment blanks associated with every sample?		X	
Calibration and GC Performance			
Are the following chromatograms and data printouts present for all samples, blanks, and MS/MSD?			
peak resolution check	X		
performance evaluation mixtures (PEM)	X		
Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260	X		
Toxaphene	X		
low points individual mixtures A & B (INDA and INDB)	X		
mid points INDA and INDB	X		
high points INDA and INDB	X		
instrument blanks	X		
Are Forms VI 1-4 present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses if INDA and INDB within limits for both columns?	X		
Is the resolution between any two adjacent peaks in the resolution check mixture > 60% for both columns?	X		
Is Form VII-1 present for each PEM analyzed for both columns?	X		
Has the individual % breakdown exceeded 20% on either column for:			
4,4'-DDT		X	
endrin		X	
Has the combined breakdown for 4,4'-DDT and endrin exceeded 30% on either column?		X	

	YES	NO	NA
Are all the relative percent difference (RPD) values for all PEM analytes < 25%?	X		
Have all samples been injected within a 12 hour period beginning with the injection of an instrument blank?	X		
Is Form VII-2 present and complete for each INDA and INDB analyzed?	X		
Are RPD values for all INDA and INDB compounds < 25%?	X		
Analytical Sequence Check			
Is Form VIII present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
Is Form IX-1 present for each lot of Florisil cartridges used?	X		
Are all samples listed on the form?	X		
If GPC cleanup was performed, is From IX-2 present?			X
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits for:			
Florisil cartridge check (80-120%)	X		
GPC calibration (80-110%)			X
Pesticide/PCB Identification			
Is a Form X present for every sample in which a pesticide or PCB was detected?	X		
Was GC/MS confirmation provided when required?	X		
Is the percent difference (%D) calculated for the positive sample results on the two columns less than 25%?		X	
Were there any false negatives?		X	
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			

	YES	NO	NA
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Where field duplicates submitted with the samples?	X		

Pesticide/PCB Qualifier Summary
Holding Time and Surrogates

Sample ID	Holding Time	Surrogates - Column 1		Surrogates - Column 2	
		TCX	DCB	TCX	DCB
A66000	OK for all samples				
A66001					
A66002					
A66003					
A66004					
A66005					
A66006					
A66007					
A66008					
A66009					
A66010			↓ (54)		
A66011					
A66012					
A66013					
A66014					
A66015					
A66015MS					
A66015MSD					
A66016				↑ (176)	

Surrogates:
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogate diluted out
↑ Recovery high
↓ Recovery low

Unless otherwise noted, all samples are within specified limits.

Corrected Sample Analysis Data Sheets

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66000

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 198792

Sample wt/vol: 991.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 09/29/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 09/30/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

Sample Data Summary Pkg.

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	alpha-BHC	0.050	U
	beta-BHC	0.050	U
	delta-BHC	0.050	U
	gamma-BHC (Lindane)	0.050	U
	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66001

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 198793

Sample wt/vol: 914.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 09/29/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 09/30/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.054	U
319-85-7	beta-BHC	0.054	U
319-86-8	delta-BHC	0.054	U
58-89-9	gamma-BHC (Lindane)	0.054	U
76-44-8	Heptachlor	0.054	U
309-00-2	Aldrin	0.054	U
1024-57-3	Heptachlor epoxide	0.054	U
959-98-8	Endosulfan I	0.054	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.54	U
53494-70-5	Endrin ketone	0.11	U
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.054	U
5103-74-2	gamma-Chlordane	0.054	U
8001-35-2	Toxaphene	5.4	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.2	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66002

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 198794

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 09/29/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 09/30/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66003

ab Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

atrix: (soil/water) WATER Lab Sample ID: 199034

ample wt/vol: 1000 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received: 09/30/93

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/04/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66004

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 199035

Sample wt/vol: 952.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 09/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/04/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66005

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 199036

Sample wt/vol: 997.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 09/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/04/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66006

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 199037

Sample wt/vol: 997.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 09/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/04/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66007

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 199038

Sample wt/vol: 976.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 09/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/04/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.051	U
319-85-7	beta-BHC	0.051	U
319-86-8	delta-BHC	0.051	U
58-89-9	gamma-BHC (Lindane)	0.051	U
76-44-8	Heptachlor	0.051	U
309-00-2	Aldrin	0.051	U
1024-57-3	Heptachlor epoxide	0.051	U
959-98-8	Endosulfan I	0.051	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.51	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.051	U
5103-74-2	gamma-Chlordane	0.051	U
8001-35-2	Toxaphene	5.1	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66008

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 199039

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

% Moisture: decanted: (Y/N) Date Received: 09/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/04/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66009

ab Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

atrix: (soil/water) WATER Lab Sample ID: 199040

ample wt/vol: 1000 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received: 09/30/93

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/04/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	0.89	J
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66010

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 199158

Sample wt/vol: 988.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/01/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66011

.ab Name: AQUATEC INC Contract: 91082

.ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

:atrix: (soil/water) WATER Lab Sample ID: 199159

:ample wt/vol: 991.0 (g/mL) ML Lab File ID:

: Moisture: decanted: (Y/N) Date Received: 10/01/93

:xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/05/93

:oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

:njection Volume: 1.00 (uL) Dilution Factor: 1.00

:PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66012

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 199160

Sample wt/vol: 967.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/01/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/07/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66013

ab Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

atrix: (soil/water) WATER Lab Sample ID: 199161

ample wt/vol: 994.0 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received: 10/01/93

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/05/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/07/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	2.5	~~P~~ J
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66014

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 199218

Sample wt/vol: 987.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/02/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	0.99	J
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66015

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 199162

Sample wt/vol: 969.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/01/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/07/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66016

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 199219

Sample wt/vol: 894.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/02/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/05/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.028	JP
319-85-7	beta-BHC	0.056	U
319-86-8	delta-BHC	0.056	U
58-89-9	gamma-BHC (Lindane)	0.056	U
76-44-8	Heptachlor	0.056	U
309-00-2	Aldrin	0.056	U
1024-57-3	Heptachlor epoxide	0.056	U
959-98-8	Endosulfan I	0.056	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.56	U
53494-70-5	Endrin ketone	0.11	U
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.056	U
5103-74-2	gamma-Chlordane	0.056	U
8001-35-2	Toxaphene	5.6	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.2	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

aquatec INC.
Inchcape Environmental

CORPORATE OFFICES
55 SOUTH PARK DRIVE
COLCHESTER, VT 05446

LABORATORY LOCATIONS
55 SOUTH PARK DRIVE
COLCHESTER, VT 05446

75 GREEN MOUNTAIN DRIVE
SOUTH BURLINGTON, VT 05403

150 HERMAN MELVILLE BOULEVARD
NEW BEDFORD, MA 02740

November 12, 1993

Ms. Laurie Johnston
Blasland & Bouck Engineers
6723 Towpath Road, Box 66
Syracuse, NY 13214

Re: Analytical Results-Kalamazoo Site
Aquatec Project No. 91082
Case No. OLM; SDG No. 39726

Dear Ms. Johnston:

Enclosed are the analytical results for samples received intact by Aquatec on September 29, 30, October 01 and 02, 1993. The analyses associated with these samples were performed in accordance with the methodologies in the OLM01 and ILM02 Statement of Works. Laboratory numbers and quality control samples were assigned as follows:

Client Sample ID	Aquatec Lab No.	Sample Matrix
Samples Received on September 29, 1993 ETR No. 39726		
A66000	198792	Water
A66001	198793	Water
A66002	198794	Water
TB1	198795	Water
HB	198830	Water
Samples Received on September 30, 1993 ETR No. 39784		
A66003	199034	Water
A66004	199035	Water
A66005	199036	Water
A66006	199037	Water
A66007	199038	Water
A66008	199039	Water
A66009	199040	Water
TB2	199041	Water

000001

ab .

Client Sample ID	Aquatec Lab No.	Sample Matrix
Samples Received on October 01, 1993 ETR No. 39816		
A66010	199158	Water
A66011	199159	Water
A66012	199160	Water
A66013	199161	Water
A66015	199162	Water
A66015MS	199162MS	Water
A66015MSD	199162MD	Water
A66015REP	199162DP	Water
A66016	199163	Water
TB3	199164	Water
Samples Received on October 02, 1993 ETR No. 39824		
A66014	199218	Water
A66016	199219	Water

Please note the use of the following additional qualifier when reporting semivolatile organic results:

X = Compound reported is a suspected laboratory contaminant.

The recovery of the semivolatile matrix spike compounds 4-nitrophenol and pentachlorophenol in sample A66015MS and A66015MSD was above quality control limits.

Sample A66016 was spiked twice with both the acid and base surrogate solutions. Surrogate recoveries for this sample were calculated accordingly and are within specified quality control limits.

Peak height was used for quantitation of all pesticide/PCB standards on both analytical columns.

Please note that the following additional qualifier has been used when reporting the pesticide/PCB results:

J = Compound reported at a concentration less than the CRQL.

Sincerely,

Karen R. Chirgwin

Karen R. Chirgwin
Laboratory Operations Director

KRC/jg

Enclosure

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

GC Column(1): RTX-35 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK1G	83	80	100	103			0
02	PBLK3G	84	82	111	114			0
03	PBLK5G	70	69	107	110			0
04	PBLK6G	91	86	117	118			0
05	A66000	82	79	92	94			0
06	A66001	77	73	93	96			0
07	A66002	82	78	94	98			0
08	A66003	85	84	110	114			0
09	A66004	82	78	97	101			0
10	A66005	87	92	114	118			0
11	A66006	84	80	112	114			0
12	A66007	86	84	112	116			0
13	A66008	86	66	91	92			0
14	A66009	92	88	115	123			0
15	A66010	69	64	54*	60			1
16	A66011	73	65	77	82			0
17	A66012	65	60	70	74			0
18	A66013	74	72	66	73			0
19	A66014	82	78	97	99			0
20	A66015	77	74	82	86			0
21	A66016	107	176*	105	104			1
22	A66015MS	86	84	80	85			0
23	A66015MSD	80	78	87	89			0

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix Spike - EPA Sample No.: A66015

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	0.525	0	0.468	89	56-123
Heptachlor	0.525	0	0.510	97	40-131
Aldrin	0.525	0	0.489	93	40-120
Dieldrin	1.050	0	1.09	104	52-126
Endrin	1.050	0	1.10	105	56-121
4,4'-DDT	1.050	0	1.14	109	38-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	0.525	0.519	99	11	15	56-123
Heptachlor	0.525	0.522	99	2	31	40-131
Aldrin	0.525	0.496	94	1	22	40-120
Dieldrin	1.050	1.18	112	7	18	52-126
Endrin	1.050	1.22	116	10	21	56-121
4,4'-DDT	1.050	1.22	116	6	27	38-127

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK1G

L Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Lab Sample ID: 180271 Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 09/30/93

Date Analyzed (1): 10/06/93 Date Analyzed (2): 10/06/93

Time Analyzed (1): 1037 Time Analyzed (2): 1037

Instrument ID (1): 0850-1 Instrument ID (2): 0850-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): RTX-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66000	198792	10/06/93	10/06/93
02	A66001	198793	10/06/93	10/06/93
03	A66002	198794	10/06/93	10/06/93

COMMENTS:

4C
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK3G

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Lab Sample ID: 180273 Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 10/04/93

Date Analyzed (1): 10/06/93 Date Analyzed (2): 10/06/93

Time Analyzed (1): 1116 Time Analyzed (2): 1116

Instrument ID (1): 0850-1 Instrument ID (2): 0850-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): RTX-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66003	199034	10/06/93	10/06/93
02	A66004	199035	10/06/93	10/06/93
03	A66005	199036	10/06/93	10/06/93
04	A66006	199037	10/06/93	10/06/93
05	A66007	199038	10/06/93	10/06/93
06	A66008	199039	10/06/93	10/06/93
07	A66009	199040	10/06/93	10/06/93

COMMENTS:

4C
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK5G

L Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Lab Sample ID: 180275 Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 10/05/93

Date Analyzed (1): 10/06/93 Date Analyzed (2): 10/06/93

Time Analyzed (1): 2033 Time Analyzed (2): 2033

Instrument ID (1): 0850-1 Instrument ID (2): 0850-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): RTX-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66010	199158	10/06/93	10/06/93
02	A66011	199159	10/06/93	10/06/93
03	A66012	199160	10/07/93	10/07/93
04	A66013	199161	10/07/93	10/07/93
05	A66015	199162	10/07/93	10/07/93
06	A66015MS	199162MS	10/07/93	10/07/93
07	A66015MSD	199162MD	10/07/93	10/07/93

COMMENTS:

4C
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK6G

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Lab Sample ID: 180276 Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 10/05/93

Date Analyzed (1): 10/06/93 Date Analyzed (2): 10/06/93

Time Analyzed (1): 2112 Time Analyzed (2): 2112

Instrument ID (1): 0850-1 Instrument ID (2): 0850-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): RTX-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66014	199218	10/06/93	10/06/93
02	A66016	199219	10/06/93	10/06/93

COMMENTS:

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK1G

L. Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 180271

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received:

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 09/30/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK3G

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Matrix: (soil/water) WATER Lab Sample ID: 180273

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received:

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/04/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK5G

a Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

atrix: (soil/water) WATER Lab Sample ID: 180275

ample wt/vol: 1000 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received:

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/05/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK6G

ab Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

atrix: (soil/water) WATER Lab Sample ID: 180276

ample wt/vol: 1000 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received:

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/05/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/06/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Instrument ID: 0850-1 Date(s) Analyzed: 10/05/93 10/05/93

GC Column: RTX-35 ID: 0.53(mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.500	*1	18.51	18.44	18.58	11800
		*2	19.31	19.24	19.38	9220
		*3	19.73	19.66	19.80	9250
		4	21.66	21.59	21.73	9890
		5	21.93	21.86	22.00	7980
Aroclor 1016	0.100	*1	10.36	10.29	10.43	11600
		*2	11.50	11.43	11.57	23400
		*3	12.23	12.16	12.30	10200
		4	12.60	12.53	12.67	31700
		5	13.31	13.24	13.38	12100
Aroclor 1221	0.200	*1	9.77	9.70	9.84	6340
		*2	10.16	10.09	10.23	4320
		*3	10.24	10.17	10.31	2720
		4	10.35	10.28	10.42	13800
		5	10.46	10.39	10.53	2430
Aroclor 1232	0.100	*1	10.35	10.28	10.42	12300
		*2	11.50	11.43	11.57	10200
		*3	12.59	12.52	12.66	13700
		4	12.98	12.91	13.05	6670
		5	14.21	14.14	14.28	6120
Aroclor 1242	0.100	*1	10.36	10.29	10.43	9870
		*2	11.51	11.44	11.58	19500
		*3	12.60	12.53	12.67	27000
		4	12.98	12.91	13.05	13300
		5	15.01	14.94	15.08	14200
Aroclor 1248	0.100	*1	13.44	13.37	13.51	20400
		*2	14.22	14.15	14.29	23900
		*3	15.01	14.94	15.08	27000
		4	15.17	15.10	15.24	20800
		5	15.83	15.76	15.90	16400
Aroclor 1254	0.100	*1	15.28	15.21	15.35	23400
		*2	15.55	15.48	15.62	29700
		*3	16.85	16.78	16.92	35400
		4	17.74	17.67	17.81	14500
		5	19.10	19.03	19.17	21600
Aroclor 1260	0.100	*1	17.37	17.30	17.44	23900
		*2	17.74	17.67	17.81	28100
		*3	19.10	19.03	19.17	21400
		4	21.40	21.33	21.47	31100
		5	23.62	23.55	23.69	15200

* Denotes required peaks

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39726

Instrument ID: 0850-2 Date(s) Analyzed: 10/05/93 10/05/93

GC Column: RTX-1701 ID: 0.53(mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.500	*1	16.27	16.20	16.34	9370
		*2	16.94	16.87	17.01	15900
		*3	17.24	17.17	17.31	15400
		4	18.02	17.95	18.09	12100
		5	18.22	18.15	18.29	17000
Aroclor 1016	0.100	*1	9.39	9.32	9.46	29900
		*2	9.88	9.81	9.95	8510
		*3	10.01	9.94	10.08	11800
		4	10.88	10.81	10.95	16200
		5	12.00	11.93	12.07	22000
Aroclor 1221	0.200	*1	7.83	7.76	7.90	6260
		*2	8.24	8.17	8.31	4440
		*3	8.39	8.32	8.46	14900
		4	9.19	9.12	9.26	2170
		5	9.38	9.31	9.45	3920
Aroclor 1232	0.100	*1	8.39	8.32	8.46	12400
		*2	9.38	9.31	9.45	12600
		*3	10.54	10.47	10.61	16900
		4	10.88	10.81	10.95	7360
		5	12.00	11.93	12.07	8850
Aroclor 1242	0.100	*1	9.39	9.32	9.46	25200
		*2	10.54	10.47	10.61	34200
		*3	10.89	10.82	10.96	15000
		4	12.01	11.94	12.08	17700
		5	12.25	12.18	12.32	13100
Aroclor 1248	0.100	*1	10.54	10.47	10.61	22500
		*2	11.36	11.29	11.43	24000
		*3	12.00	11.93	12.07	29800
		4	12.24	12.17	12.31	24000
		5	12.96	12.89	13.03	29400
Aroclor 1254	0.100	*1	12.97	12.90	13.04	37400
		*2	13.40	13.33	13.47	34100
		*3	14.51	14.44	14.58	45100
		4	15.39	15.32	15.46	19900
		5	16.23	16.16	16.30	35900
Aroclor 1260	0.100	*1	14.87	14.80	14.94	33500
		*2	15.39	15.32	15.46	37600
		*3	16.22	16.15	16.29	39500
		4	17.94	17.87	18.01	47000
		5	19.11	19.04	19.18	34800

* Denotes required peaks

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CHAIN OF CUSTODY RECORD

Page 1 of 1

000004

PROJ. NO.: 64551
PROJECT NAME: KRSG-Allied OU
SAMPLERS: (Signature) Karen L Royce [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	~~CLP Volatiles~~	TOC	CLP Semivolatiles	CLP Pesticides, PCBs	Cyanide	COD, Nitrate	Alkalinity, CO_3, HCO_3, Cl, SO_4	Temperature	REMARKS
MW-21	9/28/93	1500		X	A66002	9	~~2~~	2	2	2	1	1	1		
Temperature Blank	9/28/93	1600		X	Temperature Blank	1								1	Cooler # 178
MW-7	9/28/93	1300		X	A66001	9		2	2	2	1	1	1		

left blank 9/28/93 KLR

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	9-28-93	16:30					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) Sheila M Nyhlop	DATE 9/29/93	TIME 1000	Remarks: temp = 2°C	

7/12/93
1393786HCDR

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Page 1 of 1

CHAIN OF CUSTODY RECORD

000005

PROJ. NO.: 645.51
PROJECT NAME: KRSG-Allied OU
SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	CLP Volatiles	TOC	CLP TAL Metals	CLP TAL Metals Filtered	CLP Semivolatiles	CLP Pesticides, PCBs	Cyanide	COD, Nitrate	Alkalinity, Chloride, Sulfate	Temperature	REMARKS
MW-7B	9/28/93	10:30		X	A66000	13	2	2	1	1	2	2	1	1	1		
Trip Blank	9/27/93	8:00		X	Trip Blank	2	1		1								
Temperature Blank	9/27/93	8:00		X	Temperature Blank	1										1	Cooler # 19
MW-7	9/28/93	1300		X	A66001	4	2		1	1							
MW-21	9/28/93	1500		X	A66002	4	2		1	1							

Left Blank 9/28/93 KLR

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Rob [signature]	9-29-93	16:30					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) [signature]	DATE 9/29/93	TIME 1000	Remarks: temp = 3°C	

7/12/9
1393 R

Distribution: Original Accompanies Shipment; C[illegible] Coordinator Field Files

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CHAIN OF CUSTODY RECORD

Page 1 of 1

900006

PROJ. NO.: 645.51
PROJECT NAME: KRSG - Allied OU
SAMPLERS: (Signature) D S

~~#150~~

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	CLP Volatiles	CLP TAL Metals	CLP TAL Metals/Field Filtered	Temperature			REMARKS
MW-125B	9/29/93	1700		X	A66006	KLR ~~3~~ 4	2	1	1				
MW-125A	9/29/93	1545		X	A66005	KLR ~~3~~ 4	2	1	1				
MW-124A	9/29/93	940		X	A66003	KLR ~~3~~ 4	2	1	1				
MW-124B	9/29/93	1130		X	A66004	KLR ~~3~~ 4	2	1	1				
Rivulet 2	9/29/93	930		X	A66007	KLR ~~3~~ 4	2	1	1				
MW-11	9/29/93	1000		X	A66008	KLR ~~3~~ 4	2	1	1				
MW-24	9/29/93	1530		X	A66009	KLR ~~3~~ 4	2	1	1				
Trip Blank	9/29/93	–		X	Trip Blank	3	2	1	0				
Temp Blank	9/29/93	1800		X	Temperature Blank					1			Cooler #150

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D S	9/29/93	17:32	Alan Heter	Alan Heter	9/29/93	1750	
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			Sheila M Wynkoop	9/30/93	1000	temp = 2°C	

7/12/93
1393786HCDR

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CHAIN OF CUSTODY RECORD

000007

PROJ. NO.: 645.51
PROJECT NAME: KRSG-Allied OU
SAMPLERS: (Signature) Karen L. Royce / [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	CLP Semivolatiles	CLP Pesticides, PCBs	CN	COD, Nitrate, Alkalinity, CO_3, HCO_3, Cl, SO_4	Temperature		REMARKS
X MW-24	9/24/93	1530		X	A66009	9	2	2	2	1	1	1		
X MW-11	9/24/93	1000		X	A66008	9	2	2	2	1	1	1		
X Rivulet 2	9/24/93	930		X	A66007	9	2	2	2	1	1	1		
X Temp Blank	9/28/93	1730		X	Temperature Blank	1							1	Cooler #148

left blank 9/24/93 KLR

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L. Royce	9/29/93	1730					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) [signature]	DATE 9/30/93	TIME 1005	Remarks: temp = 4°C	

7/12/93
139378

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CHAIN OF CUSTODY RECORD

000008

PROJ. NO.: 645.51
PROJECT NAME: KRSG - ALLIED OU
SAMPLERS: (Signature) D-S

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	CN	COD + NO3	Alk, Chl, SO4, NO3, CO3	SEMIVOLATILES	TEMP BLANK	PCB'S PESTICIDES	REMARKS	
MW-125A	9/29/93	15:45		X	A66005	9	2	1	1	1	2		2		WATER
MW-125B	9/29/93	17:00		X	A66006	9	2	1	1	1	2		2		WATER
	9/29/93	17:30		X	TEMPERATURE BLANK							1		COOLER #57	WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D-S	9/29/93	17:30	Alan Heter	Alan Heter	9/29/93	1750	
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) Sheila Murphy	DATE 9/30/93	TIME 1000	Remarks: Temp = 6°C	

5/3/93
1393786HCOR

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CHAIN OF CUSTODY RECORD

000009

PROJ. NO.: 645,51
PROJECT NAME: Allied OU - KRSG
SAMPLERS: (Signature) [signature]

Cooler # 258

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TCL SVOCs	PCB/Pesticides	COD/NO3	CN-	Alkalinity, Chloride, SO4, HCO3, CO3	Temp Blank	TOC	REMARKS
MW-124A	9/29/93	0940		X	A66003	9	2	2	1	1	1		2	WATER
MW-124B	9/29/93	1130		X	A66004	9	2	2	1	1	1		2	↓
	9/29/93	0900		X	Temp. BLANK	1						1		↓
						19								

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	9/29/93	17:31	Alan Peter				
Alan Peter	9/29/93	1750					

Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:
			Sheila M Wynkoop	9/30/93	1000	Temp = 5°C

7/12/92
13937

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000010

CHAIN OF CUSTODY RECORD

PROJ. NO.: 645.51
PROJECT NAME: KRSG - ALLIED OU
SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	SEMIVOLATILES	PCB's/PESTICIDES	TOC	CN	ALK, CHL, SO4, HIO3, CO3	COD + HIO3	TEMPERATURE	REMARKS
X MW-126A	9/30/93	9:30		X	A66010	9	2	2	2	1	1	1		WATER
X MW-126B	9/30/93	10:30		X	A66011	9	2	2	2	1	1	1		WATER
X MW-126C	9/30/93	10:45		X	A66012	9	2	2	2	1	1	1		WATER
~~MW-126D~~	~~9/30/93~~	~~11:30~~		~~X~~	~~A66015~~	~~9~~	~~2~~	~~2~~	~~2~~	~~1~~	~~1~~	~~1~~		~~WATER~~
	9/30/93	17:00			Temp. Blank	1							1	

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	9/30/93	16:30	Alan Heter	Alan Heter	9/30/93	1755	
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			Sheila M Wynkoop	10/01/93	1000	temp = 5°C	

5/3/93
1393786HCDR

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Page 2 of 2

CHAIN OF CUSTODY RECORD

000011

PROJ. NO.	PROJECT NAME
645.51	KRSG - Allied OU

SAMPLERS: (Signature) Karen L. Royce [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	CLP Volatiles	CLP TAL Metals	CLP TAL Metals (Field Filtered)				REMARKS
MW-26	9/30/93	900		X	A66015	12	6	3	3				MS/MSD
MW-125P	9/30/93	1400		X	A66016	2 ~~4~~ KLR	2	0	0				Metals samples will be collected & sent on 10/1/93

left blank KLR 9/30/93

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L Royce	9/30/93	17:30					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			Sheila M Wynkoop	10/01/93	1000		

7/12/9
1393 R

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CHAIN OF CUSTODY RECORD

Page 1 of 2

000012

PROJ. NO.	PROJECT NAME
645.81	KRSG - ALLIED OU

SAMPLERS: (Signature) [signature]

Cooler # 138

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	VOLATILES	METALS	METALS (FIELD FILTERED)	SEMIVOLATILES	PCBs PESTICIDES	TEMPERATURE	TOC	Cl⁻	Alk, CHL, Sy, HCO3, CO3	COD + NO3	Temp Blank	REMARKS
MW-126A	9/30/93	9:30		X	A66010	4	2	1	1									WATER
MW-126B	9/30/93	10:30		X	A66011	4	2	1	1									WATER
MW-126C	9/30/93	10:45		X	A66012	4	2	1	1									WATER
MW-121A	9/30/93	14:30		X	A66013	13	2	1	1	2	2		2	1	1	1		WATER
					~~[illegible]~~	~~[illegible]~~				~~[illegible]~~	~~[illegible]~~		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~		DWL
X	9/30/93	1700		X	Temp Blank	1											1	

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	9/30/93	16:30	[signature]	[signature]	9/30/93	1750	
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			[signature]	10/01/93	1000	temp = 2°C	

5/3/93
1393786HCOR

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trip blank not listed on any [illegible]

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CHAIN OF CUSTODY RECORD

000013

PROJ. NO.: 645.51
PROJECT NAME: KRSG-Allied OU
SAMPLERS: (Signature) Karen R. Royce / Robert [illegible]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	CLP Semivolatiles	CLP Pesticides, PCBs	CN	COD, Nitrate	Alkalinity, CO_3, HCO_3	Temperature	REMARKS
MW-26	9/30/93	900		X	A66015	27	6	6	6	3	3	3		MS/MSD
~~MW-125P~~	~~9/30/93~~	~~1400~~		~~X~~	~~A66016~~									
Temperature Blank	9/29/93	1800		X	Temperature Blank	1							1	Cooler # 236
MW-125P	9/30/93	1400		X	A66016	2	2							KLR added this line 9/30/93

KLR added

left blank KLR 9/30/93

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen R. Royce	9/30/93	1730					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			Sheila M Wyndham	10/01/93	1000	temp = 7°C	

7/12/93
1383786

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CHAIN OF CUSTODY RECORD

Page 2 of 2

000014

PROJ. NO.: 645.51
PROJECT NAME: KRSG - ALLIED OU
SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	Total Metals	Field Filtered Metals	Volatiles	Temperature			REMARKS
MW-12B	9/30/93	14:45		X	A66014	4	1	1	2				WATER
TRIP BLANK	10/1/93	7:00		X	TRIP BLANK	4	1		2				WATER
MW-22A	10/1/93	8:45		X	A66017	4	1	1	2				WATER
MW-22B	10/1/93	10:15		X	A66018	4	1	1	2				WATER
MW-12B	10/1/93	13:00		X	A66019	4	1	1	2				WATER
MW-12C	10/1/93	13:30		X	A66024	4	1	1	2				WATER
MW-12A	10/1/93	14:00		X	A66020	4	1	1	2				WATER
					TEMP BLANK	1				1			COOLER #242 WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	10/1/93	16:15					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) Pat Foundstone Pat Foundstone	DATE 10/2/93	TIME 1115	Remarks: Temp blank = 6°C	

7/12/93
1393786HCDR

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FAX: 315-449-0017

Copy original w/ETA 39825

CHAIN OF CUSTODY RECORD

000015

PROJ. NO.: 645.51
PROJECT NAME: KRSG - ALLIEDOU
SAMPLERS: (Signature) [signature]

cooler # 211

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	SEMIVOLATILES	PCB/PESTICIDES	Cn-	ALK CHLORIDE, SO4, HCO3, CO3	COD + NO3	TEMPERATURE	REMARKS
MW-121A	9/30/93	14:30		X	A66013	2	2							WATER
MW-121B	9/30/93	14:45		X	A66014	9	2	2	2	1	1	1		WATER
MW-22A	10/1/93	8:45		X	A66017	9	2	2	2	1	1	1		WATER
MW-22B	10/1/93	10:15		X	A66018	9	2	2	2	1	1	1		WATER
	10/1/93	1730		X	Temp Blank	1							1	

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	10/1/93	15:36	Alan Hefer	Alan Hefer	10/1/93	1730	
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)

Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:
			Pat Poundstone Pat Poundstone	10/2/93	1115	Temp Blank = 3°C

7/12/93
1393786

Distribution: Original Accompanies Shipment; Cop[illegible] Coordinator Field Files

BLASLAND & BOUCK ENGINEERS, P.C.
6723 Towpath Road, Box 66
Syracuse, New York 13214-0066
TEL: 315-446-9120
FAX: 315-449-0017

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Airbill # 67427529

CHAIN OF CUSTODY RECORD

000016

PROJ. NO. 645.51
PROJECT NAME KRSG - Allied OU
SAMPLERS: (Signature) Karen L Royce

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers		TOC	CLP Semivolatiles	CLP Pesticides/PCBs	CN-	COD	Nitrate Alkalinity, Cl, HCO3, Cl, SO4	Temperature	REMARKS
MW-12SP	9/30/93	1400		X	A66016	7		2	2	1	1	1			These bottles collected on 10/1/93
Rinse Blank	10/1/93	1000		X	A66021	9	2	2	2	1	1	1			
Temperature Blank	9/30/93	1800		X	Temperature Blank	1								1	Cooler # 197
MW-2S	10/1/93	1330		X	A66022	9	2	2	2	1	1	1			

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L Royce	10/1/93	1770					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) Pat Poundstone Pat Poundstone	DATE 10/2/93	TIME 1115	Remarks: Temp Blank = 10°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

BLASLAND & BOUCK ENGINEERS, P.C.
6723 Towpath Road, Box 66
Syracuse, New York 13214-0066
TEL: 315-446-9120
FAX: 315-449-0017

copy original w/ETA 39825

Airbill # 6742752903

CHAIN OF CUSTODY RECORD

Page 1 of 2

000017

PROJ. NO.: 64551
PROJECT NAME: KRSG-Allied CU
SAMPLERS: (Signature) Karen L. Royce

COOLER #242

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers		CLP Volatiles	CLP TAL Metals	CLP TAL Metals (Field Filtered)			REMARKS	
MW-125P	9/30/93 ~~10/1/93~~	1400		X	A66016	2		1	1				Sample collected 10/1/93	WATER
Rinse Blank	10/1/93	1000		X	A66021	4	2	1	1					WATER
MW-2S	10/1/93	1330		X	A66022	4	2	1	1					WATER
MW-2D	10/1/93	1500		X	A66023	4	2	1	1					WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L. Royce	10/1/93	1530	[illegible]				
Relinquished by: (Signature) [illegible]	DATE 10/1/93	TIME 16:15	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)

Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:
			Pat Poundstone	10/2/93	1115	Temp Blank = 6.0°C

7/12/93
1393780

Distribution: Original Accompanies Shipment; Co[illegible] Coordinator Field Files

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Sheila M. Wynkoop Log-in Date: 9/29/93

Received By (Signature): Sheila M. Wynkoop

Case Number: OLM

Sample Delivery Group No: 39726

ETR Number: 39726

REMARKS:

1. Custody Seal(s) — Present/~~Absent~~* ~~Intact~~/Broken
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records — ~~Present~~/Absent*
4. Sample Information Sheets — Present/~~Absent~~*
5. Airbill — ~~Airbill/Sticker~~ ~~Present~~/Absent*
6. Airbill No.: 6742227924
7. Sample Tags — ~~Present~~/~~Absent~~*
   Sample Tag Numbers — ~~Listed~~/Not Listed on Chain-of-Custody
8. Sample Condition: — ~~Intact~~/Broken*/ ~~Leaking~~
9. Does information on custody records, sample information sheets, and sample tags agree? — *See attached. ~~Yes~~/No*
10. Date Received at Lab: 9/29/93
11. Time Received: 1000

CLIENT SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66000	N/A	198792	All samples
A66001		198793	rec'd intact
A66002		198794	inside coolers
TB		198795	with ice. coolers
HB		198830	were intact
			as were
			custody seals
			on the sect-
			sides of
			coolers.
			C of C was
			present. On
			bottles present
			in 1x40ml VOA
			of A66000 +
			A66002 +
			2x40ml TOC
			of A66000 +
			~~A66005~~ mw

Sample Transfer

Fraction: all

Area #: Level 4

By: SMW

On: 9/29/93

SMW 9/29/93

* Contact Project Director.

Reviewed by: [illegible]

Date:

Logbook No:

Logbook Page No:

Case: OLM
SDG: 39726
ETR: 39726

aquatec INC.
An Inchcape Company
55 SOUTH PARK DRIVE, COLCHESTER, VT 05446

Discrepancies between sample bottles/labels and C-of-C

(1) C-of-C has "gcab" checked off for all samples; all samples have "gcab" checked off except for 1x40ml TOC of A66001.

(2) C-of-C has "1500" as a time for A66002; this sample has "1500" as a time on all containers except for 1x40ml VOA which shows no time.

(3) "Water" checked off on all labels for all samples; C-of-C does not show "water" as a matrix.

(4) "TSS" not shown on C-of-C or on sample labels; TSS is to be run on samples per JLB.

SMW
9/29/98

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Sheila M. Wynkoop Log-in Date: 9/30/93

Received By (Signature): Sheila M. Wynkoop

Case Number: am

Sample Delivery Group No: 39726

ETR Number: 39784

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records Present/Absent*
4. Sample Information Sheets Present/Absent*
5. Airbill Airbill/Sticker Present/Absent*
6. Airbill No.: 6742727902
7. Sample Tags Present/Absent*
   Sample Tag Numbers Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking
9. Does information on custody records, sample information sheets, and sample tags agree? * See attached Yes/No*
10. Date Received at Lab: 9/30/93
11. Time Received: 1000

	CORRESPONDING		
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66003	N/A	199034	All samples
A66004		199035	rec'd intact
A66005		199036	inside coolers
A66006		199037	with ice.
A66007		199038	Coolers were
A66008		199039	intact as
A66009		199040	were custody
TB		199041	seals on the
			outsides of
			coolers. COC
			was present.
			air bubbles
			present in
			1x40ml VOA +
			1x40ml TOC of
			A66004, 2x40ml
			TOC + 1x40ml VOA
			of A66005, 1x40ml
			TOC + 2x40ml
			VOA of A66006.
			Temperature
			Blank temperatures
			were
			5°C, 6°C, 4°C
			+ 3°C.

Sample Transfer

Fraction: all

Area #: Level 4

By: SMW

On: 9/30/93

SMW 9/30/93

* Contact Project Director.

Reviewed by: [illegible]

Date:

Logbook No:

Logbook Page No:

Case: am
SDG: 39726
ETL: 39784

aquatec INC.
An Inchcape Company
55 SOUTH PARK DRIVE, COLCHESTER, VT 05446

Discrepancies between sample bottles/labels and C-of-C

(1) All samples have "water" checked off on labels; C-of-C shows "water" as a matrix on two C-of-C's; the other two do not show a matrix.

(2) C-of-C has "grab" checked off for all samples; all samples have "grab" checked off except for IL Amber PCB/Pest which does not have "composite" or "grab" checked off. Also, "water" is not checked off for this BH.

(3) C-of-C has "9/29/93" as a date for TB; this sample shows no date on BHS.

(4) "TSS" not shown on any BHS or on C-of-C but is to be run for all samples except TB.

SMW
9/30/93

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Sheila M. Wynkoop Log-in Date: 10/01/93

Received By (Signature): Sheila M. Wynkoop

Case Number: OUM

Sample Delivery Group No: 39726

ETR Number: 398116

REMARKS:

1. Custody Seal(s) ~~Present~~/Absent* ~~Intact~~/~~Broken~~
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records ~~Present~~/Absent*
4. Sample Information Sheets ~~Present~~/Absent*
5. Airbill ~~Airbill/Sticker~~ ~~Present~~/Absent*
6. Airbill No.: 0460071091
7. Sample Tags ~~Present~~/Absent*
   Sample Tag Numbers ~~Listed~~/Not Listed on Chain-of-Custody
8. Sample Condition: ~~Intact~~/~~Broken~~*/~~Leaking~~
9. Does information on custody records, sample information sheets, and sample tags agree? *See attached. ~~Yes~~/No*
10. Date Received at Lab: 10/01/93
11. Time Received: 1000

	CORRESPONDING		
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66010	N/A	199158	All samples
A66011		199159	were intact
A66012		199160	inside coolers
A66013		199161	with ice. Coolers
A66015		199162	were intact as
A66016		199163	were custody
TB		199164	seals on the
			outsides of
			coolers. C-of-C
			was present.
			Air bubbles
			present in
			2x40ml VOA &
			2x40ml TOC for
			A66010, 1x40ml
			TOC for A66011,
			1x40ml TOC
			for A66012, &
			2x40ml VOA for
			A66013. Temper-
			ature Blank
			temperatures
			were 2°C, 7°C,
			& 5°C.

Sample Transfer

Fraction: all

Area #: Level 4

By: SMW

On: 10/01/93

SMW 10/01/93

* Contact Project Director.

Reviewed by: _____ Logbook No: _____

Date: _____ Logbook Page No: _____

Case: OLM
SDG: 39726
ETR: 39816

aquatec INC.
An Inchcape Company
55 SOUTH PARK DRIVE, COLCHESTER, VT 05446

Discrepancies between sample bottles/labels and C-of-C

(1) Samples all have "Water" checked off on labels; C-of-C has "Water" as a Matrix

(2) C-of-C has "2 TOC" listed for A66013; we did not receive 2x40ml TOC for A66013. This was confirmed in conversation with PM.

(3) C-of-C has "MS/MSD" shown for sample A66015; we rec'd plenty of sample for QC but "MS/MSD" is not shown on any BTLs.

(4) We rec'd 2x40ml VOA + 1L poly Metals for TB which are not listed on C-of-C.

(5) "Water" shown on 2 C-of-C's. 2 C-of-C's do not show "Water" as a Matrix. All samples have "Water" checked off on label.

SMW
10/01/93

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 2

Received By (Print Name): Pat Poundstone Log-in Date: 10/3/93

Received By (Signature): Pat Poundstone

Case Number: OLM

Sample Delivery Group No: 39726

ETR Number: 39824

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos.: No #s
3. Chain-of-Custody Records Present/Absent*
4. Sample Information Sheets Present/Absent*
5. Airbill Airbill/Sticker Present/Absent*
6. Airbill No.: 6742752903
7. Sample Tags Present/Absent*
   Sample Tag Numbers Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking
9. Does information on custody records, sample information sheets, and sample tags agree? Yes/No* see *
10. Date Received at Lab: 10/2/93
11. Time Received: 1115

CLIENT SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66014	no tag	199218	Samples were
A66016	1	199219	received intact
			inside coolers
			packed w/ice.
			Chain-of-custody
			records were
			included with
			the samples. Coolers
			were intact as were
			custody seals on
			outside of coolers
			Temps of coolers
			temperature
			blanks were 10°,
			6°, and 3°C.
			CKP, 10/3/93
*1.) A66016: All sample labels have			
date of collection recorded as 9/30/93.			
Chain-of-custody has a date of 9/30/93			
recorded in "date" column but states			
in the "remarks" column that sample			
was collected on 10/1/93.			
2.) A66014: One volatiles vial has			
collection time recorded as 1430. Chain-			
of-custody says collection at 1445.			

Sample Transfer

Fraction: all

Area #: Lvl 4 fridge

By: CKP

On: 10/2/93

* Contact Project Director.

Reviewed by: _____ Logbook No: _____

Date: _____ Logbook Page No: _____

aquatec INC.
An Inchcape Company
55 SOUTH PARK DRIVE, COLCHESTER, VT 05446

Discrepancies between sample bottles/labels and C-of-C

3.) Total suspended solids (TSS) analysis has not been requested. However, per PTM, Aquatec is now doing TSS.

METHOD M01.PPCB:EXW MATRIX: WATER LEVEL: LOW BATCH ID: 2FD

CLIENT(s): AB0239726

DATE: 9/30/93

ANALYST: JEH

Project: 91082

Case: OLM

SDG: 39726

Lab sample id RTR	Client id	ml Sample	1. pH 5-9	2.# 1.0ml Pest Surr (0.2ppm DEC/TMX) Lot # G208304301	3.# 1.0ml Pest MTX (0.5/1.0ppm) Lot#	4. Add 60ml MeCl2 (2 min. shake)	5. Drain through granular NaSO4	6. 60ml MeCl2, shake, drain (2x) MeCl2 Lot # G23293	7. Solvent exchange to hexane Hex Lot# G21264	8.# Conc to 10ml	9.# Add 1.0ml to pre-washed florisil cartridge Florisil Lot# 942226	10. Elute with 8.0ml 9:1 Hexane:Acetone Ace Lot# G29310	11.# Conc to 1.0ml
180271	PBIKIG	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
198792	A66000	991	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
198793	A66001	914	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
198794	A66002	1005	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓

JEH

JEH 9/30/93

JEH 9/30/93

Aquatec, Inc. -- Extraction worksheet -- printed by: JEH on 09-30-93 07:29:09

001649

METHOD: OLM01.PPCB:EXW

CLIENT(s): BIAB0239784

DATE: 10/4/93

ANALYST: JEH

Project: 91082

CASE: OLM

SDG: 39726

Lab sample id BTR	Client id	ml Sample	1. pH 5-9	2.# 1.0ml Pest Surr (0.2ppm DEC/TMX) Lot # GEO830301	3.# 1.0ml Pest MTX (0.5/1.0ppm) Lot#	4. Add 60ml MeCl2 (2 min. shake)	5. Drain through granular Na2SO4	6. 60ml MeCl2, shake, drain (2x) MeCl2 Lot # G23297	7. Solvent exchange to hexane Hex Lot# G21266	8.# Conc to 10ml	9.# Add 1.0ml to pre-washed florisil cartrid Florisil Lot# E42226	10. Elute with 8.0ml 9:1 Hexane:Acetone Ace Lot# G28310	11.# Conc to 1.0ml
180273	PBIK 3G	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199034	A66003	1001	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199035	A66004	952	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199036	A66005	997	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199037	A66006	997	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199038	A66007	976	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199039	A66008	970	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199040	A66009	1001	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓

JEH
BDH

JEH 10/4/93

JEH 10/4/93

Aquatec, Inc. -- Extraction worksheet -- printed by: JEH on 09-25-93 06:41:54

001650

METHO[illegible]LM01.PPCB:EXW MATRIX: WATER LEVEL: LOW BATCH[illegible] 2GA

CLIENT(s): BIAB0239816
DATE: 10/5/93
ANALYST: JEH
Project: 91082
CASE: OLM
SDG: 39726

Lab sample id STR	Client id	ml Sample	1. pH 5-9	2.# 1.0ml Pest Surr (0.2ppm DEC/TMX) Lot # [illegible]	3.# 1.0ml Pest MTX (0.5/1.0ppm) Lot# [illegible]	4. Add 60ml MeCl2 (2 min. shake)	5. Drain through granular Na2SO4	6. 60ml MeCl2, shake, drain (2x) MeCl2 Lot # [illegible]	7. Solvent exchange to hexane Hex Lot# [illegible]	8.# Conc to 10ml	9.# Add 1.0ml to pre-washed florisil cartridge Florisil Lot# [illegible]	10. Elute with 8.0ml 9:1 Hexane:Acetone Ace Lot# [illegible]	11.# Conc to 1.0ml
180275	PB1K5G	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199158	A66010	988	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199159	A66011	991	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199160	A66012	967	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199161	A66013	994	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199162	A66015	969	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199162MS	A66015MS	954	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
199162MD	A66015MD	952	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

JEH
BDH

JEH 10/5/93

JEH 10/5/93

Aquatec, Inc. – Extraction worksheet – printed by: JEH on 10-05-93 06:49:15

METHOD: OLM01.PPCB:EXW MATRIX: WATER LEVEL: LOW BATCH ID: 2GF

CLIENT(s): BLAB02 / 39824

DATE: 10/5/93

ANALYST: BDH

Project: 91082

CASE: OLM

SDG: 39726

SITE: Kalamazoo

Lab sample id BTR	Client id	ml Sample	pH 5-9 1.	1.0ml Pest Surr (0.2ppm DEC/TMX) Lot # GL0830930 / LOT 3 2.#	1.0ml Pest MTX (0.5/1.0ppm) Lot# 3.#	Add 60ml MeCl2 (2 min. shake) 4.	Drain through granular Na2SO4 5.	60ml MeCl2, shake, drain (2x) MeCl2 Lot # 623297 6.	Solvent exchange to hexane Hex Lot# 621266 7.	Conc to 10ml 8.#	Add 1.0ml to pre-washed florisil cartridge Florisil Lot# 194226 9.#	Elute with 8.0ml 9:1 Hexane:Acetone Ace Lot# 629310 10.	Conc to 1.0ml 11.#
180276	PBLK66	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199218	A66014	987	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199219	A66016	894	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓

BDH
MTP

BDH
10/5/93

BDH 10/5/93

001652

47

F-0169A

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

TR Number: 39816

roject Number: 91082

Case No.: OLM

SDG Number: 39726

010030

emo: Samples placed in fridge on 10/01/93 by SMW at 1700.

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199158-199162	JEH	10/5/93 0705	Extraction	10/5/93 0728

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

000019

:TR Number: 39824

Case No.: OLM

'roject Number: 91082

SDG Number: 39726

Memo: Samples 199218-219 placed in fridge on 10/02/93 @ 1300 hrs.
PKP

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199218, 219	BDH	10/5/93 1010	Extraction	10:15 10/5/93

ETR Number: 39726

Project Number: 91082

Case No.: OCM

SDG Number: 39726

000020

Memo: Samples 198792 → 795 + 198830 were placed in fridge on 9/29/93 by EMW at 1300.

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
198792-198794	JEW	9/30/93 0715	Extraction	9/30/93 0805

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

ETR Number: 39784

Project Number: 91082

Case No.: OLM

SDG Number: 39726

000021

Memo: Samples 199034→41 placed in fridge on 9/30/93 by SMW at 1915.

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199034-199040	JEH	10/4/93 0656	Extraction	10/4/93 0800

COC Number: 39726

Project Number: 91082

Date Rec'd: OVM

SDG Number: 39726

Comments: Samples 198792 → 795 & 198830 were placed in fridge on 9/29/93 by SMW at 1300.

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
198792 – 794	MSB	9/30/93 @ 12:30	EXTRACTION	9/30/93 @ 13:30

000354

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

CR Number: 39784

Project Number: 91082

Case No.: OLM

SDG Number: 39726

Memo: Samples 199034→41 placed in fridge on 9/30/93 by SMW at 1915.

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199034-040	MSG	10/4/93	EXTRACTION	10/4/93 e

00035B

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

:R Number: 39824

Case No.: OLM

:oject Number: 91082

SDG Number: 39726

:mo: Samples 199218-219 placed in fridge on 10/02/93 @ 1300 hrs.
PKP

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199218-219	MTP	10/5/93 1100	Extraction	10/6/93 1430

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

Number: 39816

Case No.: OLM

ject Number: 91082

SDG Number: 39726

o: Samples placed in fridge on 10/01/93 by SMW at 1700.

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
39158-162	MTP	10/5/93 1100	Extraction	10/5/93 1430

Laboratory Transfer Record

Sample Management — Aquatec, Inc.

ETR:	Date: 10/7/93

Laboratory I.D.	Fraction/Analysis
199034-35-39	

Relinquished @ GMD by FNB Time: 1300

Transported by BED

Received @ CP by JLB Time: 1330

000056

Laboratory Transfer Record

Sample Management — Aquatec, Inc.

ETR: 39726 | Date: 9/30/93

Laboratory I.D.	Fraction/Analysis
198271	
198792	
198793	
198794	
	JEH 9/30/93

Relinquished @ GMO by JEH Time: 1118

Transported by ~~JEH~~ BED

Received @ _____ by _____ Time: _____

000057

Sample Management

Aquatec, Inc.

ETR: 39816	Date: 10/4/93

Laboratory I.D.	Fraction/Analysis
199158-60,61	2x1L Amber SVOA + 2x1L Amber PEST/PCB per
199162	6x1L Amber SVOA + 6x1L Amber PEST/PCB

Relinquished @ CP by SMW Time: 0900

Transported by BED

Received @ GMD by FVB Time: 1000

Figure 9: F-0047

(Nov '91)

Laboratory Transfer Record

Sample Management — Aquatec, Inc.

ETR: 39784 | Date: 10/4/93

Laboratory ID.	Fraction/Analysis
180273	
199034	
199035	
199036	
199037	
199038	
199039	
199040	

JEH 10/4/93

Relinquished @ GMD by JEH Time: 1039

Transported by BED

Received @ _____ by _____ Time: _____

000059

Laboratory Transfer Record

Sample Management — Aquatec, Inc.

ETR: 39824 | Date: 10/5/93

Laboratory ID.	Fraction/Analysis
PBLK 66	
199218	
199219	

Relinquished @ GMD by BDH Time: 13:00

Transported by BRD

Received @ _____ by _____ Time: _____

000060

Laboratory Transfer Record

Sample Management — Aquatec, Inc.

ETR: 39816 | Date: 10/5/93

Laboratory I.D.	Fraction/Analysis
180275	
199158	
199159	
199160	
199161	
199162	
199162MS	
199162MD	
	JEH 10/5/93

Relinquished ⊙ GMD by JEH Time: 1117

Transported by JEH

Received ⊙ _____ by _____ Time: _____

000061

Laboratory Transfer Record

Sample Management — Aquatec, Inc.

ETR: 39726 — Date: 10/1/97

Laboratory I.D.	Fraction/Analysis
198792 - 794	BNA Ext.

Relinquished ⊙ GMD by MSG Time: 10:30

Transported by BED

Received ⊙ CP by DAH Time: 12:08

000061A

Laboratory Transfer Record

Sample Management | Aquatec, Inc.

ETR: 39784 | Date: ~~9/3~~ 10/1/93

Laboratory I.D.	Fraction/Analysis
199034-40	2x1L Amber SVOA +
	2x1L Amber. Pest/PCB per

Relinquished @ CP by SMW Time: 0900

Transported by BED

Received @ MTH by GMD Time: 1000

Figure 9: F-0047

(Nov '91)

000061B

Laboratory Transfer Record

Sample Management — Aquatec, Inc.

ETR: 39816/39824	Date: 10/6/93

Laboratory I.D.	Fraction/Analysis
SB1K 8M	
199158	
199159	
199160	
161	
162	
162 MS	
162 MD	
199218	
219	

Relinquished @ GMD by MTP Time 1220

Transported by BEP

Received @ _____ by _____ Time _____

000061C

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE

SDG# 39825

VOLATILE, SEMIVOLATILE, PESTICIDE/PCB, AND INORGANICS ANALYSES

ALLIED OPERABLE UNIT

Analyses performed by:

Aquatec, Inc.
Colchester, Vermont

Review performed by:

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the data package for SDG# 39825 for the Allied Operable Unit sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis			
				VOA	BNA	Pest	TAL[1]
A66017	199221	water	10/1/93	x	x	x	x
A66018	199222	water	10/1/93	x	x	x	x
A66019	199223	water	10/1/93	x	x	x	x
A66020	199224	water	10/1/93	x	x	x	x
A66021	199225	water	10/1/93	x	x	x	x
A66022	199226	water	10/1/93	x	x	x	x
A66023	199227	water	10/1/93	x	x	x	x
A66024	199228	water	10/1/93	x	x	x	x
TB1	199229	water	10/1/93	x			x
A66025	199313	water	10/4/93	x	x	x	x
A66026	199314	water	10/4/93	x	x	x	x
A66027	199315	water	10/4/93	x	x	x	x
A66028	199316	water	10/4/93	x	x	x	x
A66029	199317	water	10/4/93	x	x	x	x
A66030	199318	water	10/4/93	x	x	x	x
A66031	199319	water	10/4/93	x	x	x	x
A66032*	199320	water	10/4/93	x	x	x	x
A66033	199622	water	10/5/93	x	x	x	x
TB2	199321	water	10/4/93	x			x

* MS/MSD/DUP performed on sample

1 Conventional chemistry analyses includes chemical oxygen demand, nitrate/nitrite, alkalinity, chloride, sulfate, total suspended solids, and total organic carbon performed on all samples except trip blanks.

PESTICIDE/PCB ANALYSES

Introduction

Analyses were performed according to the USEPA CLP SOW OLM01.8.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- C Identification confirmed by GC/MS.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The QAPP-specified holding time for semivolatile analyses of water samples are 5 days from sample receipt to extraction and 40 days from the start of extraction to analysis. The technical holding times are 7 day from date of collection to extraction and 40 days to analysis. No deviations from these holding times were noted.

2. Blank Contamination

Quality assurance blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross contamination of samples during field operations.

No target compounds were detected in either the method blanks or instrument blanks.

3. System Performance

The resolution and compound breakdown was within acceptable limits for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

4.1 Initial Calibration

A maximum RSD of 20% is allowed. All initial calibrations were within the specified limit with the exception of delta-BHC, which was above 20% RSD on one column. All data for this compound have been qualified as estimated based on the deviation.

4.2 Continuing Calibration

A maximum RPD of 25% is allowed. All continuing calibrations were within the specified limit.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate recoveries were outside specified limits, qualifications may be applied to the samples.

One surrogate was low on both columns in sample A66025. No qualifiers have been added to the sample based on the recovery. All other surrogate recoveries were within acceptable limits.

6. Compound Identification

The retention times of pesticide/PCB compounds must fall within the calculated retention time windows for both the primary and confirmation columns.

All compounds fell within the appropriate retention time windows. The quantitated concentrations between the two columns did not exceed the 25% difference limit for any sample.

7. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All percent recoveries and relative percent differences (RPD) between recoveries were within acceptable limits.

8. Field Duplicates

Results for duplicate samples are summarized below:

Sample	Result	Duplicate Sample	Result	RPD
A66019	Aroclor 1016 - 4.9	A66024	ND	145%[1]
A66022	ND	A66023	ND	--
A66030	ND	A66031	ND	--
A66033	ND	A66038*	ND	--

* Sample analyzed in SDG# 39890
[1] Compound not detected in duplicate sample, RPD calculation based on detection limit.

All samples replicates through non-detection with the exception of A66019/A66024. The RPD for samples A66019/A66024 is above the acceptable limit for Aroclor 1016. Data for this compound have been qualified as estimated in the samples based on the deviation.

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Pesticide/PCB Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Were the method blanks reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 12			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of 6			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	X		

	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Do any trip/field/rinse blanks have positive results?			X
Are there field/rinse/equipment blanks associated with every sample?		X	
Calibration and GC Performance			
Are the following chromatograms and data printouts present for all samples, blanks, and MS/MSD?			
peak resolution check	X		
performance evaluation mixtures (PEM)	X		
Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260	X		
Toxaphene	X		
low points individual mixtures A & B (INDA and INDB)	X		
mid points INDA and INDB	X		
high points INDA and INDB	X		
instrument blanks	X		
Are Forms VI 1-4 present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses if INDA and INDB within limits for both columns?	X		
Is the resolution between any two adjacent peaks in the resolution check mixture > 60% for both columns?	X		
Is Form VII-1 present for each PEM analyzed for both columns?	X		
Has the individual % breakdown exceeded 20% on either column for:			
4,4'-DDT		X	
endrin		X	
Has the combined breakdown for 4,4'-DDT and endrin exceeded 30% on either column?		X	

	YES	NO	NA
Are all the relative percent difference (RPD) values for all PEM analytes < 25%?	X		
Have all samples been injected within a 12 hour period beginning with the injection of an instrument blank?	X		
Is Form VII-2 present and complete for each INDA and INDB analyzed?	X		
Are RPD values for all INDA and INDB compounds < 25%?	X		
Analytical Sequence Check			
Is Form VIII present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
Is Form IX-1 present for each lot of Florisil cartridges used?	X		
Are all samples listed on the form?	X		
If GPC cleanup was performed, is From IX-2 present?			X
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits for:			
Florisil cartridge check (80-120%)	X		
GPC calibration (80-110%)			X
Pesticide/PCB Identification			
Is a Form X present for every sample in which a pesticide or PCB was detected?	X		
Was GC/MS confirmation provided when required?	X		
Is the percent difference (%D) calculated for the positive sample results on the two columns less than 25%?	X		
Were there any false negatives?		X	
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			

	YES	NO	NA
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Where field duplicates submitted with the samples?	X		

Pesticide/PCB Qualifier Summary
Holding Time and Surrogates

Sample ID	Holding Time	Surrogates - Column 1		Surrogates - Column 2	
		TCX	DCB	TCX	DCB
A66017	OK for all samples				
A66018					
A66019					
A66020					
A66021					
A66022					
A66023					
A66024					
A66025			↓ (52)		↓ (57)
A66026					
A66027					
A66028					
A66029					
A66030					
A66031					
A66032					
A66032MS					
A66032MSD					
A66033					

Surrogates:
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogate diluted out
↑ Recovery high
↓ Recovery low

Unless otherwise noted, all samples are within specified limits.

Pesticide/PCB Calibration Outliers

Instrument: 0850-2
Column: RTX-1701

Date:			10/13	10/14	10/14	10/15			
Time:				0657	1453	0008			
Injection No.:			4-16	18	20-21	34			
	INDA/ INDB	PEM	Initial Cal.	PEM	INDA /B	PEM	INDA /B	PEM	INDA/ B
			%RSD	%D	%D	%D	%D	%D	%D
alpha-BHC	INDA	X		OK	OK	OK			
beta-BHC	INDB	X							
delta-BHC	INDB		21.4						
gamma-BHC (Lindane)	INDA	X							
Heptachlor	INDA								
Aldrin	INDB								
Heptaclor epoxide	INDB								
Endosulfan I	INDA								
Dieldrin	INDA								
4,4'-DDE	INDB								
Endrin	INDA	X							
Endosulfan II	INDB								
4,4'-DDD	INDA								
Endosulfan sulfate	INDB								
4,4'-DDT	INDA	X							
Methoxychlor	INDA	X							
Endrin ketone	INDB								
Endrin aldehyde	INDB								
alpha-Chlordane	INDB								
gamma-Chlordane	INDB								
Toxaphene									
Aroclor 1016									
Aroclor 1221									
Aroclor 1232									
Aroclor 1242									
Aroclor 1248									

Pesticide/PCB Calibration Outliers - Page 2

Aroclor 1254									
Aroclor 1260									
Tetrachloro-m-xylene	INDA/B	X							
Decachlorobiphenyl	INDA/B	X							
Affected Samples:			A66025						
			A66026						
			A66028						
			A66029						
			A66030						
			A66031						
			A66032						

Corrected Sample Analysis Data Sheets

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66017

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Matrix: (soil/water) WATER Lab Sample ID: 199221

Sample wt/vol: 999.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/02/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/06/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	2.7	
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66018

ab Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

atrix: (soil/water) WATER Lab Sample ID: 199222

ample wt/vol: 1000 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received: 10/02/93

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/06/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66019

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Matrix: (soil/water) WATER Lab Sample ID: 199223

Sample wt/vol: 952.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/02/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/06/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	4.9	
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66020

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Matrix: (soil/water) WATER Lab Sample ID: 199224

Sample wt/vol: 946.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/02/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/06/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.053	U
319-85-7	beta-BHC	0.053	U
319-86-8	delta-BHC	0.053	U
58-89-9	gamma-BHC (Lindane)	0.053	U
76-44-8	Heptachlor	0.053	U
309-00-2	Aldrin	0.053	U
1024-57-3	Heptachlor epoxide	0.053	U
959-98-8	Endosulfan I	0.053	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.53	U
53494-70-5	Endrin ketone	0.11	U
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.053	U
5103-74-2	gamma-Chlordane	0.053	U
8001-35-2	Toxaphene	5.3	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66021

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Matrix: (soil/water) WATER Lab Sample ID: 199225

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/02/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/06/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66022

ab Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

atrix: (soil/water) WATER Lab Sample ID: 199226

ample wt/vol: 990.0 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received: 10/02/93

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/06/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66023

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Matrix: (soil/water) WATER Lab Sample ID: 199227

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

% Moisture: decanted: (Y/N) Date Received: 10/02/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/06/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66024

ab Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

atrix: (soil/water) WATER Lab Sample ID: 199228

ample wt/vol: 992.0 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received: 10/02/93

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/06/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66025

a Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

atrix: (soil/water) WATER Lab Sample ID: 199313

ample wt/vol: 921.0 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received: 10/05/93

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/08/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/14/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.054	U
319-85-7	beta-BHC	0.054	U
319-86-8	delta-BHC	0.054	U J
58-89-9	gamma-BHC (Lindane)	0.054	U
76-44-8	Heptachlor	0.054	U
309-00-2	Aldrin	0.054	U
1024-57-3	Heptachlor epoxide	0.054	U
959-98-8	Endosulfan I	0.054	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.54	U
53494-70-5	Endrin ketone	0.11	U
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.054	U
5103-74-2	gamma-Chlordane	0.054	U
8001-35-2	Toxaphene	5.4	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.2	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66026

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Matrix: (soil/water) WATER Lab Sample ID: 199314

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/05/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/08/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/14/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66027

ab Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

atrix: (soil/water) WATER Lab Sample ID: 199621

ample wt/vol: 962.0 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received: 10/06/93

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/11/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	3.0	
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66028

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Matrix: (soil/water) WATER Lab Sample ID: 199316

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

% Moisture: decanted: (Y/N) Date Received: 10/05/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/08/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/14/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	UJ
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66029

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Matrix: (soil/water) WATER Lab Sample ID: 199317

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/05/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/08/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/14/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66030

ab Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

atrix: (soil/water) WATER Lab Sample ID: 199318

ample wt/vol: 1000 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received: 10/05/93

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/08/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/14/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66031

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Matrix: (soil/water) WATER Lab Sample ID: 199319

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received: 10/05/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/08/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/14/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U J
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66032

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Matrix: (soil/water) WATER Lab Sample ID: 199320

Sample wt/vol: 992.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/05/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/08/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/14/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66033

a Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

atrix: (soil/water) WATER Lab Sample ID: 199622

ample wt/vol: 977.0 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received: 10/06/93

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/11/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.051	U
319-85-7	beta-BHC	0.051	U
319-86-8	delta-BHC	0.051	U
58-89-9	gamma-BHC (Lindane)	0.051	U
76-44-8	Heptachlor	0.051	U
309-00-2	Aldrin	0.051	U
1024-57-3	Heptachlor epoxide	0.051	U
959-98-8	Endosulfan I	0.051	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.51	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.051	U
5103-74-2	gamma-Chlordane	0.051	U
8001-35-2	Toxaphene	5.1	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

aquatec INC.
Inchcape Environmental

CORPORATE OFFICES
55 SOUTH PARK DRIVE
COLCHESTER, VT 05446

LABORATORY LOCATIONS
55 SOUTH PARK DRIVE
COLCHESTER, VT 05446

75 GREEN MOUNTAIN DRIVE
SOUTH BURLINGTON, VT 05403

150 HERMAN MELVILLE BOULEVARD
NEW BEDFORD, MA 02740

November 16, 1993

Ms. Laurie Johnston
Blasland & Bouck Engineers
6723 Towpath Road, Box 66
Syracuse, NY 13214

Re: Analytical Results-Kalamazoo Site
Aquatec Project No. 91082
Case No. OLM; SDG No. 39825

Dear Ms. Johnston:

Enclosed are the analytical results for samples received intact by Aquatec on October 02, 05 and 06, 1993. The analyses associated with these samples were performed in accordance with the methodologies in the OLM01 and ILM02 Statement of Works. Laboratory numbers and quality control samples were assigned as follows:

Client Sample ID	Aquatec Lab No.	Sample Matrix
Samples Received on October 02, 1993 ETR No. 39825		
A66017	199221	Water
A66018	199222	Water
A66019	199223	Water
A66020	199224	Water
A66021	199225	Water
A66022	199226	Water
A66023	199227	Water
A66024	199228	Water
A66013	199220	Water
TB1	199229	Water
HB	199230	Water
Samples Received on October 05, 1993 ETR No. 39869		
A66025	199313	Water
A66026	199314	Water
A66027	199315	Water
A66028	199316	Water
A66029	199317	Water
A66030	199318	Water
A66031	199319	Water
A66032	199320	Water
A66032MS	199320MS	Water
A66032MSD	199320MD	Water
A66032REP	199320DP	Water
TB2	199321	Water

000001

Client Sample ID	Aquatec Lab No.	Sample Matrix
Samples Received on October 06, 1993 ETR No. 39887		
A66027	199621	Water
A66033	199622	Water

Please note sample TB received October 2, 1993 and TB received October 5, 1993 were renamed TB1 and TB2 respectively for volatile organic analysis.

Semivolatile organic surrogate recoveries for samples A66026, A66030 and A66032 were analyzed outside the specified quality control limits. These samples were re-extracted beyond the specified holding time and reanalyzed. Both sets of data are included in this case submittal.

Semivolatile organic matrix spike and matrix spike duplicate recoveries of 4-chloro-3-methylphenol, 4-nitrophenol and 2,4-dinitrotoluene were outside the specified quality control limits for samples A66032MS and A66032MSD.

Peak height was used for quantitation of all pesticide/PCB standards on both analytical columns.

Matrix spike recovery for selenium in sample A66032 was outside the specified quality control limits. All data have been flagged according to contract specifications.

Sincerely,

Karen R. Chirgwin

Karen R. Chirgwin
Laboratory Operations Director

KRC/jg

Enclosure

91082B13OCT93

2E
WATER PESTICIDE SURROGATE RECOVERY

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

GC Column(1): RTX-35 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK7G	84	84	96	97			0
02	PBLK9G	88	88	71	74			0
03	PBLK1H	107	110	110	110			0
04	A66017	106	109	102	108			0
05	A66018	92	90	84	84			0
06	A66019	94	100	102	106			0
07	A66020	92	94	100	102			0
08	A66021	90	90	86	86			0
09	A66022	90	92	96	96			0
10	A66023	85	86	88	88			0
11	A66024	86	88	107	108			0
12	A66025	80	73	52*	57*			2
13	A66026	79	80	103	104			0
14	A66027	108	114	104	107			0
15	A66028	81	78	104	106			0
16	A66029	70	67	68	70			0
17	A66030	94	92	110	115			0
18	A66031	88	81	104	105			0
19	A66032	88	87	100	108			0
20	A66033	110	114	114	114			0
21	A66032MS	86	84	98	106			0
22	A66032MSD	86	84	95	102			0

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

FORM II PEST-1 3/90

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Matrix Spike - EPA Sample No.: A66032

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	0.510	0	0.495	97	56-123
Heptachlor	0.510	0	0.466	91	40-131
Aldrin	0.510	0	0.474	93	40-120
Dieldrin	1.020	0	1.02	100	52-126
Endrin	1.020	0	1.00	98	56-121
4,4'-DDT	1.020	0	1.04	102	38-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	0.505	0.496	98	1	15	56-123
Heptachlor	0.505	0.473	94	3	31	40-131
Aldrin	0.505	0.482	95	2	22	40-120
Dieldrin	1.010	1.01	100	0	18	52-126
Endrin	1.010	0.987	98	0	21	56-121
4,4'-DDT	1.010	1.03	102	0	27	38-127

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK1H

L Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Lab Sample ID: 180280 Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 10/11/93

Date Analyzed (1): 10/12/93 Date Analyzed (2): 10/12/93

Time Analyzed (1): 0442 Time Analyzed (2): 0442

Instrument ID (1): 0850-1 Instrument ID (2): 0850-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): RTX-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66027	199621	10/12/93	10/12/93
02	A66033	199622	10/12/93	10/12/93

COMMENTS:

4C
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK7G

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Lab Sample ID: 180277 Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 10/06/93

Date Analyzed (1): 10/12/93 Date Analyzed (2): 10/12/93

Time Analyzed (1): 0522 Time Analyzed (2): 0522

Instrument ID (1): 0850-1 Instrument ID (2): 0850-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): RTX-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66017	199221	10/12/93	10/12/93
02	A66018	199222	10/12/93	10/12/93
03	A66019	199223	10/12/93	10/12/93
04	A66020	199224	10/12/93	10/12/93
05	A66021	199225	10/12/93	10/12/93
06	A66022	199226	10/12/93	10/12/93
07	A66023	199227	10/12/93	10/12/93
08	A66024	199228	10/12/93	10/12/93

COMMENTS:

4C
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK9G

I Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Lab Sample ID: 180278 Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 10/08/93

Date Analyzed (1): 10/14/93 Date Analyzed (2): 10/14/93

Time Analyzed (1): 1612 Time Analyzed (2): 1612

Instrument ID (1): 0850-1 Instrument ID (2): 0850-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): RTX-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66025	199313	10/14/93	10/14/93
02	A66026	199314	10/14/93	10/14/93
03	A66028	199316	10/14/93	10/14/93
04	A66029	199317	10/14/93	10/14/93
05	A66030	199318	10/14/93	10/14/93
06	A66031	199319	10/14/93	10/14/93
07	A66032	199320	10/14/93	10/14/93
08	A66032MS	199320MS	10/14/93	10/14/93
09	A66032MSD	199320MD	10/14/93	10/14/93

COMMENTS:

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK1H

ab Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

atrix: (soil/water) WATER Lab Sample ID: 180280

ample wt/vol: 1000 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received:

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/11/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK7G

ab Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

atrix: (soil/water) WATER Lab Sample ID: 180277

ample wt/vol: 1000 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received:

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/06/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/12/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK9G

b Name: AQUATEC INC Contract: 91082

b Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

trix: (soil/water) WATER Lab Sample ID: 180278

mple wt/vol: 1000 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received:

traction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/08/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/14/93

jection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

b Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Instrument ID: 0850-1 Date(s) Analyzed: 10/10/93 10/10/93

GC Column: RTX-35 ID: 0.53(mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.500	*1	18.64	18.57	18.71	10200
		*2	19.46	19.39	19.53	7330
		*3	19.89	19.82	19.96	7540
		4	21.87	21.80	21.94	8920
		5	22.14	22.07	22.21	6950
Aroclor 1016	0.100	*1	10.33	10.26	10.40	12500
		*2	11.49	11.42	11.56	23600
		*3	12.07	12.00	12.14	8140
		4	12.23	12.16	12.30	11600
		5	12.60	12.53	12.67	33400
Aroclor 1221	0.200	*1	9.40	9.33	9.47	945
		*2	9.76	9.69	9.83	5960
		*3	10.15	10.08	10.22	4100
		4	10.34	10.27	10.41	13100
		5	10.46	10.39	10.53	2170
Aroclor 1232	0.100	*1	10.34	10.27	10.41	13300
		*2	11.50	11.43	11.57	11000
		*3	12.60	12.53	12.67	15200
		4	12.99	12.92	13.06	7670
		5	14.43	14.36	14.50	22300
Aroclor 1242	0.100	*1	10.35	10.28	10.42	10500
		*2	11.51	11.44	11.58	20100
		*3	12.62	12.55	12.69	28100
		4	13.00	12.93	13.07	14100
		5	15.05	14.98	15.12	15600
Aroclor 1248	0.100	*1	13.45	13.38	13.52	21200
		*2	14.24	14.17	14.31	25300
		*3	15.04	14.97	15.11	29700
		4	15.20	15.13	15.27	22900
		5	15.87	15.80	15.94	18800
Aroclor 1254	0.100	*1	15.34	15.27	15.41	24400
		*2	15.60	15.53	15.67	31900
		*3	16.93	16.86	17.00	37900
		4	17.40	17.33	17.47	26700
		5	19.24	19.17	19.31	24200
Aroclor 1260	0.100	*1	17.44	17.37	17.51	26500
		*2	17.83	17.76	17.90	31200
		*3	19.21	19.14	19.28	24000
		4	21.56	21.49	21.63	35400
		5	23.84	23.77	23.91	17600

* Denotes required peaks

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Instrument ID: 0850-1 Date(s) Analyzed: 10/13/93 10/14/93

GC Column: RTX-35 ID: 0.53(mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.500	*1	18.55	18.48	18.62	11400
		*2	19.36	19.29	19.43	8450
		*3	19.78	19.71	19.85	8540
		4	20.27	20.20	20.34	7730
		5	21.74	21.67	21.81	10400
Aroclor 1016	0.100	*1	10.31	10.24	10.38	12600
		*2	11.46	11.39	11.53	24300
		*3	12.57	12.50	12.64	34400
		4	12.96	12.89	13.03	17400
		5	14.20	14.13	14.27	17400
Aroclor 1221	0.200	*1	9.71	9.64	9.78	6870
		*2	10.10	10.03	10.17	4680
		*3	10.18	10.11	10.25	2760
		4	10.29	10.22	10.36	14800
		5	10.41	10.34	10.48	2600
Aroclor 1232	0.100	*1	11.46	11.39	11.53	11600
		*2	12.39	12.32	12.46	9360
		*3	12.57	12.50	12.64	15900
		4	14.39	14.32	14.46	14700
		5	15.00	14.93	15.07	7750
Aroclor 1242	0.100	*1	11.46	11.39	11.53	21000
		*2	12.57	12.50	12.64	29400
		*3	12.96	12.89	13.03	14300
		4	14.20	14.13	14.27	15200
		5	15.00	14.93	15.07	16000
Aroclor 1248	0.100	*1	13.39	13.32	13.46	21700
		*2	14.18	14.11	14.25	25700
		*3	14.98	14.91	15.05	29800
		4	15.14	15.07	15.21	23300
		5	15.80	15.73	15.87	18900
Aroclor 1254	0.100	*1	15.27	15.20	15.34	26300
		*2	15.54	15.47	15.61	33800
		*3	16.86	16.79	16.93	41100
		4	17.32	17.25	17.39	27400
		5	19.14	19.07	19.21	26500
Aroclor 1260	0.100	*1	17.39	17.32	17.46	28300
		*2	17.77	17.70	17.84	33200
		*3	19.15	19.08	19.22	25400
		4	21.47	21.40	21.54	37400
		5	23.71	23.64	23.78	18800

* Denotes required peaks

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Instrument ID: 0850-2 Date(s) Analyzed: 10/10/93 10/10/93

GC Column: RTX-1701 ID: 0.53(mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.500	*1	16.31	16.24	16.38	11500
		*2	16.99	16.92	17.06	16800
		*3	17.30	17.23	17.37	16300
		4	18.10	18.03	18.17	12800
		5	18.30	18.23	18.37	18300
Aroclor 1016	0.100	*1	8.35	8.28	8.42	12100
		*2	9.84	9.77	9.91	8540
		*3	9.97	9.90	10.04	11700
		4	10.50	10.43	10.57	42400
		5	12.22	12.15	12.29	16900
Aroclor 1221	0.200	*1	7.79	7.72	7.86	5520
		*2	8.20	8.13	8.27	3970
		*3	8.35	8.28	8.42	13500
		4	8.77	8.70	8.84	575
		5	9.35	9.28	9.42	3590
Aroclor 1232	0.100	*1	8.34	8.27	8.41	13100
		*2	9.34	9.27	9.41	13700
		*3	10.50	10.43	10.57	19000
		4	10.85	10.78	10.92	7780
		5	12.22	12.15	12.29	6960
Aroclor 1242	0.100	*1	9.34	9.27	9.41	25000
		*2	10.50	10.43	10.57	35400
		*3	10.85	10.78	10.92	14500
		4	12.95	12.88	13.02	17300
		5	13.01	12.94	13.08	16400
Aroclor 1248	0.100	*1	10.50	10.43	10.57	23400
		*2	11.33	11.26	11.40	26000
		*3	12.22	12.15	12.29	27000
		4	12.95	12.88	13.02	35700
		5	13.01	12.94	13.08	30100
Aroclor 1254	0.100	*1	12.96	12.89	13.03	41500
		*2	13.40	13.33	13.47	39300
		*3	14.52	14.45	14.59	54900
		4	15.10	15.03	15.17	35100
		5	16.25	16.18	16.32	46500
Aroclor 1260	0.100	*1	14.88	14.81	14.95	39800
		*2	15.40	15.33	15.47	48100
		*3	16.25	16.18	16.32	51200
		4	17.98	17.91	18.05	62000
		5	19.18	19.11	19.25	46300

* Denotes required peaks

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39825

Instrument ID: 0850-2 Date(s) Analyzed: 10/13/93 10/14/93

GC Column: RTX-1701 ID: 0.53(mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.500	*1	16.91	16.84	16.98	16900
		*2	17.21	17.14	17.28	16500
		*3	18.00	17.93	18.07	13400
		4	18.21	18.14	18.28	18800
		5	19.06	18.99	19.13	8960
Aroclor 1016	0.100	*1	8.32	8.25	8.39	11500
		*2	9.32	9.25	9.39	29600
		*3	10.48	10.41	10.55	41300
		4	10.82	10.75	10.89	17900
		5	12.19	12.12	12.26	16400
Aroclor 1221	0.200	*1	7.76	7.69	7.83	6120
		*2	8.16	8.09	8.23	4480
		*3	8.31	8.24	8.38	15200
		4	9.10	9.03	9.17	2490
		5	9.30	9.23	9.37	4020
Aroclor 1232	0.100	*1	8.32	8.25	8.39	13500
		*2	9.11	9.04	9.18	10100
		*3	9.32	9.25	9.39	14000
		4	10.48	10.41	10.55	19000
		5	10.82	10.75	10.89	7930
Aroclor 1242	0.100	*1	8.31	8.24	8.38	9530
		*2	9.30	9.23	9.37	25400
		*3	10.46	10.39	10.53	34900
		4	10.80	10.73	10.87	15100
		5	12.89	12.82	12.96	17100
Aroclor 1248	0.100	*1	10.47	10.40	10.54	22400
		*2	11.29	11.22	11.36	25300
		*3	12.18	12.11	12.25	26100
		4	12.90	12.83	12.97	35400
		5	12.97	12.90	13.04	29100
Aroclor 1254	0.100	*1	12.92	12.85	12.99	42400
		*2	13.35	13.28	13.42	40400
		*3	14.47	14.40	14.54	55400
		4	15.06	14.99	15.13	34200
		5	16.20	16.13	16.27	47200
Aroclor 1260	0.100	*1	14.83	14.76	14.90	39700
		*2	15.36	15.29	15.43	47400
		*3	16.20	16.13	16.27	50200
		4	17.92	17.85	17.99	60700
		5	19.10	19.03	19.17	45000

* Denotes required peaks

Airbill# 6742752903

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FAX: 315-449-0017

CHAIN OF CUSTODY RECORD

Page 1 of 4

000004

PROJ. NO.: 645.51
PROJECT NAME: KRSG-Allied OU
SAMPLERS: (Signature) Karen L. Royce

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	CLP Semivolatiles	CLP Pesticides, PCBs	CN-	COD, Nitrate	Alkalinity, CO_3, HCO_3, Cl_2SO_4	Temperature	REMARKS
MW-2D	10/1/93	1500		X	A66023	9	2	2	2	1	1	1		
Temperature Blank	9/29/93	1800		X		1							1	Cooler # 202

Left Blank 10/1/93 KLR

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L Royce	10/1/93	1730					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)

Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:
			Pat Foundstone	10/2/93	1115	Temp Blank = 5°C

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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CHAIN OF CUSTODY RECORD

000005

PROJ. NO.: 645.51
PROJECT NAME: KRSG - ALLIEDOU
SAMPLERS: (Signature) [signature]

cooler # 211

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	SEMIVOLATILES	PCB/PESTICIDES	CN-	ALK(CH)(CRO, SO4, HCO3, CO3)	COD + NO3	TEMPERATURE	REMARKS
MW-121A	9/30/93	14:30		X	A66013	2	2							WATER
MW-121B	9/30/93	14:45		X	A66014	9	2	2	2	1	1	1		WATER
MW-22A	10/1/93	8:45		X	A66017	9	2	2	2	1	1	1		WATER
MW-22B	10/1/93	10:15		X	A66018	9	2	2	2	1	1	1		WATER
	10/1/93	1730		X	Temp Blank	1							1	

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	10/1/93	13:36	Alan Hefer	Alan Hefer	10/1/93	1730	
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			Pat Poundstone	10/2/93	1115	Temp Blank = 3° C	

7/12/9
13937

Distribution: Original Accompanies Shipment; Co Coordinator Field Files

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AIRBILL # 6742752903

Page 2 of 2

CHAIN OF CUSTODY RECORD

PROJ. NO.: 645.51
PROJECT NAME: KRSG - ALLIED OU
SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	Total Metals	Field Filtered Metals	Volatiles	Temperature			REMARKS
MW-121B	9/30/93	14:45		X	A66014	4	1	1	2				WATER
TRIP BLANK	10/1/93	7:00		X	TRIP BLANK	4	1	~~1~~	2				WATER
MW-22A	10/1/93	8:45		X	A66017	4	1	1	2				WATER
MW-22B	10/1/93	10:15		X	A66018	4	1	1	2				WATER
MW-120B	10/1/93	13:00		X	A66019	4	1	1	2				WATER
MW-120C	10/1/93	13:30		X	A66024	4	1	1	2				WATER
MW-120A	10/1/93	14:00		X	A66020	4	1	1	2				WATER
					TEMP BLANK	1				1			COOLER #242 WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	10/1/93	16:15					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) Pat Poundstone	DATE 10/2/93	TIME 1115	Remarks: Temp blank = 6°C	

7/12/93
1393788HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

000006

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Airbill # 6742752 96

CHAIN OF CUSTODY RECORD

000007

PROJ. NO.: 645.51
PROJECT NAME: KRSG - Allied OU
SAMPLERS: (Signature) Karen L Royce

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	CLP Semivolatiles	CLP Pesticides, PCBs	CN-	COD, Nitrate	Alkalinity, Cl, SO4, Hess,	Temperature	REMARKS
MW-125P	9/30/93	1400		X	A66016	7		2	2	1	1	1		These bottles collected on 10/1/93
Rinse Blank	10/1/93	1000		X	A66021	9	2	2	2	1	1	1		
Temperature Blank	9/30/93	1800		X	Temperature Blank	1							1	Cooler # 197
MW-25	10/1/93	1330		X	A66022	9	2	2	2	1	1	1		

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L Royce	10/1/93	1730					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			Pat Poundstone	10/2/93	1115	Temp Blank = 10°C	

7/12/
13931 R

Distribution: Original Accompanies Shipment; C Coordinator Field Files

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CHAIN OF CUSTODY RECORD

AIRBILL # 6742757903

000003

PROJ. NO.	PROJECT NAME
645.51	KRSG - ALLIED OU

SAMPLERS: (Signature) D. L.

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	SEMIVOLATILES	PCB/PESTICIDES	Ca	ALK, CHL, SO4, HCO3, CO3	COD + NO3	TEMPERATURE	REMARKS
MW-120B	10/1/93	13:00		X	A66019	9	2	2	2	1	1	1		WATER
MW-120C	10/1/93	13:30		X	A66024	9	2	2	2	1	1	1		WATER
MW-120A	10/1/93	14:00		X	A66020	9	2	2	2	1	1	1		WATER
	10/1/93	16:15		X	TEMP BLANK	1							1	COOLER + 738 WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D. L.	10/1/93	16:15					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)

Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:
			Pat Poundstone	10/2/93	1115	Temp Blank = 8°C

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

Airbill # 6742752903

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FAX: 315-449-0017

CHAIN OF CUSTODY RECORD

Page 1 of 2

000009

PROJ. NO.: 645.51
PROJECT NAME: KRSG-Allied OU
SAMPLERS: (Signature) Karen L. Royce [signature]

COOLER #242

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	CLP Volatiles	CLP TAL Metals	CLP TAL Metals (Field Filtered)				REMARKS
MW-125P	9/30/93 ~~10/1/93~~	1400		X	A66016	2		1	1				Sample collected 10/1/93 WATER
Rinse Blank	10/1/93	1000		X	A66021	4	2	1	1				WATER
MW-2S	10/1/93	1330		X	A66022	4	2	1	1				WATER
MW-2D	10/1/93	1500		X	A66023	4	2	1	1				WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L. Royce	10/1/93	1530	[signature]				
[signature]	10/1/93	16:15					

Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:
			Pat Poundstone	10/2/93	1115	Temp Blank = 6.0°C

7/12/9
13937 R

Distribution: Original Accompanies Shipment; C Coordinator Field Files

BLASLAND & BOUCK ENGINEERS, P.C.
6723 Towpath Road, Box 66
Syracuse, New York 13214-0066
TEL: 315-446-9120
FAX: 315-449-0017

Airbill: 6742727843
Page 1 of 1

000010

CHAIN OF CUSTODY RECORD

PROJ. NO.: 645.51
PROJECT NAME: KRSG - Allied OU
SAMPLERS: (Signature) Karen L Royce [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	CLP Semivolatiles	CLP Pesticides, PCBs	CN-	COD, Nitrate, Alkalinity, CO_3, HCO_3, Cl, SO_4	Temperature	REMARKS
Temperature Blank	10/4/93	6:30		X	Temperature Blank	1						1	Cooler # 00
MW-19BR	10/4/93	9:30		X	A66030	9	2	2	2	1	1	1	
MW-19S	10/4/93	11:00		X	A66031	9	2	2	2	1	1	1	
Rinse Blank	10/4/93	14:00		X	A66029	9	2	2	2	1	1	1	

left blank 10/4/93 KLR

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L Royce	10/4/93	18:00					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) Sheila M Windsor	DATE 10/5/93	TIME 1000	Remarks: temp = 12°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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CHAIN OF CUSTODY RECORD

Page 2 of 2

000011

PROJ. NO.: 645.51
PROJECT NAME: KRSG - ALLIEDOU
SAMPLERS: (Signature) D. [signature]

COOLER #178

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	VOLATILES	METALS	FIELD FILTERED METALS	TEMPERATURE	TOC		REMARKS
MW-125A	10/4/93	9:45		X	A66025	4	2	1	1				WATER
MW-125B	10/4/93	10:30		X	A66026	4	2	1	1				WATER
MW-~~12R~~ 25 PM	10/4/93	15:00		X	A66027	4 PWL ~~3~~ ~~3~~ PM	2	~~1~~ PWL			2		WATER
MW-12R	10/4/93	15:31		X	A66028	4	2	1	1				WATER
					~~TEMPERATURE BLANK~~					1			~~COOLER #~~ ~~WATER~~

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D. [signature]	10/4/93	17:30					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)

Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:
			Sheila M Wynkoop	10/5/93	1000	Temp Blank = 11°C

7/12/93
1393786

Distribution: Original Accompanies Shipment; Copy [illegible]ordinator Field Files

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CHAIN OF CUSTODY RECORD

000012

PROJ. NO.: 645.51
PROJECT NAME: KRSG - Allied OU
SAMPLERS: (Signature) Karen L Royce Rob Patchett

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	CLP Volatiles	CLP TAL Metals	CLP TAL Metals (Field Filtered)	Temperature			REMARKS
Trip Blank	10/4/93	8:00		X	Trip Blank	2	1	1					
Temperature Blank	10/4/93	6:30		X	Temperature Blank	1				1			Cooler # 178
MW-19BR	10/4/93	9:30		X	A66030	4	2	1	1.				
MW-19S	10/4/93	11:00		X	A66031	4	2	1	1				
MW-1	10/4/93	13:00		X	A66032	KLP ~~4~~ 12	6	3	3				MS/MSD
Rinse Blank	10/4/93	14:00		X	A66029	4	2	1	1				

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L. Royce	10/4/93	10/4/93					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)

Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:
			Sheila M Wynkoop	10/5/93	1000	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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FAX: 315-449-0017

CHAIN OF CUSTODY RECORD

000013

PROJ. NO.: 645.51
PROJECT NAME: KISG - ALLIED OU
SAMPLERS: (Signature) D-J

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	PCB's/PESTICIDES	SEMIVOLATILES	Cn-	ALK, CHL, SO_4, HCO_3, CO_3	COD, NO_3	TEMPERATURE	REMARKS
MW-123A	10/4/93	9:45		X	A66025	9	2	2	2	1	1	1		WATER
MW-123B	10/4/93	10:30		X	A66026	9	2	2	2	1	1	1		WATER
~~MW-25~~	~~10/4/93~~	~~15:00~~		~~X~~	~~A66027~~ DWL									
~~MW-12R~~	~~10/4/93~~	~~15:30~~		~~X~~	~~A66028~~ DWL									
					TEMP FLANK								1	COOLER# 64 WATER
MW-12R	10/4/93	15:30		X	A66028	9	2	2	2	1	1	1		WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D-J	10/4/93	17:32					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			Sheila M Wyndham	10/5/93	1000		

7/12/9
1393 R

Distribution: Original Accompanies Shipment; C Coordinator Field Files

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Airbill: 674272784

Page 1 of 1

CHAIN OF CUSTODY RECORD

000014

PROJ. NO.: 645.51
PROJECT NAME: KRSG-Allied OU
SAMPLERS: (Signature) Karen L Royce

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	CLP Semivolatiles	CLP Pesticides/PCB's	CN	COD, Nitrate Alkalinity, CO_3, HCO_3, Cl, SO_4	Temperature	REMARKS
MW-1	10/4/93	1300		X	A66032	27	6	6	6	3	3	3	MS/MSD
Temperature Blank	10/4/93	1600		X	Temperature Blank	1						1	Cooler # 156

left blank 10/4/93 KLR

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L Royce	10/4/93	1800					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) Sheila M Wynkoop	DATE 10/5/93	TIME 1000	Remarks: temp = 12°C	

7/12/93
1393788HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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Copy original w/ ETR 39884
Page 2 of 2

000015

CHAIN OF CUSTODY RECORD

PROJ. NO.: 645.51
PROJECT NAME: ALLIED CO
SAMPLERS: (Signature) D-J

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	VOLATILES	METALS	FIELD FILTERED METALS	TEMPERATURE			REMARKS
MW-[illegible]	10/4/93	15:00		X	A66027	2		1	1				WATER
MW-122A	10/5/93	8:30		X	A66033	4	2	1	1				WATER
MW-122C	10/5/93	8:45		X	A66038	4	2	1	1				WATER
MW-122B	10/5/93	10:30		X	A66039	4	2	1	1				WATER
MW-19C	10/5/93	15:00		X	A66040	4	2	1	1				WATER
MW-19D	10/5/93	15:45		X	A66041	4	2	1	1				WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D-J	10/5/93	17:50					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			[signature]	10/6/93	1000		

7/12 1393 CDR

Distribution: Original Accompanies Shipment; C[illegible] to Coordinator Field Files

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CHAIN OF CUSTODY RECORD

000016

PROJ. NO.: 645.51
PROJECT NAME: KRSG - ALLIED OU
SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	PCB's/PESTICIDE	SEMIVOLATILES	Cn-	COD + NO3	ALK, CHL, SO4, HCO3, CO3	TEMPERATURE	REMARKS
MW-25	10/4/93	15:00		X	A66027	7		2	2	1	1	1		WATER
MW-122A	10/5/93	8:30		X	A66033	9	2	2	2	1	1	1		WATER
MW-122C	10/5/93	8:45		X	A66038	9	2	2	2	1	1	1		WATER
					TEMP BLANK	1							1	COOLER #200 WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	10/5/93	17:52					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) [signature]	DATE 10/6/93	TIME 1000	Remarks: temp = 5°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc.

Page 1 of 2 JLB 10/1/93

Received By (Print Name): Pat Poundstone

Log-in Date: 10/3/93

Received By (Signature): Pat Poundstone

Case Number: OLM

Sample Delivery Group No: 39825

ETR Number: 39825

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos.: No #5
3. Chain-of-Custody Records — Present/Absent*
4. Sample Information Sheets — Present/Absent*
5. Airbill — Airbill Sticker Present/Absent*
6. Airbill No.: 6742752903
7. Sample Tags — Present/Absent*
   Sample Tag Numbers — Listed/Not Listed on Chain-of-Custody
8. Sample Condition: — Intact/Broken*/Leaking
9. Does information on custody records, sample information sheets, and sample tags agree? Yes/No*
10. Date Received at Lab: 10/2/93
11. Time Received: 1115

	CORRESPONDING		
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66013	no tag	199220	Samples were
A66017		199221	received intact
A66018		199222	inside coolers
A66019		199223	packed w/ice.
A66020		199224	A chain-of-custody
A66021		199225	record was included
A66022		199226	w/the samples
A66023		199227	Coolers were intact
A66024		199228	as were custody
TB		199229	seals on outside
			of coolers. Temps.
			of cooler temperature
			blanks were 3°,
			10°, 6°, 8°, and 5°C.
			PKP, 10/3/93
#1.) A66020: Label on one			PCB/Pest.
bottle does not		have date	and time of
collection recorded. Chain-of-custody says			
collection on 10/1/93 at			1400.
2.) A66024: Label on one			semivolatiles
bottle does not have time of collection			
recorded. C-o-C says collection at 1330.			
3.) TB: All labels on sample bottles/vials			
have a client ID of A66021. C-o-C says			
those fractions collected on 10/1/93 at 0700			
are Trip blank. (Times & dates matched with			
C-of-C to determine sample ID:)			

Sample Transfer

Fraction: all

Area #: Lvl 4 fridge

By: PKP

On: 10/2/93

* Contact Project Director.

Reviewed by:

Date:

Note: TSS not requested on C-of-C. It is to be run per PTM. JLB 10/4

Logbook No:

Logbook Page No:

001990

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Sheila M. Wynkoop Log-in Date: 10/5/93

Received By (Signature): Sheila M. Wynkoop

Case Number: OLM

Sample Delivery Group No: 39825

ETR Number: 39869

REMARKS:

1. Custody Seal(s) ~~Present~~/~~Absent~~* ~~Intact~~/~~Broken~~
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records ~~Present~~/~~Absent~~*
4. Sample Information Sheets ~~Present~~/~~Absent~~*
5. Airbill ~~Airbill/Sticker~~ ~~Present~~/~~Absent~~*
6. Airbill No.: 6742727843
7. Sample Tags ~~Present~~/~~Absent~~*
   Sample Tag Numbers ~~Listed~~/~~Not Listed~~ on Chain-of-Custody
8. Sample Condition: ~~Intact~~/~~Broken~~*/~~Leaking~~
9. Does information on custody records, sample information sheets, and sample tags agree? *see attached ~~Yes~~/No*
10. Date Received at Lab: 10/5/93
11. Time Received: 1000

CLIENT SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66025	N/A	199313	All samples
A66026		199314	rec'd intact
A66027		199315	inside coolers
A66028		199316	with ice.
A66029		199317	coolers were
A66030		199318	intact as
A66031		199319	were custody
A66032		199320	seals on
TB		199321	the outsides
			of coolers.
			C of C was
			present. Air
			bubbles pre-
			sent in 2x40ml
			TOC & 1x40ml
			VOA of A66025
			2x40ml TOC &
			2x40ml VOA of
			A66026, &
			2x40ml TOC & 1
			x40ml VOA of
			A66027 only.
			Temperature Blank
		SMW	temperatures were
		10/5/93	12°C, 12°C & 11°C

please note one temp. blank was missing.

Sample Transfer

Fraction: all

Area #: Level 4

By: SMW

On: 10/5/93

* Contact Project Director.

Reviewed by: _____ Logbook No: _____

Date: _____ Logbook Page No: _____

aquatec INC.
An Inchcape Company
55 SOUTH PARK DRIVE, COLCHESTER, VT 05446

Case: OLM
SDG: 39825
EPR: 39869

Discrepancies between sample bottles/labels and C-of-C

(1) Two out of the five C-of-C's show "Water" as a matrix for samples; the other three show no matrix. All samples have "Water" checked off on labels.

(2) C-of-C has "MS/MSD" shown for sample A16032. This sample does not show "MS/MSD" on labels.

SMW 10/5/93

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Sheila M. Wynkoop Log-in Date: 10/6/93

Received By (Signature): Sheila M Wynkoop

Case Number: OLM

Sample Delivery Group No: 39825

ETR Number: 39887

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records Present/Absent*
4. Sample Information Sheets Present/Absent*
5. Airbill Airbill/Sticker Present/Absent*
6. Airbill No.: 6742727821
7. Sample Tags Present/Absent*
   Sample Tag Numbers Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking
9. Does information on custody records, sample information sheets, and sample tags agree? Yes/No* No *see attached SMW
10. Date Received at Lab: 10/6/93
11. Time Received: 1000

CLIENT SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66027	N/A	199621	All samples
A66033	↓	199622	rec'd intact
			inside coolers
			with ice.
			coolers were
			intact as
			were custody
			seals on the
			outsides of
			coolers. C of C
			was present.
			Temperature
			Blank temper-
			atures were
			9°C, 5°C, 10°C
			& 10°C. No
			air bubbles
			present in
			any 40ml vials

Sample Transfer

Fraction: all

Area #: Level 4

By: SMW

On: 10/6/93

SMW 10/6/93

* Contact Project Director.

Reviewed by: _____ Logbook No: _____

Date: _____ Logbook Page No: _____

001993

Case: Olm
SDG: 39825
ETR: 39887

aquatec INC.
An Inchcape Company
55 SOUTH PARK DRIVE, COLCHESTER, VT 05446

Discrepancies between sample bottles/labels and C-of-C

(1) A66027 Wet lab BH has "none" as a preservative
& A66033 Wet lab BH has "4°C" as a preservative.

(2) C of C has "830" shown as a time for A66033. This sample shows the same on some bottles; others say "0830" for a time.

(3) "TSS" not shown on C of C or on sample bottles; "TSS" is to be run for these samples.

SMW
10/6/93

METHOD: LM01.PPCB:EXW MATRIX: WATER LEVEL: LOW BATCH ID: 2GX

CLIENT(s): DLHB02 39869
DATE: 10/8/93
ANALYST: BDH
PROJECT: 91082
CASE: OLM
SDG: 39825
SITE: Kalamazoo

Lab sample id ETR	Client id	ml Sample	1. pH 5-9	2.# 1.0ml Pest Surr (0.2ppm DECTMX) Lot # GE083093 LAT-3	3.# 1.0ml Pest MTX (0.4/1.0ppm) Lot # GE100593B	4. Add 60ml MeCl2 (2 min. shake)	5. Drain through granular Na2SO4	6. 60ml MeCl2 shake, drain (2x) MeCl2 Lot # 623297	7. Solvent exchange to hexane Hex Lot # G212GC	8.# Conc to 10ml	9.# Add 1.0ml to pre-washed florisil cartridge Florisil Lot # 1412222a	10. Elute with 8.0ml 9:1 Hexane:Acetone Ace Lot # G293LC	11.# Conc to 1.0ml
180278	PBLK96	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199313	A66025	921	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199314	A66026	1002	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199316	A66028	960	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199317	A66029	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199318	A66030	1003	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199319	A66031	1003	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199320	A66032	992	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199320MS	A66032MS	982	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
199320MD	A66032MD	986	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

BDH
MDS

BDH
10/8/93

BDH 10/8/93

60

METHOD:OLM01.PPCB:EXW **MATRIX: WATER** **LEVEL: LOW** **BATCH ID: 2HH**

CLIENT(s): BLABOZ 39887

DATE: 10/11/93

ANALYST: JEH

Project: 91082

CASE: OLM

SDG: 39825

Lab sample id ETR	Client id	ml Sample	pH 5-9 1.	1.0ml Peg Surr (0.2ppm DEC/TMX) Lot # GEOK3573Ci 2.#	1.0ml Post MTX (0.5/1.0ppm) Lot# 3.#	Add 60ml MeCl2 (2 min. shake) 4.	Drain through granular Na2SO4 5.	60ml MeCl2, shake, drain (2x) MeCl2 Lot # G23897 6.	Solvent exchange to hexane Hex Lot# G21266 7.	Conc to 10ml 8.#	Add 1.0ml to pre-washed florisil cartridge Florisil Lot# 54226 9.#	Elute with 8.0ml 9:1 Hexane:Acetone Ace Lot# G25310 10.	Conc to 1.0ml 11.#
186280	PBLKIH	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199621	A66027	962	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199622	A66033	977	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓

JEH
BDH

JEH 10/11/93

JEH 10/11/93

001983

Aquatec, Inc. -- Extraction worksheet -- printed by: JEH on 10-11-93 14:39:11

METHOD:OLM01.PPCB:EXW **MATRIX: WATER** **LEVEL: LOW** **BATCH ID: 2GL**

CLIENT(s): BLYBOR / 34825
DATE: 10/6/92
ANALYST: BDH
PROJECT: 91082
CASE: OLM
SDG: 31825
SITE: Kalamazoo

Lab sample id	Client id	ml Sample	pH 5-9 1.	1.0ml Pest Surr (0.2ppm DECTMX) Lot KFCC 2 LT #3 2.#	1.0ml Pest MTX (0.5/1.0ppm) Lot 3.#	Add 60ml MeCl2 (2 min. shake) 4.	Drain through granular Na2SO4 5.	60ml MeCl2, shake, drain (2x) MeCl2 Lot #B232471 6.	Solvent exchange to hexane Hex Lot G217LC 7.	Conc to 10ml 8.#	Add 1.0ml to pre-washed florisil cartridge Florisil Lot 2422222 9.#	Elute with 8.0ml 9:1 Hexane:Acetone Ace Lot G24516 10.	Conc to 1.0ml 11.#
180277	PBLK76	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
191221	A66017	971	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
191222	A66018	1004	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
191223	A66019	952	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
191224	A66020	946	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
191225	A66021	1001	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
191226	A66022	990	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
191227	A66023	965	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
191228	A66024	992	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓

BDH
KWB

BDH
10/6/93

BDH 10/6/93

001984

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

CTR Number: 39887

Project Number: 91082

Case No.: OLM

SDG Number: 39825

000054

Memo: Sample 199621 placed in fridge on 10/6/93 by SMW at 1300

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199621 + 622	MTP	10/7/93 1330	Extraction	10/7/93 1500

F-0100A

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

ETR Number: 39825

Case No.: OLM

Project Number: 91082

SDG Number: 39825

Memo: Samples 199220 - 229 placed in fridge on 10/02/93 @ 1300 hrs. PKP

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199221, 22,23,24 25,26,27,28	BDH	09:00 10/6/93	Extraction	10/6/93 10:00

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

ETR Number: 39887

Project Number: 91082

Case No.: OLM

SDG Number: 39825

90056

Memo: Sample 199621 placed in fridge on 10/6/93 by SMW at 1300

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199621-199622	JEW	10/11/93 1445	Extraction	10/11/93 1500.

F-0169A

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

'R Number: 39869

'oject Number: 91082

Case No.: OLM

SDG Number: 39825

000057

mo: Samples 199313-21 placed in fridge on 10/5/93 by SMN at 1600

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199313 ~~20~~ 14,16,17,18,19,20(3)	BDH	10/6/93 ~~10/8~~ 10100	Extraction	10/6/93 10130

Laboratory Transfer Record

Sample Management — Aquatec, Inc.

ETR: 39825 | Date: 10/6/93

Laboratory ID.	Fraction/Analysis
PBLK 76	
199221	
199222	
199223	
199224	
199225	
199226	
199227	
199228	

Relinquished @ GMD by BDH Time: 16:00

Transported by BED

Received @ _____ by _____ Time: _____

000062

Laboratory Transfer Record

Sample Management

Aquatec, Inc.

ETR: 39587

Date:

Laboratory I.D.	Fraction/Analysis
180280 (PB1K1H)	
199621	
199622	

JEH 10/11/93

Relinquished by GMD by JEH Time: 1603

Transported by JEH

Received by _____ by _____ Time: _____

000063

Sample Management

Aquatec, Inc.

ETR: 39887

Date: 10/16/93

Laboratory I.D.	Fraction/Analysis
199621	2x1L Amber/SVOA + 2x1L Amber Pest/PCB
22	" "

Relinquished @ CP by JMW Time: 1600

Transported by BGD

Received @ GMD by FVB Time: 1630

Figure 9: F-0047

(Nov

Laboratory Transfer Record

Sample Management — Aquatec, Inc.

ETR: 39869 | Date: 10/8/93

Laboratory I.D.	Fraction/Analysis
PBLK 9G	
199313	
199314	
199316	
199317	
199318	
199319	
199320	
199320MS	
199320MD	

Relinquished @ GMD by BDH Time: 16:30

Transported by BED

Received @ CR by FCD Time: 8:13

000065

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE

SDG# 39890

VOLATILE, SEMIVOLATILE, PESTICIDE/PCB, AND INORGANICS ANALYSES

ALLIED OPERABLE UNIT

Analyses performed by:

Aquatec, Inc.
Colchester, Vermont

Review performed by:

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the data package for SDG # 39890 for the Allied Operable Unit sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis			
				VOA	BNA	Pest	TAL[1]
A66034	199623	water	10/5/93	x	x	x	x
A66035	199624	water	10/5/93	x	x	x	x
A66036	199625	water	10/5/93	x	x	x	x
A66038	199626	water	10/5/93	x	x	x	x
A66039	199627	water	10/5/93	x	x	x	x
A66040	199628	water	10/5/93	x	x	x	x
A66041	199629	water	10/5/93	x	x	x	x
A66042	199879	water	10/5/93	x	x	x	x
A66043	199880	water	10/5/93	x	x	x	x
TB1	199630	water	10/5/93	x			x
A66044	199881	water	10/6/93	x	x	x	x
A66045	199882	water	10/6/93	x	x	x	x
A66046	199883	water	10/6/93	x	x	x	x
A66049	199884	water	10/6/93	x	x	x	x
A66050	199885	water	10/6/93	x	x	x	x
A66051	199886	water	10/6/93	x	x	x	x
A66052	199887	water	10/6/93	x	x	x	x
A66053	199888	water	10/6/93	x	x	x	x
A66059*	199963	water	10/7/93	x	x	x	x
TB2	199889	water	10/6/93	x			x

* MS/MSD/DUP performed on sample

[1] Conventional chemistry analyses includes chemical oxygen demand, nitrate/nitrite, alkalinity, chloride, sulfate, total suspended solids, and total organic carbon performed on all samples except trip blanks.

PESTICIDE/PCB ANALYSES

Introduction

Analyses were performed according to the USEPA CLP SOW OLM01.8.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- C Identification confirmed by GC/MS.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The QAPP-specified holding times for semivolatile analyses of water samples are 5 days from sample receipt to extraction and 40 days from the start of extraction to analysis. The technical holding times are 7 days from date of collection to extraction and 40 days to analysis. No deviations from these holding times were noted.

2. Blank Contamination

Quality assurance blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross contamination of samples during field operations.

No target compounds were detected in either the method blank or instrument blanks.

3. System Performance

The resolution and compound breakdown was within acceptable limits for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

4.1 Initial Calibration

A maximum RSD of 20% is allowed. All initial calibrations were within the specified limit with the exception of delta-BHC which was above 20% RSD on column RTX-1701. All data for this compound has been qualified as estimated based on the deviation.

4.2 Continuing Calibration

A maximum RPD of 25% is allowed. All continuing calibrations were within the specified limit.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate recoveries were outside specified limits, qualifications may be applied to the samples.

One surrogate was low on both columns in samples A66042 and A66059MS. No qualifiers have been added to the samples based on the recovery. All other surrogate recoveries were within acceptable limits

6. Compound Identification

The retention times of pesticide/PCB compounds must fall within the calculated retention time windows for both the primary and confirmation columns.

The quantitated concentrations between the two columns did not exceed the 25% difference limit for any of the samples. All compounds fell within the appropriate retention time windows.

7. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All percent recoveries were within acceptable limits; however, all relative percent differences (RPD) were outside of acceptable limits. No qualifiers have been added based on matrix spike recoveries.

8. Field Duplicates

Results for duplicate samples are summarized below:

Sample	Result	Duplicate Sample	Result	RPD
A66033*	ND	A66038	ND	--
A66049	ND	A66050	ND	--

* Sample analyzed in SDG# 39825

The samples replicate through non-detection.

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Pesticide/PCB Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Were the method blanks reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 12			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
6 out of 6			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	X		

	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Do any trip/field/rinse blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?	X		
Calibration and GC Performance			
Are the following chromatograms and data printouts present for all samples, blanks, and MS/MSD?			
peak resolution check	X		
performance evaluation mixtures (PEM)	X		
Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260	X		
Toxaphene	X		
low points individual mixtures A & B (INDA and INDB)	X		
mid points INDA and INDB	X		
high points INDA and INDB	X		
instrument blanks	X		
Are Forms VI 1-4 present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses if INDA and INDB within limits for both columns?		X	
Is the resolution between any two adjacent peaks in the resolution check mixture > 60% for both columns?	X		
Is Form VII-1 present for each PEM analyzed for both columns?	X		
Has the individual % breakdown exceeded 20% on either column for:			
4,4'-DDT		X	
endrin		X	
Has the combined breakdown for 4,4'-DDT and endrin exceeded 30% on either column?		X	

	YES	NO	NA
Are all the relative percent difference (RPD) values for all PEM analytes < 25%?	X		
Have all samples been injected within a 12 hour period beginning with the injection of an instrument blank?	X		
Is Form VII-2 present and complete for each INDA and INDB analyzed?	X		
Are RPD values for all INDA and INDB compounds < 25%?	X		
Analytical Sequence Check			
Is Form VIII present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
Is Form IX-1 present for each lot of Florisil cartridges used?	X		
Are all samples listed on the form?	X		
If GPC cleanup was performed, is From IX-2 present?			X
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits for:			
Florisil cartridge check (80-120%)	X		
GPC calibration (80-110%)			X
Pesticide/PCB Identification			
Is a Form X present for every sample in which a pesticide or PCB was detected?	X		
Was GC/MS confirmation provided when required?	X		
Is the percent difference (%D) calculated for the positive sample results on the two columns less than 25%?	X		
Were there any false negatives?		X	
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			

	YES	NO	NA
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Where field duplicates submitted with the samples?	X		

Pesticide/PCB Qualifier Summary
Holding Time and Surrogates

Sample ID	Holding Time	Surrogates - Column 1		Surrogates - Column 2	
		TCX	DCB	TCX	DCB
A66034	OK for all samples				
A66035					
A66036					
A66038					
A66039					
A66040					
A66041					
A66042			↓(27)		↓(29)
A66043					
TB1					
A66044					
A66045					
A66046					
A66049					
A66050					
A66051					
A66052					
A66053					
A66059					
A66059MS					
A66059MSD		↓(58)		↓(56)	
TB2					

Surrogates:
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogate diluted out
↑ Recovery high
↓ Recovery low

Unless otherwise noted, all samples are within specified limits.

Pesticide/PCB Calibration Outliers

Instrument: 0850-2
Column: RTX-1701

Date:			10/14	10/15	10/15	10/15	10/16		
Time:				0008	0725	1722	0238		
Injection No.:			4-16	20	31-32	46	60-61		
	INDA/ INDB	PEM	Initial Cal.	PEM	INDA /B	PEM	INDA /B	PEM	INDA/ B
			%RSD	%D	%D	%D	%D	%D	%D
alpha-BHC	INDA	X		OK	OK	OK	OK		
beta-BHC	INDB	X							
delta-BHC	INDB		21.4						
gamma-BHC (Lindane)	INDA	X							
Heptachlor	INDA								
Aldrin	INDB								
Heptaclor epoxide	INDB								
Endosulfan I	INDA								
Dieldrin	INDA								
4,4'-DDE	INDB								
Endrin	INDA	X							
Endosulfan II	INDB								
4,4'-DDD	INDA								
Endosulfan sulfate	INDB								
4,4'-DDT	INDA	X							
Methoxychlor	INDA	X							
Endrin ketone	INDB								
Endrin aldehyde	INDB								
alpha-Chlordane	INDB								
gamma-Chlordane	INDB								
Toxaphene									
Aroclor 1016									
Aroclor 1221									
Aroclor 1232									
Aroclor 1242									
Aroclor 1248									

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Pesticide/PCB Calibration Outliers - Page 2

Aroclor 1254									
Aroclor 1260									
Tetrachloro-m-xylene	INDA/B	X							
Decachlorobiphenyl	INDA/B	X							
Affected Samples:			A66034						
			A66035						
			A66036						
			A66038						
			A66039						
			A66040						
			A66041						
			A66042						
			A66043						
			A66044						
			A66045						
			A66046						
			A66049						
			A66050						
			A66051						
			A66052						
			A66053						
			A66059						

Corrected Sample Analysis Data Sheets

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66034

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199623

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/06/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/11/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	UJ
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66035

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199624

Sample wt/vol: 932.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/06/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/11/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.054	U
319-85-7	beta-BHC	0.054	U
319-86-8	delta-BHC	0.054	U J
58-89-9	gamma-BHC (Lindane)	0.054	U
76-44-8	Heptachlor	0.054	U
309-00-2	Aldrin	0.054	U
1024-57-3	Heptachlor epoxide	0.054	U
959-98-8	Endosulfan I	0.054	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.54	U
53494-70-5	Endrin ketone	0.11	U
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.054	U
5103-74-2	gamma-Chlordane	0.054	U
8001-35-2	Toxaphene	5.4	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66036

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199625

Sample wt/vol: 999.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/06/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/11/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U J
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66038

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199626

Sample wt/vol: 962.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/06/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/11/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U J
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66039

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199627

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/06/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/11/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66040

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199628

Sample wt/vol: 939.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/06/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/11/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.053	U
319-85-7	beta-BHC	0.053	U
319-86-8	delta-BHC	0.053	U J
58-89-9	gamma-BHC (Lindane)	0.053	U
76-44-8	Heptachlor	0.053	U
309-00-2	Aldrin	0.053	U
1024-57-3	Heptachlor epoxide	0.053	U
959-98-8	Endosulfan I	0.053	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.53	U
53494-70-5	Endrin ketone	0.11	U
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.053	U
5103-74-2	gamma-Chlordane	0.053	U
8001-35-2	Toxaphene	5.3	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66041

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199629

Sample wt/vol: 967.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/06/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/11/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/16/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66042

L Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199879

Sample wt/vol: 983.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.051	U
319-85-7	beta-BHC	0.051	U
319-86-8	delta-BHC	0.051	U J
58-89-9	gamma-BHC (Lindane)	0.051	U
76-44-8	Heptachlor	0.051	U
309-00-2	Aldrin	0.051	U
1024-57-3	Heptachlor epoxide	0.051	U
959-98-8	Endosulfan I	0.051	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.51	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.051	U
5103-74-2	gamma-Chlordane	0.051	U
8001-35-2	Toxaphene	5.1	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66043

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199880

Sample wt/vol: 931.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.054	U
319-85-7	beta-BHC	0.054	U
319-86-8	delta-BHC	0.054	U J
58-89-9	gamma-BHC (Lindane)	0.054	U
76-44-8	Heptachlor	0.054	U
309-00-2	Aldrin	0.054	U
1024-57-3	Heptachlor epoxide	0.054	U
959-98-8	Endosulfan I	0.054	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.54	U
53494-70-5	Endrin ketone	0.11	U
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.054	U
5103-74-2	gamma-Chlordane	0.054	U
8001-35-2	Toxaphene	5.4	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66044

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199881

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U J
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66045

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199882

Sample wt/vol: 967.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U J
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66046

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199883

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U J
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.2	
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66049

L Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199884

Sample wt/vol: 939.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.053	U
319-85-7	beta-BHC	0.053	U
319-86-8	delta-BHC	0.053	U J
58-89-9	gamma-BHC (Lindane)	0.053	U
76-44-8	Heptachlor	0.053	U
309-00-2	Aldrin	0.053	U
1024-57-3	Heptachlor epoxide	0.053	U
959-98-8	Endosulfan I	0.053	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.53	U
53494-70-5	Endrin ketone	0.11	U
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.053	U
5103-74-2	gamma-Chlordane	0.053	U
8001-35-2	Toxaphene	5.3	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66050

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199885

Sample wt/vol: 925.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.054	U
319-85-7	beta-BHC	0.054	U
319-86-8	delta-BHC	0.054	U J
58-89-9	gamma-BHC (Lindane)	0.054	U
76-44-8	Heptachlor	0.054	U
309-00-2	Aldrin	0.054	U
1024-57-3	Heptachlor epoxide	0.054	U
959-98-8	Endosulfan I	0.054	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.54	U
53494-70-5	Endrin ketone	0.11	U
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.054	U
5103-74-2	gamma-Chlordane	0.054	U
8001-35-2	Toxaphene	5.4	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.2	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66051

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199886

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

% Moisture: decanted: (Y/N) Date Received: 10/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.051	U
319-85-7	beta-BHC	0.051	U
319-86-8	delta-BHC	0.051	U J
58-89-9	gamma-BHC (Lindane)	0.051	U
76-44-8	Heptachlor	0.051	U
309-00-2	Aldrin	0.051	U
1024-57-3	Heptachlor epoxide	0.051	U
959-98-8	Endosulfan I	0.051	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.51	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.051	U
5103-74-2	gamma-Chlordane	0.051	U
8001-35-2	Toxaphene	5.1	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66052

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199887

Sample wt/vol: 921.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.054	U
319-85-7	beta-BHC	0.054	U
319-86-8	delta-BHC	0.054	U J
58-89-9	gamma-BHC (Lindane)	0.054	U
76-44-8	Heptachlor	0.054	U
309-00-2	Aldrin	0.054	U
1024-57-3	Heptachlor epoxide	0.054	U
959-98-8	Endosulfan I	0.054	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.54	U
53494-70-5	Endrin ketone	0.11	U
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.054	U
5103-74-2	gamma-Chlordane	0.054	U
8001-35-2	Toxaphene	5.4	U
12674-11-2	Aroclor-1016	3.8	
11104-28-2	Aroclor-1221	2.2	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66053

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199888

Sample wt/vol: 985.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/07/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.051	U
319-85-7	beta-BHC	0.051	U
319-86-8	delta-BHC	0.051	U J
58-89-9	gamma-BHC (Lindane)	0.051	U
76-44-8	Heptachlor	0.051	U
309-00-2	Aldrin	0.051	U
1024-57-3	Heptachlor epoxide	0.051	U
959-98-8	Endosulfan I	0.051	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.51	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.051	U
5103-74-2	gamma-Chlordane	0.051	U
8001-35-2	Toxaphene	5.1	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66059

L Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 199963

Sample wt/vol: 954.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/08/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/13/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U J
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

Inchcape Testing Services
Aquatec Laboratories

55 South Park Drive
Colchester, VT 05446
Tel. 802-655-1203
Fax. 802-655-1248

November 23, 1993

Ms. Laurie Johnston
Blasland & Bouck Engineers
6723 Towpath Road, Box 66
Syracuse, NY 13214

Re: Analytical Results-Kalamazoo Site
Aquatec Project No. 91082
Case No. OLM; SDG No. 39890

Dear Ms. Johnston:

Enclosed are the analytical results for samples received intact by Aquatec on October 06, 07 and 08, 1993. The analyses associated with these samples were performed in accordance with the methodologies in the OLM01 and ILM02 Statement of Works. Laboratory numbers and quality control samples were assigned as follows:

Client Sample ID	Aquatec Lab No.	Sample Matrix
Samples Received on October 06, 1993 ETR No. 39890		
A66034	199623	Water
A66035	199624	Water
A66036	199625	Water
A66038	199626	Water
A66039	199627	Water
A66040	199628	Water
A66041	199629	Water
TB1	199630	Water
Samples Received on October 07, 1993 ETR No. 39927		
A66042	199879	Water
A66043	199880	Water
A66044	199881	Water
A66045	199882	Water
A66046	199883	Water
A66049	199884	Water
A66050	199885	Water
A66051	199886	Water
A66052	199887	Water
A66053	199888	Water
TB2	199889	Water

Client Sample ID	Aquatec Lab No.	Sample Matrix
Samples Received on October 08, 1993 ETR No. 39816		
A66059	199963	Water
A66059MS	199963MS	Water
A66059MSD	199963MD	Water
A66059REP	199963DP	Water

Samples A66059MS and A66059MSD were analyzed two days outside specified holding times for volatile organic analysis.

Please note the use of the following additional qualifiers when reporting semivolatile organic results:

X = The reported result is suspected laboratory contamination and its presence in the sample is unlikely.

Z = The reported result is based on the combined instrument response from coeluting compounds.

Peak height was used for calibration and quantitation of all compounds on both analytical columns for the pesticide/PCB analysis.

Aroclor 1268 was observed in sample A66051 which is a suspected laboratory contaminant. This sample will be re-extracted and reanalyzed at a later date and the results will be kept on file at Aquatec.

Samples A66051, A66039, A66040 and A66041 were prepped for the cyanide analysis within holding time, but due to instrumental difficulties, they were analyzed one day beyond the specified holding time.

Matrix spike recovery for sample A66059MS was outside specified quality control limits for arsenic analysis. All associated samples have been flagged according to contract specifications.

Sincerely,

Karen R. Chirgwin

Karen R. Chirgwin
Laboratory Operations Director

KRC/jg

Enclosure

91082B18OCT93

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

GC Column(1): RTX-35 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK9G	92	91	110	109			0
02	PBLK2H	83	80	107	106			0
03	PBLK3H	78	74	100	101			0
04	A66034	82	74	84	82			0
05	A66035	88	87	98	99			0
06	A66036	88	85	102	100			0
07	A66038	85	84	82	85			0
08	A66039	78	79	88	90			0
09	A66040	87	85	100	100			0
10	A66041	91	88	100	98			0
11	A66042	66	65	27*	29*			2
12	A66043	76	70	70	68			0
13	A66044	83	82	94	93			0
14	A66045	84	82	105	104			0
15	A66046	83	80	88	88			0
16	A66049	80	74	94	94			0
17	A66050	87	70	102	92			0
18	A66051	84	82	136	138			0
19	A66052	80	78	84	81			0
20	A66053	86	76	102	100			0
21	A66059	79	76	96	96			0
22	A66059MS	72	72	94	94			0
23	A66059MSD	58*	56*	72	75			2

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

FORM II PEST-1

3/90

001095

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix Spike - EPA Sample No.: A66059

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	0.505	0	0.436	86	56-123
Heptachlor	0.505	0	0.405	80	40-131
Aldrin	0.505	0	0.415	82	40-120
Dieldrin	1.010	0	0.903	89	52-126
Endrin	1.010	0	0.925	92	56-121
4,4'-DDT	1.010	0	0.927	92	38-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	0.520	0.343	66	26 *	15	56-123
Heptachlor	0.520	0.325	62	25 *	20	40-131
Aldrin	0.520	0.323	62	28 *	22	40-120
Dieldrin	1.040	0.707	68	27 *	18	52-126
Endrin	1.040	0.704	68	30 *	21	56-121
4,4'-DDT	1.040	0.711	68	30 *	27	38-127

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

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

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK3H

I Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Lab Sample ID: 180282 Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 10/13/93

Date Analyzed (1): 10/15/93 Date Analyzed (2): 10/15/93

Time Analyzed (1): 0127 Time Analyzed (2): 0127

Instrument ID (1): 0850-1 Instrument ID (2): 0850-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): RTX-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66059	199963	10/15/93	10/15/93
02	A66059MS	199963MS	10/15/93	10/15/93
03	A66059MSD	199963MD	10/15/93	10/15/93

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK2H

I Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Lab Sample ID: 180281 Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 10/12/93

Date Analyzed (1): 10/15/93 Date Analyzed (2): 10/15/93

Time Analyzed (1): 0844 Time Analyzed (2): 0844

Instrument ID (1): 0850-1 Instrument ID (2): 0850-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): RTX-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66042	199879	10/15/93	10/15/93
02	A66043	199880	10/15/93	10/15/93
03	A66044	199881	10/15/93	10/15/93
04	A66045	199882	10/15/93	10/15/93
05	A66046	199883	10/15/93	10/15/93
06	A66049	199884	10/15/93	10/15/93
07	A66050	199885	10/15/93	10/15/93
08	A66051	199886	10/15/93	10/15/93
09	A66052	199887	10/15/93	10/15/93
10	A66053	199888	10/15/93	10/15/93

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK9G

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Lab Sample ID: 180279 Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 10/11/93

Date Analyzed (1): 10/15/93 Date Analyzed (2): 10/15/93

Time Analyzed (1): 1802 Time Analyzed (2): 1802

Instrument ID (1): 0850-1 Instrument ID (2): 0850-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): RTX-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66034	199623	10/15/93	10/15/93
02	A66035	199624	10/15/93	10/15/93
03	A66036	199625	10/15/93	10/15/93
04	A66038	199626	10/15/93	10/15/93
05	A66039	199627	10/15/93	10/15/93
06	A66040	199628	10/15/93	10/15/93
07	A66041	199629	10/16/93	10/16/93

COMMENTS:

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK2H

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 180281

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received:

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK3H

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Matrix: (soil/water) WATER Lab Sample ID: 180282

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received:

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/13/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK9G

ab Name: AQUATEC INC Contract: 91082

ab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

atrix: (soil/water) WATER Lab Sample ID: 180279

ample wt/vol: 1000 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received:

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/11/93

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/15/93

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Instrument ID: 0850-1 Date(s) Analyzed: 10/13/93 10/14/93

GC Column: RTX-35 ID: 0.53(mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.500	*1	18.55	18.48	18.62	11400
		*2	19.36	19.29	19.43	8450
		*3	19.78	19.71	19.85	8540
		4	21.74	21.67	21.81	10400
		5	22.01	21.94	22.08	8280
Aroclor 1016	0.100	*1	10.31	10.24	10.38	12600
		*2	11.46	11.39	11.53	24300
		*3	12.04	11.97	12.11	8230
		4	12.20	12.13	12.27	11900
		5	12.57	12.50	12.64	34400
Aroclor 1221	0.200	*1	9.71	9.64	9.78	6870
		*2	10.10	10.03	10.17	4680
		*3	10.18	10.11	10.25	2760
		4	10.29	10.22	10.36	14800
		5	10.41	10.34	10.48	2600
Aroclor 1232	0.100	*1	10.19	10.12	10.26	10400
		*2	10.30	10.23	10.37	14000
		*3	12.39	12.32	12.46	9360
		4	12.57	12.50	12.64	15900
		5	14.20	14.13	14.27	7840
Aroclor 1242	0.100	*1	11.46	11.39	11.53	21000
		*2	12.57	12.50	12.64	29400
		*3	12.96	12.89	13.03	14300
		4	14.20	14.13	14.27	15200
		5	15.00	14.93	15.07	16000
Aroclor 1248	0.100	*1	13.39	13.32	13.46	21700
		*2	14.18	14.11	14.25	25700
		*3	14.98	14.91	15.05	29800
		4	15.14	15.07	15.21	23300
		5	15.80	15.73	15.87	18900
Aroclor 1254	0.100	*1	15.27	15.20	15.34	26300
		*2	15.54	15.47	15.61	33800
		*3	16.86	16.79	16.93	41100
		4	17.32	17.25	17.39	27400
		5	19.14	19.07	19.21	26500
Aroclor 1260	0.100	*1	17.39	17.32	17.46	28300
		*2	17.77	17.70	17.84	33200
		*3	19.15	19.08	19.22	25400
		4	21.47	21.40	21.54	37400
		5	23.71	23.64	23.78	18800

* Denotes required peaks

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39890

Instrument ID: 0850-2 Date(s) Analyzed: 10/13/93 10/14/93

GC Column: RTX-1701 ID: 0.53(mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.500	*1	16.24	16.17	16.31	11700
		*2	16.91	16.84	16.98	16900
		*3	17.21	17.14	17.28	16500
		4	18.00	17.93	18.07	13400
		5	18.21	18.14	18.28	18800
Aroclor 1016	0.100	*1	8.32	8.25	8.39	11500
		*2	9.81	9.74	9.88	8760
		*3	9.94	9.87	10.01	11900
		4	10.48	10.41	10.55	41300
		5	11.09	11.02	11.16	14800
Aroclor 1221	0.200	*1	7.76	7.69	7.83	6120
		*2	8.16	8.09	8.23	4480
		*3	8.31	8.24	8.38	15200
		4	9.10	9.03	9.17	2490
		5	9.30	9.23	9.37	4020
Aroclor 1232	0.100	*1	8.32	8.25	8.39	13500
		*2	9.11	9.04	9.18	10100
		*3	10.48	10.41	10.55	19000
		4	11.36	11.29	11.43	7210
		5	12.19	12.12	12.26	7260
Aroclor 1242	0.100	*1	9.30	9.23	9.37	25400
		*2	10.46	10.39	10.53	34900
		*3	10.80	10.73	10.87	15100
		4	12.89	12.82	12.96	17100
		5	12.96	12.89	13.03	16200
Aroclor 1248	0.100	*1	11.29	11.22	11.36	25300
		*2	11.34	11.27	11.41	24000
		*3	12.18	12.11	12.25	26100
		4	12.90	12.83	12.97	35400
		5	12.97	12.90	13.04	29100
Aroclor 1254	0.100	*1	12.92	12.85	12.99	42400
		*2	13.35	13.28	13.42	40400
		*3	14.47	14.40	14.54	55400
		4	15.06	14.99	15.13	34200
		5	16.20	16.13	16.27	47200
Aroclor 1260	0.100	*1	14.83	14.76	14.90	39700
		*2	15.36	15.29	15.43	47400
		*3	16.20	16.13	16.27	50200
		4	17.92	17.85	17.99	60700
		5	19.10	19.03	19.17	45000

* Denotes required peaks

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Page 1 of 3

000003

CHAIN OF CUSTODY RECORD

PROJ. NO.: 645.51
PROJECT NAME: KRSG-Allied OU
SAMPLERS: (Signature) Karen L Royce Rof [illegible]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	CLP Semivolatiles	CLP Pesticides, PCBs	COD, Nitrate	CN-	Alkalinity, CO_3, HCO_3, Cl_2SO_4	Temperature	REMARKS
MW-23	10/5/93	1000		X	A66034	9	2	2	2	1	1	1		
Temperature Blank	10/4/93	1600		X	Temperature Blank	1							1	Cooler # 258
MW-128A	10/5/93	1130		X	A66035	9	2	2	2	1	1	1		
MW-114	10/5/93	1600		X	A66036	9	2	2	2	1	1	1		

left blank 10/5/93 KLR

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L Royce	10/5/93	1800					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) Sheila M Winkoop	DATE 10/6/93	TIME 1000	Remarks: temp = 9°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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Page 2 of 2

CHAIN OF CUSTODY RECORD

PROJ. NO.: 6455.51
PROJECT NAME: ALLIED CW
SAMPLERS: (Signature) D-J

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	VOLATILES	METALS	FIELD FILTERED METALS	TEMPERATURE			REMARKS
MW-12B	10/4/93	15:00		X	A66027	2		1	1				WATER
MW-12A	10/5/93	8:30		X	A66033	4	2	1	1				WATER
MW-12C	10/5/93	8:45		X	A66038	4	2	1	1				WATER
MW-12B	10/5/93	10:30		X	A66039	4	2	1	1				WATER
MW-19C	10/5/93	15:00		X	A66040	4	2	1	1				WATER
MW-19D	10/5/93	15:45		X	A66041	4	2	1	1				WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D-J	10/5/93	17:50					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			[illegible]	10/6/93	1000		

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

000004

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CHAIN OF CUSTODY RECORD

000005

PROJ. NO.: 645.51
PROJECT NAME: KRSG - ALLIED OU
SAMPLERS: (Signature) D-S

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	PCB's/PESTICIDE	SEMIVOLATILES	Cn-	COD + NO3	ALK, CHL, SO4, HCO3, CO3	TEMPERATURE	REMARKS
MW-25	10/4/93	15:00		X	A66027	7		2	2	1	1	1		WATER
MW-122A	10/5/93	8:30		X	A66033	9	2	2	2	1	1	1		WATER
MW-122C	10/5/93	8:45		X	A66038	9	2	2	2	1	1	1		WATER
					TEMP BLANK	1							1	COOLER #200 WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D-S	10/5/93	17:52					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			[signature]	10/6/93	1000	temp = 5°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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CHAIN OF CUSTODY RECORD

900000

PROJ. NO.: 645.51
PROJECT NAME: KRSG - ALLIEDGU
SAMPLERS: (Signature) D. J.

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	PCB's/PESTICIDES	SEMIVOLATILES	Cn-	COD + NO3	ALK, CHL, SO4, HCO3, CO3	TEMPERATURE	REMARKS
MW-122B	10/5/93	10:30		X	A66039	9	2	2	2	1	1	1		WATER
MW-19-B	10/5/93	15:00		X	A66040	9	2	2	2	1	1	1		WATER
MW-19D	10/5/93	15:45		X	A66041	9	2	2	2	1	1	1		WATER
	10/5/93				Temp Blank	1							1	

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	10/5/93	17:51					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) [signature]	DATE 10/6/93	TIME 1000	Remarks: temp = 10°C	

7/12/93
1393786HCDR

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Page 1 of 2

CHAIN OF CUSTODY RECORD

PROJ. NO.: 645.51
PROJECT NAME: KRSG-Allied OU
SAMPLERS: (Signature) Karen L Royce

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	CLP Volatiles	CLP Metals	CLP Metals-Filtered	Temperature			REMARKS
MW-23	10/5/93	1000		X	A66034	4	2	1	1				
Trip Blank	10/5/93	800		X	Trip Blank	2	1	1					
Temperature Blank	10/5/93	1600		X	Temperature Blank	1				1			Cooler #57
MW-128A	10/5/93	1130		X	A66035	4	2	1	1				
MW-114	10/5/93	1600		X	A66036	4	2	1	1				

Left Blank 10/5/93 KLR

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L Royce	10/5/93	1800					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			[illegible]	10/6/93	1000	Temp = 10°C	

7/12/93
1393786HCOR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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CHAIN OF CUSTODY RECORD

000008

PROJ. NO.: 645.51
PROJECT NAME: KRSG - ALLIEDOU
SAMPLERS: (Signature) D. J.

Cooler ~~#194~~ ~~#234~~ ASH #194

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	PCB/PESTICIDE	SEMINOLATILES	Cn-	ALK, CHL, SO_4, CO_3, HCO_3	COD + NO_3	TEMPERATURE	REMARKS
MW-8B	10/6/93	12:45		X	A66052	9	2	2	2	1	1	1		WATER
MW-8[illegible]	10/6/93	13:00		X	A66053	9	2	2	2	1	1	1		WATER
	10/6/93	1700 ~~1630~~ ASH		X	Temp Blank	1							1	"

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D. J.	10/6/93	15:00	Alan Heter	Alan Heter	10/6/93	1650	
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			Sheila Wipkop	10/7/93	1000	temp = 15°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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600000

CHAIN OF CUSTODY RECORD

PROJ. NO. 645.51

PROJECT NAME: KRSG- ALLIED OU

SAMPLERS: (Signature) D_S

Cooler ~~194~~ ASH #234

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	PCB/PESTICIDES	SEMIVOLATILES	MCA	AUX, CHL, CO_3, HCO_3, SO_4	COD + NO_3	TEMPERATURE	REMARKS
MW-20	10/6/93	8:30		X	A66049	9	2	2	2	1	1	1		WATER
MW-20C	10/6/93	8:45		X	A66050	9	2	2	2	1	1	1		WATER
MW-20B	10/6/93	9:00		X	A66051	9	2	2	2	1	1	1		WATER
—	10/6/93	1630		X	Temp Blank	1							1	

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D_S	10/6/93	15:01	Alan Peter	Alan Peter	10/6/93	1650	
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			Sabila M Wynlogg	10/7/93	1000	temp = 12°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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Airbill # 6742727810

Page 1 of 1

CHAIN OF CUSTODY RECORD

PROJ. NO.: 645.51

PROJECT NAME: ~~KRSG~~ KRSG - Allied OU

SAMPLERS: (Signature) Karen L Royce, Rob Gatchett

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	CLP Semivolatiles	CLP Pesticides, PCBs	TOC	CN-	COD, Nitrate, Alkalinity, SO_4, HCO_3, Cl	Temperature	REMARKS
MW-127A	10/6/93	900		X	A66044	9	2	2	2	1	1	1	
MW-112	10/6/93	1330 ~~1300~~ KLR		X	A66045	9	2	2	2	1	1	1	
Temperature Blank	10/4/93	1900		X	Temperature Blank	1							1 Cooler # 213
MW-5	10/6/93	1500		X	A66046	9	2	2	2	1	1	1	

Left blank 10/6/93 KLR

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)

Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:
			Sheila M Murphy	10/7/93	1000	temp = 12°C

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

000010

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CHAIN OF CUSTODY RECORD

000011

PROJ. NO.: KRSG-
PROJECT NAME: Allied OU 645.51
SAMPLERS: (Signature)

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	CLP Semivolatile	TOC	CLP Pesticides, PCBs	CN-	COD, Nitrate Alkalinity, CO_3, HCO_3, Chloride	Temperature	REMARKS
Rinse Blank	10/5/93	1830		X	A66043	9	2	2	2	1	1	1	
Rinse Blank	10/5/93	1900		X	A66042	9	2	2	2	1	1	1	
Temperature Blank	10/6/93	1700		X	Temperature Blank	1							1	Cooler #8

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	10/6/93	18:00					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) [signature]	DATE 10/7/93	TIME 1000	Remarks: temp = 12°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

BLASLAND & BOUCK ENGINEERS, P.C.
6723 Towpath Road, Box 66
Syracuse, New York 13214-0066
TEL: 315-446-9120
FAX: 315-449-0017

Airbill # 6742727810 KLR

Page 1 of 2

CHAIN OF CUSTODY RECORD

PROJ. NO.: 645.51
PROJECT NAME: KRSG - Allied OU
SAMPLERS: (Signature) Karen L Royce

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	CLP Volatiles	CLP TAL Metals	CLP TAL Metals (Field Filtered)	Temperature			REMARKS
MW-12A	10/6/93	900		X	A66044	4	2	1	1				
MW-112	10/6/93	1330		X	A66045	4	2	1	1				
Temperature Blank	10/5/93	1800		X	Temperature Blank	1				1			Cooler # 233
Trip Blank	10/6/93	800		X	Trip Blank	2	1	1					
MW-5	10/6/93	1500		X	A66046	4	2	1	1				

Left Blank 10/6/93 KLR

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	10/6/93	18:00					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) [signature]	DATE 10/7/93	TIME 1000	Remarks: Temp = 12°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

BLASLAND & BOUCK ENGINEERS, P.C.
6723 Towpath Road, Box 66
Syracuse, New York 13214-0066
TEL: 315-446-9120
FAX: 315-449-0017

Airbill # 6742727816

Page 2 of 2

00001

CHAIN OF CUSTODY RECORD

PROJ. NO.: 645.51
PROJECT NAME: KRSG - ALLIED OU
SAMPLERS: (Signature) D. [illegible]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	VOLATILES	METALS	FILTERED (FIELD) METALS	TEMPERATURE			REMARKS
MW-20	10/6/93	8:30		X	A66049	4	2	1	1				
MW-20C	10/6/93	8:45		X	A66050	4	2	1	1				
MW-20B	10/6/93	9:00		X	A66051	4	2	1	1				
MW-8B	10/6/93	12:45		X	A66052	4	2	1	1				
MW-8[illegible]	10/6/93	13:00		X	A66053	4	2	1	1				Cooler #233
Rinse 3	10/5/93	18:30		X	A66043	4	2	1	1				
Rinse 4	10/5/93	19:00		X	A66042	4	2	1	1				

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D. [illegible]	10/6/93	15:24	[illegible]	[illegible]	10/6/93	1800	
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			[illegible]	10/7/93	1000		

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

BLASLAND & BOUCK ENGINEERS, P.C.
6723 Towpath Road, Box 66
Syracuse, New York 13214-0066
TEL: 315-446-9120
FAX: 315-449-0017

COPY Original w/ 39939

000014

CHAIN OF CUSTODY RECORD

PROJ. NO.: 61551
PROJECT NAME: KESS - ALLIED OU
SAMPLERS: (Signature) P-S

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	VOLATILES	METALS	FIELD FILTERED METALS	TEMPERATURE			REMARKS
MW-3	10/6/93	17:30		X	A66054	4	2	1	1				WATER
MW-15	10/6/93	18:00		X	A66055	4	2	1	1				WATER
MW-17A	10/7/93	0845		X	A66056	4	2	1	1				WATER
MW-17B	10/7/93	0915		X	A66057	4	2	1	1				WATER
MW-16B	10/7/93	1515		X	A66059	12	6	3	3				MS/MSD WATER
MW-16C	10/7/93	1400		X	A66058	4	2	1	1				WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D-S	10/7/93	15:30					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) Sheila M Wyndham	DATE 10/8/93	TIME 1000	Remarks:	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

BLASLAND & BOUCK ENGINEERS, P.C.
6723 Towpath Road, Box 66
Syracuse, New York 13214-0066
TEL: 315-446-9120
FAX: 315-449-0017

CHAIN OF CUSTODY RECORD

000015

PROJ. NO. 645.51

PROJECT NAME: KRSG - ALLIED OU

SAMPLERS: (Signature) D-S

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	PCB/PESTICIDES	SEMIVOLATILES	Cr-	CHL, ALK, SUY CO3, HCO3	COD, NO3	TEMPERATURE	REMARKS
MW-16B	10/7/93	1315		X	A66059	27	6	6	6	3	3	3		MS/MSD WATER
					TEMP BLANK	1							1	COOLER # 149 WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D-S	10/7/93	17:10					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) Sheila M Lyndsop	DATE 10/8/93	TIME 1000	Remarks: Temp = 15°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Sheila M Wynkoop Log-in Date: 10/6/93

Received By (Signature): Sheila M Wynkoop

Case Number: OLM

Sample Delivery Group No: 39890

ETR Number: 39890

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records Present/Absent*
4. Sample Information Sheets Present/Absent*
5. Airbill Airbill/Sticker Present/Absent*
6. Airbill No.: (074272782)
7. Sample Tags Present/Absent*
   Sample Tag Numbers Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking
9. Does information on custody records, sample information sheets, and sample tags agree? * See attached Yes/No*
10. Date Received at Lab: 10/6/93
11. Time Received: 1000

	CORRESPONDING		
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66034	N/A	199623	All samples
A66035		199624	rec'd intact
A66036		199625	inside coolers
A66038		199626	with ice.
A66039		199627	Coolers were
A66040		199628	intact as
A66041		199629	were custody
TB		199630	seals on
HB		199655	the outside
			of coolers.
			C-of-C was
			present. air
			bubbles present
			in 1 40ml TOC
			of A66036 &
			2x40ml VOA of
			A66040 only.
			Temperature
			Blank temperatures
			were 9°C, 10°C,
			10°C + 5°C.

Sample Transfer

Fraction: all

Area #: Level 4

By: SMW

On: 10/6/93

SMW 10/6/93

* Contact Project Director.

Reviewed by: _____ Logbook No: _____

Date: _____ Logbook Page No: _____

Case: am
SDG: 39890
ETR: 39890

aquatec INC.
An Inchcape Company
55 SOUTH PARK DRIVE, COLCHESTER, VT 05446

Discrepancies between sample bottles/labels and C-of-C

(1) Two out of the ~~Two~~ Five C-of-C's do not show a Matrix for samples; the other three C-of-C's show "water" as a Matrix. All samples have "water" checked off on labels.

(2) C-of-C has "845" as a time for A66038; this sample shows the same on some bts, others say "0845".

(3) Some bts for "Alk/SO4/Chloride" say "NONE" for a preservative; others say "4°C".

(4) All SVOA & Pest/PCB have "none" shown as a preservative except for 1L Amber A66041 SVOA which has "4°C" as a preservative.

(5) "TSS" not shown on C-of-C or Sample Bts; "TSS" to be run on all samples except TB & HB

SMW
10/6/93

001675

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Sheila M. Wynkoop Log-in Date: 10/7/93

Received By (Signature): Sheila M Wynkoop

Case Number: ILM

Sample Delivery Group No: 39885

ETR Number: 39927

REMARKS:

1. Custody Seal(s) Present/~~Absent~~* Intact/~~Broken~~
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records Present/~~Absent~~*
4. Sample Information Sheets ~~Present~~/Absent*
5. Airbill ~~Airbill/Sticker~~ Present/~~Absent~~*
6. Airbill No.: 6742727810
7. Sample Tags ~~Present~~/Absent*
   Sample Tag Numbers ~~Listed~~/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/~~Broken~~*/~~Leaking~~
9. Does information on custody records, sample information sheets, and sample tags agree? see attached Yes/No*
10. Date Received at Lab: 10/7/93
11. Time Received: 1000

CLIENT SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66042	N/A	199879	all samples
A66043		199880	rec'd intact
A66044		199881	inside coolers
A66045		199882	with ice.
A66046		199883	coolers were
A66049		199884	intact as
A66050		199885	were custody
A66051		199886	seals on
A66052		199887	the outsides
A66053		199888	of coolers.
TB		199889	D-of-C was
			present. Air
			bubbles pre-
			sent in 1x40ml
			VOA & 1x40ml TOC
			for A66043, 1x
			40ml VOA & 2x40ml
			TOC for A66049,
			2x40ml VOA &
			2x40ml TOC of
		SMW 10/7/93	A66050 &
			A66051, 1x40ml
temperature Blank temper-			VOA of A66052
ature were 12°C, 12°C,			and 2x40ml
12°C, 12°C & 15°C			TOC of A66053

Sample Transfer

Fraction: all

Area #: Level 4

By: SMW

On: 10/7/93

* Contact Project Director.

Reviewed by: _____ Logbook No: _____

Date: _____ Logbook Page No: _____

Case: ICM
SDG: 39885
ETR: 39927

aquatec INC.
An Inchcape Company
55 SOUTH PARK DRIVE, COLCHESTER, VT 05446

Discrepancies between sample bottles/labels and C-of-C

(1) C-of-C has "1900" as a time for A46042; This sample shows the same on all bts except 1x40ml TOC which has "1930" as a time.

(2) Some SVOA, Pest/PCB & AIK/CHL/SO_4/HCO_3/CO_3 bts say "none" for a preservative; other bts for these analyses say "4°C" for a preservative.

(3) C-of-C has "8:30" as a time for A46049; this sample has the same for all bts except 1L AIK/SO_4/CO_3/HCO_3/Chl which has "8:45" as a time ~~date~~ & 1L Metals which has "8:50" as a time.

(4) C-of-C has "10/6/93" as a date & "1300" as a time for sample A46053; this sample shows the same on all bts except for 1L poly COD/NO_3 which shows no date & no time.

(5) C-of-C has times such as "8:30", "9:00", etc.; some sample bts show the same, others have a zero in front of the time such as "0830" or "0900."

(6) All samples have "water" checked off on label for a matrix; two out of the six C-of-C's show water, the others show no matrix.

001677

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Sheila M. Wynkoop Log-in Date: 10/8/93

Received By (Signature): Sheila M. Wynkoop

Case Number: dm

Sample Delivery Group No: 39890

ETR Number: 39942

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records Present/Absent*
4. Sample Information Sheets Present/Absent*
5. Airbill Airbill Sticker Present/Absent*
6. Airbill No.: 6742727784
7. Sample Tags Present/Absent*
   Sample Tag Numbers Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking
9. Does information on custody records, sample information sheets, and sample tags agree? Yes/No* See ✓
10. Date Received at Lab: 10/8/93
11. Time Received: 1000

Sample Transfer

Fraction: all

Area #: Lab 14

By: SMW

On: 10/8/93

CLIENT SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66059	N/A	199963	All samples rec'd intact inside coolers with ice. Coolers were intact as were custody seals on the outsides of coolers. COC was present. Air bubbles present in 3x40ml VOA & 1x40ml TOC of A66059. Temperature blank temperatures were 15°C, 15°C, 15°C, 11°C & 7°C.

① Discrepancies: COC shows "MS/MSD" for A66059. This sample does not show "MS/MSD" on any bottles, although there is plenty of sample for QC.

② "TSS" not shown on COC or on bottles. "TSS" to be run on sample.

SMW 10/8/9

* Contact Project Director.

Reviewed by: Logbook No:

Date: Logbook Page No:

METHOD: OLM01.PPCB:EXW MATRIX: WATER LEVEL: LOW BATCH ID: 2HK

CLIENT(s): BIABOT 39942/39948

DATE: 10/13/93

ANALYST: JEH

Project: 91082

Case: OLM

SDG: 39850/39948

Lab sample id BTR	Client id	ml Sample	1. pH 5-9	2. 1.0ml Pest Surr (0.2ppm) DECTMO Lot # GZ70/28501	3. 1.0ml Pest MTX (0.5/1.0ppm) Lot # GZ80/55501	4. Add 60ml MeCl2 (2 min. shake)	5. Drain through phase sep. Na2SO4	6. 60ml MeCl2 Lot # GZ1290	7. Solvent exchange to hexane Hex Lot # GZ2222	8. Conc to 10ml	9. Add 1.0ml to prepacked florisil cartridge Florisil Lot # 22222	10. Elute with 8.0ml 9:1 Hexane:Acetone Ace Lot # GZ3310	11. Conc to 1.0ml
180282	PBIK3H	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199963	A66059	954	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199963MS	A66059MS	993	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
199963MSD	A66059MSD	960	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
199964	A66037	969	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199965	A66047	981	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199966	A66048	1001	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199967	A66054	925	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199968*	A66055	1004	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199969	A66056	845	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199970	A66057	936	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199971	A66058	893	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓

* Pulled 1.0ml From Archive Grid Conc → 1.0ml 10/25/93 JEH

JEH MTP

JEH 10/13/93

JEH 10/13/93

Aquatec, Inc. – Extraction worksheet – printed by: JEH on 10-13-93 07:16:33

011668

METHOD: OLM01.PPCB:EXW MATRIX: WATER LEVEL: LOW BAT ID: 2HS

CLIENT(s): AB02 / 39964

DATE: 10/14/93

ANALYST: BDH

Project: 91082

Case: OLM

SDG: 39948

Site: Kalamazoo

Jan 11/16/93

001669

Lab sample id ETR	Client id	ml Sample	pH 5-9 1.	1.0ml Pest Surr (0.2ppm DEC/TMX) Lot # GE1012431 2.#	1.0ml Pest MTX (0.5/1.0ppm) Lot# 3.#	Add 60ml MeCl2 (2 min. shake) 4.	Drain through granular Na2SO4 5.	60ml MeCl2, shake, drain (2x) MeCl2 Lot # G28290 6.	Solvent exchange to hexane Hex Lot# G21226 7.	Conc to 10ml 8.#	Add 1.0ml to pre-washed florisil cartridge Florisil Lot# 442220 9.#	Elute with 8.0ml 9:1 Hexane:Acetone Ace Lot# G29310 10.	Conc to 1.0ml 11.#
~~PBLK4H~~	~~180283~~	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
200109	A66060	972	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
200110	A66061	970	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
200111	A66062	962	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
200112	A66063	965	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
200113	A66064	965	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓

BDH
MTP

BDH
10/14/93

10/14/93 BDH

Aquatec, Inc. -- Extraction worksheet -- printed by: BDH on 10-14-93 09:09:59 #Indi

F-0169A

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

000044

TR Number: 39890

Project Number: 91082

Case No.: OLM

SDG Number: 39890

Memo: Samples 199623-30 placed in fridge on 10/6/93 by SMW at 1600.

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199623-199629	JEH	10/11/93 0730	Extraction	10/11/93 0805

F-0169A

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

TR Number: 39927

roject Number: 91082

Case No.: OM

SDG Number: 39898

000045

emo: Samples 199879-889 placed in fridge on 10/7/93 by SMW at 1730

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199879-199888	JEA	10/12/93 0732	Extraction	10/12/93 0750

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

:TR Number: 39942

'roject Number: 91082

Case No.: OLM

SDG Number: 39890

000046

cmo: Sample 199963 placed in fridge on 10/8/93 by SMW at 1430.

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199963	JEW	10/13/93 0717	Extraction	10/13/93 0814

Laboratory Transfer Record

Sample Management — Aquatec, Inc.

ETR: 39927 | Date: 10/12/93

Laboratory ID.	Fraction/Analysis
180281 (PB1K2H)	
199879	
199880	
199881	
199882	
199883	
199884	
199885	
199886	
199887	
199888	

JEH 10/12/93

Relinquished @ GMD by JEH Time: 1310

Transported by BED

Received @ _____ by _____ Time: _____

Sample Management | Aquatec, Inc.

ETR: 39927	Date: 10/8/93

Laboratory I.D.	Fraction/Analysis
199879-87	2x1L Amber SVOA &
	2x1L Amber pest/PCB
	per

Relinquished @ CP by SMW Time: 0930

Transported by BED

Received @ GMD by FNB Time: 1000

Figure 9: F-0047

(Nov '91)

Laboratory Transfer Record

Sample Management

Aquatec, Inc.

ETR: 39890

Date: 10/11/93

Laboratory I.D.	Fraction/Analysis
180279 (PRIK9G)	
199623	
199624	
199625	
199626	
199627	
199628	
199629	

JEH 10/11/93

Relinquished @ GMD by JEH Time: 1104

Transported by BED

Received @ _____ by _____ Time: _____

000049

F-0169A

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

ETR Number: 39890

Project Number: 91082

Case No.: OLM

SDG Number: 39890

000053A

Memo: Samples 199623-30 placed in fridge on 10/6/93 by SMW at 1600.

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199623-629	MTP	10/11/93 1300	Extraction	10/11/93 1630

F-0169A

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

TR Number: 39927

roject Number: 91082

Case No.: OM

SDG Number: 39898

000533B

emo: Samples 199879-889 placed in fridge on 10/7/93 by SMW at 1730

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199879-888	MTP	10/12/93 1330	Extraction	10/12/93 1700

F-0169A

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

ETR Number: 39942

Project Number: 91082

Case No.: OUM

SDG Number: 39890

000053C

Memo: Sample 199963 placed in fridge on 10/8/93 by SMW at 1430.

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199963	MTP	10/11/93 1300	Extraction	10/11/93 1630

Laboratory Transfer Record

Sample Management | Aquatec, Inc.

ETR: 39890	Date: 10/6/93
Laboratory I.D.	**Fraction/Analysis**
199623-29	2x1L Amber pest/PCB + 2x1L Amber SVOA per

Relinquished @ CP by SMW Time: 1600

Transported by BED

Received @ GMD by FWB Time: 1630

Figure 9: F-0047

(Nov '91)

-000053D

Laboratory Transfer Record

Sample Management — Aquatec, Inc.

ETR: 39927 / 39948 | Date: 10/13/93

Laboratory ID.	Tracker/Analysis
S.BIK 3N	
199879	
880	
881	
882	
883	
884.	
885	
886	
887	
888	
964	
965	
966	
967	
968	
969	
970	
971	

Relinquished @ GMD by MTP Time: 0935

Transported by BED

Received @ CP by DAN Time: 11:10

000053E

Laboratory Transfer Record

Sample Management | Aquatec, Inc.

ETR: 39942	Date: 10/8/93

Laboratory I.D.	Fraction/Analysis
199963	6 x 1L Amber SVOA
	5 6x1L Amber pest/PCB

Relinquished @ CP by SMW Time: 1600

Transported by BED

Received @ GMD by FMB Time: 1630

Figure 9: F-0047

(Nov '91)

000053F

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE

SDG# 39948

VOLATILE, SEMIVOLATILE, PESTICIDE/PCB, AND INORGANICS ANALYSES

ALLIED OPERABLE UNIT

Analyses performed by:

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Colchester, Vermont

Review performed by:

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Summary

The following is an assessment of the data package for SDG # 39948 for the Allied Operable Unit sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis			
				VOA	BNA	Pest	TAL[1]
A66037	199964	water	10/7/93	x	x	x	x
A66047	199965	water	10/7/93	x	x	x	x
A66048	199966	water	10/7/93	x	x	x	x
A66054	199967	water	10/7/93	x	x	x	x
A66055	199968	water	10/7/93	x	x	x	x
A66056	199969	water	10/7/93	x	x	x	x
A66057	199970	water	10/7/93	x	x	x	x
A66058	199971	water	10/7/93	x	x	x	x
TB1	199972	water	10/7/93	x			x
A66060	200109	water	10/8/93	x	x	x	x
A66061	200110	water	10/8/93	x	x	x	x
A66062	200111	water	10/8/93	x	x	x	x
A66063	200112	water	10/8/93	x	x	x	x
A66064	200113	water	10/8/93	x	x	x	x
TB2	200114	water	10/8/93	x			x

[1] Conventional chemistry analyses includes chemical oxygen demand, nitrate/nitrite, alkalinity, chloride, sulfate, total suspended solids, and total organic carbon performed on all samples except trip blanks.

PESTICIDE/PCB ANALYSES

Introduction

Analyses were performed according to the USEPA CLP SOW OLM01.8.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- C Identification confirmed by GC/MS.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The QAPP-specified holding time for semivolatile analyses of water samples are 5 days from sample receipt to extraction and 40 days from the start of extraction to analysis. The technical holding times are 7 days from date of collection to extraction and 40 days to analysis. No deviations from these holding times were noted.

2. Blank Contamination

Quality assurance blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross contamination of samples during field operations.

No target compounds were detected in either the method blank or instrument blanks.

3. System Performance

The resolution and compound breakdown was within acceptable limits for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance.

4.1 Initial Calibration

A maximum RSD of 20% is allowed. All initial calibrations were within the specified limit.

4.2 Continuing Calibration

A maximum RPD of 25% is allowed. All continuing calibrations were within the specified limit.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate recoveries were outside specified limits, qualifications may be applied to the samples.

Both surrogates were low on both columns in sample A66062. All results for this sample have been qualified as estimated. Sample A66060 and A66064 each had one surrogate below the specified limit on both columns. No qualifiers have been added to these samples based on surrogate recovery. All other surrogate recoveries were within acceptable limits

6. Compound Identification

The retention times of pesticide/PCB compounds must fall within the calculated retention time windows for both the primary and confirmation columns.

All compounds fell within the appropriate retention time windows. The quantitated concentrations between the two columns did not exceed the 25% difference limit for any of the samples.

7. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

Insufficient sample precluded matrix spike/matrix spike duplicate analysis.

8. Field Duplicates

No field duplicates were included in this data set.

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

Data Validation Checksheets

Pesticide/PCB Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Were the method blanks reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?		X	
Were matrix spikes analyzed at the required frequency?		X	
How many spike recoveries were outside of QC limits?			
0 out of 0			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of 0			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	X		

	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Do any trip/field/rinse blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?	X		
Calibration and GC Performance			
Are the following chromatograms and data printouts present for all samples, blanks, and MS/MSD?			
peak resolution check	X		
performance evaluation mixtures (PEM)	X		
Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260	X		
Toxaphene	X		
low points individual mixtures A & B (INDA and INDB)	X		
mid points INDA and INDB	X		
high points INDA and INDB	X		
instrument blanks	X		
Are Forms VI 1-4 present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses if INDA and INDB within limits for both columns?	X		
Is the resolution between any two adjacent peaks in the resolution check mixture > 60% for both columns?	X		
Is Form VII-1 present for each PEM analyzed for both columns?	X		
Has the individual % breakdown exceeded 20% on either column for:			
4,4'-DDT		X	
endrin		X	
Has the combined breakdown for 4,4'-DDT and endrin exceeded 30% on either column?		X	

	YES	NO	NA
Are all the relative percent difference (RPD) values for all PEM analytes < 25%?	X		
Have all samples been injected within a 12 hour period beginning with the injection of an instrument blank?	X		
Is Form VII-2 present and complete for each INDA and INDB analyzed?	X		
Are RPD values for all INDA and INDB compounds < 25%?	X		
Analytical Sequence Check			
Is Form VIII present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
Is Form IX-1 present for each lot of Florisil cartridges used?	X		
Are all samples listed on the form?	X		
If GPC cleanup was performed, is From IX-2 present?			X
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits for:			
Florisil cartridge check (80-120%)	X		
GPC calibration (80-110%)			X
Pesticide/PCB Identification			
Is a Form X present for every sample in which a pesticide or PCB was detected?	X		
Was GC/MS confirmation provided when required?	X		
Is the percent difference (%D) calculated for the positive sample results on the two columns less than 25%?	X		
Were there any false negatives?		X	
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			

	YES	NO	NA
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Where field duplicates submitted with the samples?		X	

Pesticide/PCB Qualifier Summary
Holding Time and Surrogates

Sample ID	Holding Time	Surrogates - Column 1		Surrogates - Column 2	
		TCX	DCB	TCX	DCB
A66037	OK for all samples				
A66047					
A66048					
A66054					
A66055					
A66056					
A66057					
A66058					
A66060		↓(46)		↓(49)	
A66061					
A66062		↓(58)	↓(57)	↓(57)	↓(58)
A66063					
A66064		↓(54)		↓(58)	

Surrogates:
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogate diluted out
↑ Recovery high
↓ Recovery low

Unless otherwise noted, all samples are within specified limits.

Corrected Sample Analysis Data Sheets

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66037

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 199964

Sample wt/vol: 969.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/08/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/13/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66047

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 199965

Sample wt/vol: 981.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/08/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/13/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.051	U
319-85-7	beta-BHC	0.051	U
319-86-8	delta-BHC	0.051	U
58-89-9	gamma-BHC (Lindane)	0.051	U
76-44-8	Heptachlor	0.051	U
309-00-2	Aldrin	0.051	U
1024-57-3	Heptachlor epoxide	0.051	U
959-98-8	Endosulfan I	0.051	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.51	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.051	U
5103-74-2	gamma-Chlordane	0.051	U
8001-35-2	Toxaphene	5.1	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66048

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 199966

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/08/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/13/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66054

I Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 199967

Sample wt/vol: 925.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/08/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/13/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.054	U
319-85-7	beta-BHC	0.054	U
319-86-8	delta-BHC	0.054	U
58-89-9	gamma-BHC (Lindane)	0.054	U
76-44-8	Heptachlor	0.054	U
309-00-2	Aldrin	0.054	U
1024-57-3	Heptachlor epoxide	0.054	U
959-98-8	Endosulfan I	0.054	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.54	U
53494-70-5	Endrin ketone	0.11	U
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.054	U
5103-74-2	gamma-Chlordane	0.054	U
8001-35-2	Toxaphene	5.4	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.2	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66055

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 199968

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/08/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/13/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66056

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 199969

Sample wt/vol: 845.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/08/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/13/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.059	U
319-85-7	beta-BHC	0.059	U
319-86-8	delta-BHC	0.059	U
58-89-9	gamma-BHC (Lindane)	0.059	U
76-44-8	Heptachlor	0.059	U
309-00-2	Aldrin	0.059	U
1024-57-3	Heptachlor epoxide	0.059	U
959-98-8	Endosulfan I	0.059	U
60-57-1	Dieldrin	0.12	U
72-55-9	4,4'-DDE	0.12	U
72-20-8	Endrin	0.12	U
33213-65-9	Endosulfan II	0.12	U
72-54-8	4,4'-DDD	0.12	U
1031-07-8	Endosulfan sulfate	0.12	U
50-29-3	4,4'-DDT	0.12	U
72-43-5	Methoxychlor	0.59	U
53494-70-5	Endrin ketone	0.12	U
7421-93-4	Endrin aldehyde	0.12	U
5103-71-9	alpha-Chlordane	0.059	U
5103-74-2	gamma-Chlordane	0.059	U
8001-35-2	Toxaphene	5.9	U
12674-11-2	Aroclor-1016	1.2	U
11104-28-2	Aroclor-1221	2.4	U
11141-16-5	Aroclor-1232	1.2	U
53469-21-9	Aroclor-1242	1.2	U
12672-29-6	Aroclor-1248	1.2	U
11097-69-1	Aroclor-1254	1.2	U
11096-82-5	Aroclor-1260	1.2	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66057

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 199970

Sample wt/vol: 936.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/08/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/13/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.054	U
319-85-7	beta-BHC	0.054	U
319-86-8	delta-BHC	0.054	U
58-89-9	gamma-BHC (Lindane)	0.054	U
76-44-8	Heptachlor	0.054	U
309-00-2	Aldrin	0.054	U
1024-57-3	Heptachlor epoxide	0.054	U
959-98-8	Endosulfan I	0.054	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.54	U
53494-70-5	Endrin ketone	0.11	U
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.054	U
5103-74-2	gamma-Chlordane	0.054	U
8001-35-2	Toxaphene	5.4	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66058

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 199971

Sample wt/vol: 893.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/08/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/13/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.056	U
319-85-7	beta-BHC	0.056	U
319-86-8	delta-BHC	0.056	U
58-89-9	gamma-BHC (Lindane)	0.056	U
76-44-8	Heptachlor	0.056	U
309-00-2	Aldrin	0.056	U
1024-57-3	Heptachlor epoxide	0.056	U
959-98-8	Endosulfan I	0.056	U
60-57-1	Dieldrin	0.11	U
72-55-9	4,4'-DDE	0.11	U
72-20-8	Endrin	0.11	U
33213-65-9	Endosulfan II	0.11	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.11	U
50-29-3	4,4'-DDT	0.11	U
72-43-5	Methoxychlor	0.56	U
53494-70-5	Endrin ketone	0.11	U
7421-93-4	Endrin aldehyde	0.11	U
5103-71-9	alpha-Chlordane	0.056	U
5103-74-2	gamma-Chlordane	0.056	U
8001-35-2	Toxaphene	5.6	U
12674-11-2	Aroclor-1016	1.1	U
11104-28-2	Aroclor-1221	2.2	U
11141-16-5	Aroclor-1232	1.1	U
53469-21-9	Aroclor-1242	1.1	U
12672-29-6	Aroclor-1248	1.1	U
11097-69-1	Aroclor-1254	1.1	U
11096-82-5	Aroclor-1260	1.1	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66060

I Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 200109

Sample wt/vol: 972.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/09/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/14/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66061

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 200110

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

% Moisture: decanted: (Y/N) Date Received: 10/09/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/14/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66062

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 200111

Sample wt/vol: 962.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/09/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/14/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66063

L Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 200112

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

% Moisture: decanted: (Y/N) Date Received: 10/09/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/14/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66064

Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 200113

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

% Moisture: decanted: (Y/N) Date Received: 10/09/93

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/14/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.052	U
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.052	U
76-44-8	Heptachlor	0.052	U
309-00-2	Aldrin	0.052	U
1024-57-3	Heptachlor epoxide	0.052	U
959-98-8	Endosulfan I	0.052	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.52	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.052	U
5103-74-2	gamma-Chlordane	0.052	U
8001-35-2	Toxaphene	5.2	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.1	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

Inchcape Testing Services
Aquatec Laboratories

55 South Park Drive
Colchester, VT 05446
Tel. 802-655-1203
Fax. 802-655-1248

November 23, 1993

Ms. Laurie Johnston
Blasland & Bouck Engineers
6723 Towpath Road, Box 66
Syracuse, NY 13214

Re: Analytical Results-Kalamazoo Site
Aquatec Project No. 91082
Case No. OLM; SDG No. 39948

Dear Ms. Johnston:

Enclosed are the analytical results for samples received intact by Aquatec on October 08 and 09, 1993. The analyses associated with these samples were performed in accordance with the methodologies in the OLM01 and ILM02 Statement of Works. Laboratory numbers and quality control samples were assigned as follows:

Client Sample ID	Aquatec Lab No.	Sample Matrix
Samples Received on October 08, 1993 ETR No. 39948		
A66037	199964	Water
A66047	199965	Water
A66048	199966	Water
A66054	199967	Water
A66055	199968	Water
A66056	199969	Water
A66057	199970	Water
A66058	199971	Water
TB1	199972	Water
Samples Received on October 09, 1993 ETR No. 39964		
A66060	200109	Water
A66061	200110	Water
A66062	200111	Water
A66063	200112	Water
A66064	200113	Water
TB2	200114	Water

Adequate sample volume was not received in order to perform matrix analyses for this sample delivery group.

Please note the use of the following additional qualifier when reporting semivolatile organic results:

Z = The reported result is based on a peak response from coeluting compounds.

Peak height was used for calibration and quantitation of all compounds on both analytical columns except for tetrachloro-m-xylene (TCX) and delta-BHC. In these instances, peak area was used on the RTX-1701 and RTX-35 columns for delta-BHC and TCX respectively.

Sincerely,

Karen R. Chirgwin

Karen R. Chirgwin
Laboratory Operations Director

KRC/jg

Enclosure

91082B18OCT93

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: AQUATEC INC Contract: 91082

Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

GC Column(1): RTX-35 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK3H	70	68	88	90			0
02	PBLK4H	69	66	87	88			0
03	A66037	68	68	76	78			0
04	A66047	81	78	87	90			0
05	A66048	78	74	64	66			0
06	A66054	79	72	92	96			0
07	A66055	92	86	98	102			0
08	A66056	72	70	84	87			0
09	A66057	85	76	89	94			0
10	A66058	80	77	78	81			0
11	A66060	46*	49*	71	74			2
12	A66061	63	60	82	85			0
13	A66062	58*	57*	57*	58*			4
14	A66063	67	62	80	82			0
15	A66064	54*	58*	78	82			2

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

4C
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK4H

I Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Lab Sample ID: 180283 Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 10/14/93

Date Analyzed (1): 10/28/93 Date Analyzed (2): 10/28/93

Time Analyzed (1): 0505 Time Analyzed (2): 0505

Instrument ID (1): 1319-1 Instrument ID (2): 1319-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): RTX-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66060	200109	10/28/93	10/28/93
02	A66061	200110	10/28/93	10/28/93
03	A66062	200111	10/28/93	10/28/93
04	A66063	200112	10/28/93	10/28/93
05	A66064	200113	10/28/93	10/28/93

COMMENTS:

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK3H

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Lab Sample ID: 180282 Lab File ID:

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 10/13/93

Date Analyzed (1): 10/28/93 Date Analyzed (2): 10/28/93

Time Analyzed (1): 0540 Time Analyzed (2): 0540

Instrument ID (1): 1319-1 Instrument ID (2): 1319-2

GC Column (1): RTX-35 ID: 0.53 (mm) GC Column (2): RTX-1701 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66037	199964	10/28/93	10/28/93
02	A66047	199965	10/28/93	10/28/93
03	A66048	199966	10/28/93	10/28/93
04	A66054	199967	10/28/93	10/28/93
05	A66055	199968	10/28/93	10/28/93
06	A66056	199969	10/28/93	10/28/93
07	A66057	199970	10/28/93	10/28/93
08	A66058	199971	10/28/93	10/28/93

COMMENTS:

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK3H

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 180282

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received:

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/13/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK4H

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Matrix: (soil/water) WATER Lab Sample ID: 180283

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received:

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/14/93

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/28/93

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

ab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Instrument ID: 1319-1 Date(s) Analyzed: 10/27/93 10/27/93

GC Column: RTX-35 ID: 0.53(mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.500	*1	16.17	16.10	16.24	85000
		*2	16.74	16.67	16.81	68400
		*3	17.35	17.28	17.42	66200
		4	18.31	18.24	18.38	83100
		5	18.49	18.42	18.56	69200
Aroclor 1016	0.100	*1	9.02	8.95	9.09	95700
		*2	10.08	10.01	10.15	168000
		*3	11.07	11.00	11.14	255000
		4	11.42	11.35	11.49	120000
		5	12.57	12.50	12.64	121000
Aroclor 1221	0.200	*1	8.48	8.41	8.55	45900
		*2	8.84	8.77	8.91	29400
		*3	9.00	8.93	9.07	94600
		4	10.08	10.01	10.15	31500
		5	11.06	10.99	11.13	27800
Aroclor 1232	0.100	*1	9.01	8.94	9.08	98700
		*2	10.08	10.01	10.15	85100
		*3	11.06	10.99	11.13	120000
		4	11.42	11.35	11.49	56300
		5	12.57	12.50	12.64	56100
Aroclor 1242	0.100	*1	10.07	10.00	10.14	140000
		*2	11.06	10.99	11.13	214000
		*3	11.41	11.34	11.48	100000
		4	12.56	12.49	12.63	106000
		5	13.28	13.21	13.35	106000
Aroclor 1248	0.100	*1	11.04	10.97	11.11	132000
		*2	12.55	12.48	12.62	158000
		*3	13.27	13.20	13.34	189000
		4	13.41	13.34	13.48	154000
		5	14.00	13.93	14.07	140000
Aroclor 1254	0.100	*1	13.54	13.47	13.61	168000
		*2	13.79	13.72	13.86	214000
		*3	14.93	14.86	15.00	293000
		4	15.30	15.23	15.37	196000
		5	16.60	16.53	16.67	223000
Aroclor 1260	0.100	*1	15.38	15.31	15.45	216000
		*2	15.67	15.60	15.74	262000
		*3	16.62	16.55	16.69	229000
		4	17.67	17.60	17.74	172000
		5	18.19	18.12	18.26	312000

* Denotes required peaks

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: AQUATEC INC Contract: 91082

Lab Code: AQUAI Case No.: OLM SAS No.: SDG No.: 39948

Instrument ID: 1319-2 Date(s) Analyzed: 10/27/93 10/27/93

GC Column: RTX-1701 ID: 0.53(mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.500	*1	15.50	15.43	15.57	32300
		*2	16.07	16.00	16.14	45700
		*3	16.10	16.03	16.17	44300
		4	16.32	16.25	16.39	48100
		5	17.14	17.07	17.21	47500
Aroclor 1016	0.100	*1	9.00	8.93	9.07	94200
		*2	10.06	9.99	10.13	160000
		*3	10.39	10.32	10.46	62300
		4	10.87	10.80	10.94	51700
		5	11.47	11.40	11.54	64800
Aroclor 1221	0.200	*1	7.52	7.45	7.59	21900
		*2	7.91	7.84	7.98	16000
		*3	8.05	7.98	8.12	49800
		4	9.01	8.94	9.08	13000
		5	10.07	10.00	10.14	17700
Aroclor 1232	0.100	*1	8.03	7.96	8.10	49500
		*2	9.00	8.93	9.07	44200
		*3	10.06	9.99	10.13	75200
		4	10.38	10.31	10.45	28800
		5	11.46	11.39	11.53	30200
Aroclor 1242	0.100	*1	9.01	8.94	9.08	78400
		*2	10.07	10.00	10.14	133000
		*3	10.40	10.33	10.47	51200
		4	11.48	11.41	11.55	56200
		5	12.41	12.34	12.48	55200
Aroclor 1248	0.100	*1	10.07	10.00	10.14	83600
		*2	10.87	10.80	10.94	71000
		*3	11.48	11.41	11.55	85400
		4	12.35	12.28	12.42	83400
		5	12.41	12.34	12.48	96100
Aroclor 1254	0.100	*1	12.40	12.33	12.47	99600
		*2	12.79	12.72	12.86	101000
		*3	13.84	13.77	13.91	140000
		4	14.36	14.29	14.43	83300
		5	15.44	15.37	15.51	119000
Aroclor 1260	0.100	*1	14.17	14.10	14.24	106000
		*2	14.65	14.58	14.72	123000
		*3	15.43	15.36	15.50	139000
		4	16.87	16.80	16.94	149000
		5	17.84	17.77	17.91	111000

* Denotes required peaks

BLASLAND & BOUCK ENGINEERS, P.C.
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TEL: 315-446-9120
FAX: 315-449-0017

CHAIN OF CUSTODY RECORD

PROJ. NO.: 6-15.51
PROJECT NAME: KRSG- ALLIED OU
SAMPLERS: (Signature) DS

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	PCB/PESTICIDES	SEMIVOLATILES	Cn-	ALK, CHL, SO4, CO3, HCO3	COD, NO3	TEMPERATURE	REMARKS
MW-17B	10/7/93	0915		X	A66057	9	2	2	2	1	1	1		WATER
MW-16C	10/7/93	1400		X	A66058	9	2	2	2	1	1	1		WATER
					TEMP BLANK	1							1	COOLER # 211 WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
DS	10/7/93	17:05					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)

Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:
			Sheila Mcgordsep	10/8/93	1000	temp = 11°C

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

000003

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CHAIN OF CUSTODY RECORD

000004

PROJ. NO.: 6151
PROJECT NAME: KESG - ALLIED OU
SAMPLERS: (Signature) P-J

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	VOLATILES	METALS	FIELD FILTERED METALS	TEMPERATURE			REMARKS	
MW-3	10/6/93	17:30		X	A66054	4	2	1	1					WATER
MW-15	10/6/93	18:00		X	A66055	4	2	1	1					WATER
MW-17A	10/7/93	0845		X	A66056	4	2	1	1					WATER
MW-17B	10/7/93	0915		X	A66057	4	2	1	1					WATER
MW-16B	10/7/93	1515		X	A66059	12	6	3	3				MS/MSD	WATER
MW-16C	10/7/93	1400		X	A66058	4	2	1	1					WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
P-J	10/7/93	15:30					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			[illegible]	10/8/93	1100		

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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CHAIN OF CUSTODY RECORD

PROJ. NO. 645.51 | PROJECT NAME KRSG- ALLIED GU

SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	PCB/PESTICIDES	SEMIVOLATILES	Cn-	ALK, CHL, SO4, CO3, HCO3	COD, NO3	TEMPERATURE	REMARKS
MW-3	10/6/93	17:30		X	A66054	9	2	2	2	1	1	1		WATER
MW-15	10/6/93	18:00		X	A66055	9	2	2	2	1	1	1		WATER
MW-17A	10/7/93	0845		X	A66056	9	2	2	2	1	1	1		WATER
					TEMP BLANK								1	COOLER # 238

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	10/7/93	17:00					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) [signature]	DATE 10/8/93	TIME 1000	Remarks:	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

000005

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COPY original w/ ETR 3 off

CHAIN OF CUSTODY RECORD

000006

PROJ. NO.: 645.51
PROJECT NAME: Allied O.U. / Kalamazoo River Study
SAMPLERS: (Signature) Rob Patchett, Alan Hefer

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TAL Metals	TAL Metals field filtered	TCL Volatiles	Temperature			REMARKS
MW-104	10/7/93	9:00		X	A66037	4	1	1	2				
MW-108	10/7/93	13:00		X	A66047	4	1	1	2				
Rinse 5	10/7/93	16:30		X	A66048	4	1	1	2				
	10/7/93	8:00			Trip Blank	3	1		2				
	10/7/93	8:00			Temp. Blank	1				1			

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Rob Patchett	10/7/93	18:00					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			[signature]	10/8/93	1000		

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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CHAIN OF CUSTODY RECORD

000007

PROJ. NO.: 645.51
PROJECT NAME: Allied Oil / Kalamazoo River Study
SAMPLERS: (Signature)

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	Semi Volatiles	Pesticides PCB	CN-	COD	Nitrate	Alkalinity, CO_3, HCO_3, Cl, SO_4	Temperature	REMARKS
MW-104	10-7-93	9:00		X	A66037	9	2	2	2	1	1	1			
MW-108	10-7-93	13:00		X	A66047	9	2	2	2	1	1	1			
Rinse 5	10-7-93	16:30		X	A66048	9	2	2	2	1	1	1			
	10-7-93	8:00			Temp. Blank	1							1		

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
	10-7-93	18:00					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
				10/7/93	1000	Temp = 15°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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CHAIN OF CUSTODY RECORD

000008

PROJ. NO.: 645.51
PROJECT NAME: KRSG - Allied OU
SAMPLERS: (Signature) Karen L Royce

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	CLP Semivolatiles	TOC	CLP Pesticides, PCBs	CN-	COD, Nitrate	Alkalinity, CO3, HCO3, Cl, SO4	Temperature	REMARKS
MW-106	10/8/93	900		X	A66063	9	2	2	2	1	1	1		
Temperature Blank	10/8/93	700		X	Temperature Blank	1							1	Cooler # 239
MW-12	10/8/93	1300		X	A66064	9	2	2	2	1	1	1		

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L Royce	10/8/93	1500					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)

Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:
			Pat Poundstone	10/09/93	1145	Temperature blank = 9°C

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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CHAIN OF CUSTODY RECORD

000009

PROJ. NO.: 645.51
PROJECT NAME: KRSG - Allied OU
SAMPLERS: (Signature) Karen L Royce

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	CLP Volatiles	CLP TAL Metals	CLP TAL Metals (Filtered)	Temperature			REMARKS
Trip Blank	10/8/93	700 ~~800~~		X	Trip Blank	3	2	1					
~~Temperature Blank~~	~~10/8/93~~	~~900~~		~~X~~	~~Temperature Blank~~	~~1~~					~~1~~		KLR Cooler # ~~239~~ KLR 64
MW-10b	10/8/93	900		X	A66063	4	2	1	1				
MW-12	10/8/93	1300		X	A66064	4	2	1	1				

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Karen L Royce	10/8/93	1500					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			Pat Poundstone	10/09/93	1145	Temperature blank = 4°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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FEDEX #6742727762

CHAIN OF CUSTODY RECORD

000010

PROJ. NO.: 6451
PROJECT NAME: KRSG - ALLIED OU
SAMPLERS: (Signature) D. L.

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	TOC	SEMI VOLATILES	PCB/PESTICIDES	CN	ALK CHL SO4 CO3 HCO3	COD + NO3	TEMPERATURE	REMARKS
MW-2	10/8/93	0950		X	A66060	9	2	2	2	1	1	1		WATER
MW-18	10/8/93	1030		X	A66061	9	2	2	2	1	1	1		WATER
RINSE BLANK	10/8/93	1300		X	A66062	9	2	2	2	1	1	1		WATER
					TEMP BLANK	1							1	COOLER #178 WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D. L.	10/8/93	14:00					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			Pat Poundstone	10/09/93	1145	Temperature blank = 7°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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FAX: 315-449-0017

CHAIN OF CUSTODY RECORD

000011

PROJ. NO.: 645.51
PROJECT NAME: KRSG- ALLIED OU
SAMPLERS: (Signature) D-S

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	VOLATILES	METALS	FIELD FILTERED METALS	TEMPERATURE			REMARKS
MW-2	10/8/93	0930		X	A66060	4	2	1	1				WATER
MW-18	10/8/93	1030		X	A66061	4	2	1	1				WATER
RINSE BLANK	10/8/93	1300		X	A66062	4	2	1	1				WATER
					TEMP BLANK	1				1			COOLER #64 WATER

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
D-S	10/8/93	14:05					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			Pat Poundstone	10/07/93	1145	Temperature blank = 4°C	

7/12/93
1393786HCDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc.

Page 1 of 1

Received By (Print Name): Sheila M Wynkoop

Log-in Date: 10/8/93

Received By (Signature): Sheila M Wynkoop

Case Number: am

Sample Delivery Group No: 39948

ETR Number: 39948

REMARKS:

1. Custody Seal(s) — ~~Present~~/Absent* ~~Intact~~/~~Broken~~
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records — ~~Present~~/Absent*
4. Sample Information Sheets — Present/Absent*
5. Airbill — ~~Airbill~~/~~Sticker~~ ~~Present~~/Absent*
6. Airbill No.: 6142727784
7. Sample Tags — Present/Absent*
   Sample Tag Numbers — ~~Listed~~/Not Listed on Chain-of-Custody
8. Sample Condition: — ~~Intact~~/Broken*/~~Leaking~~
9. Does information on custody records, sample information sheets, and sample tags agree? *see attached. Yes/No*
10. Date Received at Lab: 10/8/93
11. Time Received: 1000

	CORRESPONDING		
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66037	N/A	199964	All samples
A66047		199965	rec'd intact
A66048		199966	inside coolers
A66054		199967	with ice. Coolers
A66055		199968	were intact
A66056		199969	as were
A66057		199970	custody seals
A66058		199971	on the out-
TB		199972	sides of coolers.
HB		199973	C-of-C docs
			present. Air
			bubbles present
			in 1x40ml VOA
			& 1x40ml TOC of
			A66047, 1x40ml
			~~A66048~~ VOA of
			A66048, 1x40ml
			VOA & 1x40ml TOC
			of A66054, 2x
			40ml VOA & 2x40ml
			TOC of A66055
			& A66057 &
			A66058; 2x40ml
			VOA of A66056.
			Temperature Blanks
			read 15°C, 15°C, 15°C,
			11°C, & 7°C

Sample Transfer

Fraction: all

Area #: Level 4

By: SMW

On: 10/8/93

SMW 10/8/93

* Contact Project Director.

Reviewed by:

Date:

Logbook No:

Logbook Page No:

001318

Case: am
SDG: 39948
ETR: 39948

aquatec INC.
An Inchcape Company
55 SOUTH PARK DRIVE, COLCHESTER, VT 05446

Discrepancies between sample bottles/labels and C-of-C

(1) Some PCB/pest SVOA + Alk/Chl/SO_4/HCO_3/CO_3 Bottles have "none" shown for preservative; other PCB/pest SVOA + Alk/Chl/SO_4/HCO_3/CO_3 Bottles have "4°C" as a preservative.

(2) Some BTLS for sample A66057 have "0915" as a time, others have "9:15" as a time; C-of-C has "0915" as a time.

(3) TB has "grab" checked off on BTLS; C-of-C does not have "grab" or "composite" checked off for this sample.

(4) All sample BTLS have "water" checked off for a matrix. Three of the five C-of-C's also have water shown as a matrix, the other two do not.

(5) "TSS" not shown on C-of-C or on sample BTLS; TSS to be run on all samples except TB + HB.

001319

SMW
10/8/93

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Pat Poundstone Log-in Date: 10/10/93

Received By (Signature): Pat Poundstone

Case Number: OLM

Sample Delivery Group No: 39948

ETR Number: 39964

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos.: No #5
3. Chain-of-Custody Records Present/Absent*
4. Sample Information Sheets Present/Absent*
5. Airbill Airbill/Sticker Present/Absent*
6. Airbill No.: 6742727762
7. Sample Tags Present/Absent*
   Sample Tag Numbers Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking* see attached Corrective Action Report
9. Does information on custody records, sample information sheets, and sample tags agree? Yes/No* see attached Discrepancy forms
10. Date Received at Lab: 10/09/93
11. Time Received: 1145

	CORRESPONDING		
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66060	no tags	200109	Samples were
A66061		200110	received intact
A66062		200111	except for one
A66063		200112	40 ml volatiles
A66064		200113	vial of A66061
TB	—	200114	which was broken.
			Samples were
			packed w/ice
			inside three
			coolers. Coolers
			were intact as
			were custody
			seals on outside
			of coolers. Temp
			of temperature
			blank for cooler
			#17B was 7°C;
			for cooler #64,
			4°C; and for
			cooler #239, 9°C.
			PKP 10/10/93

Sample Transfer

Fraction: all

Area #: Lab fridge

By: PKP

On: 10/09/93

* Contact Project Director.

Reviewed by: Susan Hutton

Date: 10/19/93

Logbook No:

Logbook Page No:

ETR: 39964
Case: OLM
SDG: 39948

aquatec INC.
An Inchcape Company
55 SOUTH PARK DRIVE, COLCHESTER, VT 05446

Discrepancies between sample bottles/labels and C-of-C

1) A66060: Label on metals bottle ~~AA~~ 10/13/93 does not have an entry for collection time. Chain-of-custody record reports a collection time for A66060 of 1030.

2) analyses for total suspended solids (TSS) has not been requested on sample labels or chain-of-custody. However, per PTM, Aquatec is now doing those analyses (TSS).

AQUATEC, INC.
CORRECTIVE ACTION REPORT

Fraction: VOA
Date: 10/10/93
Initiated By: AKA

Contract: 91082
Case: OLM
SDG: 39948

Summary of Problem: 1 40ml volatiles vial of sample A66061 was received broken

Summary of Investigation and Findings:
Another 40ml volatile vial for sample A66061 was sent

Resolution/Recommended Corrective Action:
We will use the second vial.

Date of Implementation: 10/10/93

Follow-up

Date:
Follow-up By:

Follow-up Findings:

ME D:OLM01.PPCB:EXW **MATRIX: WATER** **LEVEL: LOW** **BATCH ID: 2HK**

CLIENT(s): B1AB07 39942/39948

DATE: 10/13/93

ANALYST: JEH

Project: 91082

Case: OLM

SDG: 39890/39948

Lab sample id ITR	Client id	ml Sample	1. pH 5-9	2. 1.0ml Pest Surr (0.2ppm DEC/TMX) Lot # GC-10/12/93	3. 1.0ml Pest MTX (0.5/1.0ppm) Lot # GC-10/12/93	4. Add 60ml MeCl2 (2 min. shake)	5. Drain through granular Na2SO4	6. 60ml MeCl2, shake, drain (2x) MeCl2 Lot # GC-10/12/93	7. Solvent exchange to hexane Hex Lot # GC-10/12/93	8. Conc to 10ml	9. Add 1.0ml to hexane/florisil cartridge Florisil Lot # GC-10/12/93	10. Elute with 8.0ml 9:1 Hexane/Acetone Ace Lot # GC-10/12/93	11. Conc to 1.0ml
180282	PB1K3H	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199963	A66059	954	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199963MS	A66059MS	993	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
199963MSD	A66059MSD	960	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
199964	A66037	969	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199965	A66047	981	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199966	A66048	1001	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199967	A66054	925	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199968	A66055	1004	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199969	A66056	845	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199970	A66057	936	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199971	A66058	893	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓

JEH MTP

JEH 10/13/93

JEH 10/13/93

Aquatec, Inc. -- Extraction worksheet -- printed by: JEH on 10-13-93 07:16:33

001332

METHOD:OLM01.PPCB:EXW **MATRIX: WATER** **LEVEL: LOW** **BATCH ID: 2HJ**

CLIENT(s): BLAB0239927
DATE: 10/12/93
ANALYST: JEH
Project: 91082
CASE: OLM
SDG: 39890

001313

Lab sample id BTR	Client id	ml Sample	pH 5-9 1.	1.0ml Pest Surr (0.2ppm DEC/TMX) Lot # GE0850501 2.#	1.0ml Pest MTX (0.5/1.0ppm) Lot# 3.#	Add 60ml MeCl2 (2 min. shake) 4.	Drain through granular NaSO4 5.	60ml MeCl2, shake, drain (2x) MeCl2 Lot # G2297 6.	Solvent exchange to hexane Hex Lot# G21266 7.	Conc to 10ml 8.#	Add 1.0ml to pre-washed florisil cartridge Florisil Lot# 94226 9.#	Elute with 8.0ml 9:1 Hexane:Acetone Ace Lot# G25310 10.	Conc to 1.0ml 11.#
180281	PB1152H	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199879	A66042	983	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199880	A66043	931	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199881	A66044	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199882	A66045	967	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199883	A66046	1004	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199884	A66049	939	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199885	A66050	925	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199886	A66051	980	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199887	A66052	921	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199888	A66053	985	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓

JEH
MSB

JEH 10/12/93

JEH 10/12/93

Aquatec, Inc. -- Extraction worksheet -- printed by: JEH on 10-12-93 07:14:40

MET D:OLM01.PPCB:EXW MATRIX: WATER LEVEL: LOW BAT D: 2HA

CLIEN ...: B1AB02 39890
DATE: 10/11/93
ANALYST: JEH
Project: 91082
CASE: OLM
SDG: 39890

Lab sample id RTR	Client id	ml Sample	1. pH 5-9	2. 1.0ml Pest Surr (0.2ppm DECTMX) Lot # G2-X-36230	3. 1.0ml Pest MTX (0.5/1.0ppm) Lot #	4. Add 60ml MeCl2 (2 min. shake)	5. Drain through granular Na2SO4	6. 60ml MeCl2, shake, drain (2x) MeCl2 Lot # G2-3842	7. Solvent exchange to hexane Hex Lot # G2-1246	8. Conc to 10ml	9. Add 1.0ml to prepacked florisil cartridge Florisil Lot # 91221	10. Elute with 8.0ml 9:1 Hexane:Acetone Ace Lot # G2-2310	11. Conc to 1.0ml
180279	PB1K9G	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199623	A66034	1005	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199624	A66035	932	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199625	A66036	999	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199626	A66038	962	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199627	A66039	1002	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199628	A66040	939	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
199629	A66041	967	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓

JEH
KWB

JEH 10/11/93

JEH 10/11/93

001314

Aquatec, Inc. -- Extraction worksheet -- printed by: JEH on 10-11-93 07:19:43

F-0169A

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

ETR Number: 39948

Project Number: 91082

Case No.: OLM

SDG Number: 39948

000038

Memo: Samples 199964-73 placed in fridge on 10/8/93 by SMW at 1600.

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
199961-971	MTP	10/12/93 1330	Extraction	10/12/93 1700

F-0169A

000039

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

ETR Number: 39964

Case No.: OLM

Project Number: 91082

SDG Number: 39948

Memo: Samples 200109-114 were placed in fridge on 10/09/93 @ 1200 hrs. GKP

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
200109-113	MTP	10/14/93 0900	Extraction	10/14/93 0930

Laboratory Transfer Record

Sample Management — Aquatec, Inc.

ETR: 39964	Date: 10/14/93

Laboratory I.D.	Fraction/Analysis
PBLK 4H	
200109	
~~200110~~ 200110	
200111	
200112	
200113	

Relinquished by GMD by BDH Time: 20:30

Transported by BDH

Received by _____ by _____ Time: _____

000041

Laboratory Transfer Record

Sample Management | Aquatec, Inc.

ETR: 39948 | Date: 10/11/93

Laboratory I.D.	Fraction/Analysis
199964-71	1. 2 x 1L Amber Pest/PCB
	2 x 1L. Amber SVOA P
	per

Relinquished @ CP by SMW Time: 0930

Transported by BED

Received @ GMD by FNB Time: 1200

Figure 9: F-0047

(Nov '91)

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER
SUPERFUND SITE

SDG# 54217

PCB ANALYSES

ALLIED OPERABLE UNIT

Analyses performed by:

Aquatec, Inc.
Colchester, Vermont

Review performed by:

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG# 54217 for the Allied Operable Unit groundwater sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date
A66100	273121	groundwater	10/3/95
A66101	273122	groundwater	10/3/95
A66102	273123	groundwater	10/3/95
A66103	273124	groundwater	10/3/95
A66104	273125	groundwater	10/3/95
A66105	273126	groundwater	10/3/95
A66106	273127	groundwater	10/3/95
A66107	273128	water	10/3/95
A66108*	273129	groundwater	10/4/95
A66109	273132	groundwater	10/4/95
A66110	273133	groundwater	10/4/95
A66111	273134	groundwater	10/4/95
A66112	273135	groundwater	10/4/95
A66113	273136	groundwater	10/4/95
A66114	273137	groundwater	10/4/95
A66115	273415	groundwater	10/5/95
A66116	273416	groundwater	10/5/95
A66117	273417	groundwater	10/5/95

* MS/MSD analyses performed on sample

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The QAPP-specified holding times for PCB analyses of water samples are 5 days from date of receipt to extraction and 40 days from extraction to analysis. The technical holding times are 7 days from date of sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blanks or field blanks.

3. System Performance

The system performance and column resolution was acceptable for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The %RSD was within acceptable limits for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. The %D was within acceptable limits for all Aroclors.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recoveries of both surrogates were below control limits in samples A66101 and A66104. All data for these samples have been qualified as estimated based on the recoveries. Recovery was below acceptable control limits for one surrogate in samples A66115 and A66117. Since recovery of the remaining surrogate was within control limits, no qualifiers were added to the samples based on the deviation. All other surrogate recoveries were within acceptable control limits.

6. Compound Identification

The retention times of pesticide/PCB compounds must fall within the calculated retention time windows for both the primary and confirmation columns.

All quantitated peaks fell within the appropriate retention time windows.

7. Compound Quantitation

The differences between the quantitated concentrations for the two analytical columns exceeded the 25% limit for the following samples:

Sample ID	Aroclor	%D	Qualification
A66101	1242	59.1	JN
A66102	1242	56.2	JN
A66106	1242	64.3	JN
A66109	1242	55.0	JN
A66112	1242	68.4	JN

Based on the differences, data for the listed Aroclors have been qualified as estimated with presumptive evidence of identification.

8. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix and matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method relative to the sample matrix. Matrix spike blank (MSB) data is used to assess the precision and accuracy of the analytical method independent of matrix interferences.

All matrix spike and matrix spike duplicate recoveries and the relative percent difference (RPD) between recoveries were within acceptable control limits. The matrix spike blank recovery was also within acceptable limits.

9. Field Duplicates

Field duplicate results are summarized below:

Sample ID / Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
A66110 / A66111	ND	--	--	NA

ND Not detected
NA *Compound no detected in sample and/or duplicate, RPD not applicable*

The samples replicate through non-detection.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

DATA REVIEW CHECKLIST

PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 4			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of 2			
Blanks			
Is a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?		X	

A54217

	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Do any field/rinse blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?	X		
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks		X	
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of a standard?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?	X		
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		

	YES	NO	NA
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?		X	
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			X
PCB Identification			
Is both a primary and secondary column Aroclor Identification Report present for every sample?	X		
Do the Aroclor identifications from both columns agree?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			X
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?	X		
Field Duplicates			
Where field duplicates submitted with the samples?	X		

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding Time*	Surrogates* - Column 1		Surrogates* - Column 2	
		TCX	DCB	TCX	DCB
A66100					
A66101		↓ (43)	↓ (36)	↓ (56)	↓ (37)
A66102					
A66103					
A66104		↓ (45)	↓ (46)	↓ (46)	↓ (47)
A66105					
A66106					
A66107					
A66108					
A66108MS					
A66108MSD					
A66109					
A66110					
A66111					
A66112					
A66113					
A66114					
A66115		↓ (58)		↓ (57)	
A66116					
A66117		↓ (57)		↓ (57)	

Surrogate Standards
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogates diluted out
↑ Recovery high
↓ Recovery low

* Unless otherwise noted, all parameters are within specified limits.

PCB Calibration Summary

Instrument: HP2759
Column: RTX-5 / RTX-35

Date:	10/12/95 to	10/13	10/13	10/13	10/13	10/13	10/13
Time:	10/13/95	1100	1125	1540	1600	2015	2035
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	Corr. Coef.	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok / ok						
Aroclor 1221	ok / ok						
Aroclor 1232	ok / ok						
Aroclor 1242	ok / ok		0/0				
Aroclor 1248	ok / ok	8.5/10		15/0		0/5.0	
Aroclor 1254	ok / ok				0/0		
Aroclor 1260	ok / ok						0/0
Tetrachloro-m-xylene	ok / ok						
Decachlorobiphenyl	ok / ok						
Affected Samples:							

A54217

PCB Calibration Summary - Page 2

Instrument: HP2759
Column: RTX-5 / RTX-35

Date:		10/13	10/13	10/17	10/17	10/18	10/18
Time:		2312	2331	2231	2250	0305	0324
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	Corr. Coef.	%D	%D	%D	%D	%D	%D
Aroclor 1016							
Aroclor 1221							
Aroclor 1232							
Aroclor 1242			0/0		0/10		
Aroclor 1248		0/0		10/15		5.0/5.0	
Aroclor 1254							5.0/5.0
Aroclor 1260							
Tetrachloro-m-xylene							
Decachlorobiphenyl							
Affected Samples:							

A54217

PCB Calibration Summary - Page 3

Instrument: HP2759
Column: RTX-5 / RTX-35

Date:		10/18	10/18				
Time:		0739	0758				
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	Corr. Coef.	%D	%D	%D	%D	%D	%D
Aroclor 1016							
Aroclor 1221							
Aroclor 1232							
Aroclor 1242							
Aroclor 1248		5.0/5.0					
Aroclor 1254							
Aroclor 1260			5.0/5.0				
Tetrachloro-m-xylene							
Decachlorobiphenyl							

Affected Samples:

A54217

CORRECTED ANALYSIS SUMMARY FORMS

A54217

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66100

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273121

Sample wt/vol: 931.0 (g/mL) ML Lab File ID: 13OCT951123-I061

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 ~~4~~ (mL) GBS 11/6/95 Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

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REV 11/6/95 GBS

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66101

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273122

Sample wt/vol: 930.0 (g/mL) ML Lab File ID: 13OCT951123-I071

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF GBS 11/6/95 Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 ~~1~~ (mL) Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.22	~~U~~J
11104-28-2	Aroclor-1221	0.22	~~U~~J
11141-16-5	Aroclor-1232	0.22	~~U~~J
53469-21-9	Aroclor-1242	0.22	~~P~~JN
12672-29-6	Aroclor-1248	0.22	~~U~~J
11097-69-1	Aroclor-1254	0.22	~~U~~J
11096-82-5	Aroclor-1260	0.22	~~U~~J

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OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66102

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273123

Sample wt/vol: 960.0 (g/mL) ML Lab File ID: 13OCT951123-I081

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 ~~4~~ (mL) GBS 11/6/95 Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.32	~~J~~ JN
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

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REV
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GBS

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66103

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273124

Sample wt/vol: 962.0 (g/mL) ML Lab File ID: 13OCT951123-I091

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF GBS 11/14/95 Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 (mL) Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

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FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66104

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273125

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: 13OCT951123-I101

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 ~~1~~ (mL) GBS 11/6/95 Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	~~U~~ UJ
11104-28-2	Aroclor-1221	0.21	~~U~~ UJ
11141-16-5	Aroclor-1232	0.21	~~U~~ UJ
53469-21-9	Aroclor-1242	0.21	~~U~~ UJ
12672-29-6	Aroclor-1248	0.21	~~U~~ UJ
11097-69-1	Aroclor-1254	0.21	~~U~~ UJ
11096-82-5	Aroclor-1260	0.21	~~U~~ UJ

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GBS

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66105

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273126

Sample wt/vol: 942.0 (g/mL) ML Lab File ID: 13OCT951123-I111

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 ~~1~~ (mL) 63 11/6/95 Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

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GBS

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CLIENT SAMPLE NO.

A66106

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273127

Sample wt/vol: 955.0 (g/mL) ML Lab File ID: 13OCT951123-I161

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 (mL) Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.4	~~P~~ JN
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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CLIENT SAMPLE NO.

A66107

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273128

Sample wt/vol: 948.0 (g/mL) ML Lab File ID: 13OCT951123-I171

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 ~~1~~ (mL) GBS 11/6/95 Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

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CLIENT SAMPLE NO.

A66108

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273129

Sample wt/vol: 930.0 (g/mL) ML Lab File ID: 13OCT951123-I181

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 (mL) GBS 11/6/95 Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.22	U
11104-28-2	Aroclor-1221	0.22	U
11141-16-5	Aroclor-1232	0.22	U
53469-21-9	Aroclor-1242	0.22	U
12672-29-6	Aroclor-1248	0.22	U
11097-69-1	Aroclor-1254	0.22	U
11096-82-5	Aroclor-1260	0.22	U

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CLIENT SAMPLE NO.

A66109

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273132

Sample wt/vol: 963.0 (g/mL) ML Lab File ID: 13OCT951123-I211

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF GBS 11/6/95 Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 ~~1~~ (mL) Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.20	~~JP~~ JN
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

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CLIENT SAMPLE NO.

A66110

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273133

Sample wt/vol: 966.0 (g/mL) ML Lab File ID: 13OCT951123-I221

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 ~~1~~ (mL) GBS 11/6/95 Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

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CLIENT SAMPLE NO.

A66111

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273134

Sample wt/vol: 940.0 (g/mL) ML Lab File ID: 13OCT951123-I231

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 ~~4~~ (mL) GBS 11/6/95 Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

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OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66112

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273135

Sample wt/vol: 972.0 (g/mL) ML Lab File ID: 13OCT951123-I241

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 ~~1~~ GBS 11/6/95 (mL) Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.62	U
11104-28-2	Aroclor-1221	0.62	U
11141-16-5	Aroclor-1232	0.62	U
53469-21-9	Aroclor-1242	0.57	~~JP~~ JN
12672-29-6	Aroclor-1248	0.62	U
11097-69-1	Aroclor-1254	0.62	U
11096-82-5	Aroclor-1260	0.62	U

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CLIENT SAMPLE NO.

A66113

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273136

Sample wt/vol: 923.0 (g/mL) ML Lab File ID: 13OCT951123-I251

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 (mL) Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.22	U
11104-28-2	Aroclor-1221	0.22	U
11141-16-5	Aroclor-1232	0.22	U
53469-21-9	Aroclor-1242	0.22	U
12672-29-6	Aroclor-1248	0.22	U
11097-69-1	Aroclor-1254	0.22	U
11096-82-5	Aroclor-1260	0.22	U

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OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66114

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273137

Sample wt/vol: 933.0 (g/mL) ML Lab File ID: 13OCT951123-I331

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/95

Extraction: (SepF/Cont/Sonc) SEPF GBS 11/6/95 Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 ~~.4~~ (mL) Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

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OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66115

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273415

Sample wt/vol: 957.0 (g/mL) ML Lab File ID: 17OCT952130-I261

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/07/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/95

Concentrated Extract Volume: 1.0 ~~1~~ GBS 11/6/95 (mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

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CLIENT SAMPLE NO.

A66116

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273416

Sample wt/vol: 969.0 (g/mL) ML Lab File ID: 17OCT952130-I271

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/07/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/95

Concentrated Extract Volume: 1.0 GBS 11/6/95 (mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

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OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66117

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 273417

Sample wt/vol: 956.0 (g/mL) ML Lab File ID: 17OCT952130-I281

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/07/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/95

Concentrated Extract Volume: 1.0 ~~2~~ (mL) GBS 11/6/95 Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

171
REV
11/6/95
GBS

Inchcape Testing Services
Aquatec Laboratories

55 South Park Drive
Colchester, VT 05446
Tel. 802-655-1203
Fax 802-655-1248

October 31, 1995

Ms. Laurie Johnston
Blasland & Bouck Engineers
6723 Towpath Road, Box 66
Syracuse, NY 13214

Re: Analytical Results-Kalamazoo Site
ITS-Aquatec NYS ELAP ID # 10391
Project No.: 91082; Case No. PCB; SDG No. 54217

Dear Ms. Johnston:

Enclosed are the analytical results for samples received intact by Inchcape Testing Services-Aquatec Laboratories on October 5 and 7, 1995. The analyses for these samples were performed in accordance with the methodologies specified in the Quality Assurance Project Plan. Laboratory numbers and quality control samples were assigned as follows:

Client Sample ID	Laboratory Number	Sample Matrix
Samples Received on October 5, 1995 ETR No. 54217		
A66100	273121	Water
A66101	273122	Water
A66102	273123	Water
A66103	273124	Water
A66104	273125	Water
A66105	273126	Water
A66106	273127	Water
A66107	273128	Water
A66108	273129	Water
A66108MS	273129MS	Water
A66108MSD	273129MD	Water
A66109	273132	Water
A66110	273133	Water
A66111	273134	Water
A66112	273135	Water
A66113	273136	Water
A66114	273137	Water
MSB	273138	Liquid
Samples Received on October 7, 1995 ETR No. 54263		
A66115	273415	Water
A66116	273416	Water
A66117	273417	Water

Low Aroclor surrogate recoveries were observed for a few samples in this delivery group.

Samples in this delivery group were reported as the best match to combinations of the seven Aroclor standards. In general, the standard Aroclors are sufficiently unique to provide precise identifications and quantiations of complex mixtures with minimal weathering. For highly altered samples, certain subtle identification distinction, such as the difference between Aroclor 1016 and Aroclor 1242 become less precise. In all cases, quantitation remains highly reliable.

For the benefit of interested parties, documentation of sample handling and preparation is included at the end of the "Sample Data Package". A colored sheet of paper entitled "Sample Preparation Package" has been used to explicitly mark the location of these documents.

If there are any questions regarding this submittal, please contact Pauline Malik at (802) 655-1203.

Sincerely,

Karen R. Chirgwin

Karen R. Chirgwin
Laboratory Operations Director

Enclosure

KRC/jg

91082B10OCT95

FORM 2
WATER OTHER SURROGATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

GC Column(1): RTX-35 ID: 0.32 (mm) GC Column(2): RTX-5 ID: 0.32 (mm)

	CLIENT SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK9T	70	70	91	90			0
02	A66100	77	77	90	92			0
03	A66101	43*	56*	36*	37*			4
04	A66102	74	78	94	94			0
05	A66103	77	77	87	87			0
06	A66104	45*	46*	46*	47*			4
07	A66105	73	72	96	96			0
08	A66106	134	252D	62	70			0
09	A66107	72	72	67	68			0
10	A66108	76	76	95	96			0
11	A66108MS	78	80	92	93			0
12	A66108MSD	70	72	81	81			0
13	A66109	77	87	97	98			0
14	A66110	78	78	100	99			0
15	A66111	80	80	100	103			0
16	A66112	98	308D	71	76			0
17	A66113	74	73	93	93			0
18	A66114	79	82	76	81			0
19	MBS	71	74	74	77			0
20	PBLK1U	58*	60	67	64			1
21	A66115	57*	57*	72	70			2
22	A66116	61	62	77	75			0
23	A66117	57*	57*	82	80			2
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (60-140)
S2 (DCB) = Decachlorobiphenyl (60-140)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
WATER OTHER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Matrix Spike - Sample No.: A66108

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Aroclor-1242	0.62	0.00	0.57	92	60-140
Aroclor-1254	0.62	0.00	0.69	111	60-140

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1242	0.61	0.48	79	15	30	60-140
Aroclor-1254	0.61	0.58	95	16	30	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS: _____

FORM 3
WATER OTHER BLANK SPIKE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Matrix Spike - Sample No.: MBS

COMPOUND	SPIKE ADDED (ug/L)	BLANK CONCENTRATION (ug/L)	BS CONCENTRATION (ug/L)	BS % REC #	QC. LIMITS REC.
Aroclor-1242	0.60		0.51	85	60-140
Aroclor-1254	0.60		0.56	93	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLK9T

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Lab Sample ID: 261456 Lab File ID: 13OCT951123-I031

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 10/10/95

Date Analyzed (1): 10/13/95 Date Analyzed (2): 10/13/95

Time Analyzed (1): 1204 Time Analyzed (2): 1204

Instrument ID (1): 2759_1 Instrument ID (2): 2759_2

GC Column (1): RTX-5 ID: 0.32(mm) GC Column (2): RTX-35 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66100	273121	10/13/95	10/13/95
02	A66101	273122	10/13/95	10/13/95
03	A66102	273123	10/13/95	10/13/95
04	A66103	273124	10/13/95	10/13/95
05	A66104	273125	10/13/95	10/13/95
06	A66105	273126	10/13/95	10/13/95
07	A66106	273127	10/13/95	10/13/95
08	A66107	273128	10/13/95	10/13/95
09	A66108	273129	10/13/95	10/13/95
10	A66108MS	273129MS	10/13/95	10/13/95
11	A66108MSD	273129MD	10/13/95	10/13/95
12	A66109	273132	10/13/95	10/13/95
13	A66110	273133	10/13/95	10/13/95
14	A66111	273134	10/13/95	10/13/95
15	A66112	273135	10/13/95	10/13/95
16	A66113	273136	10/13/95	10/13/95
17	A66114	273137	10/13/95	10/13/95
18	MBS	273138	10/13/95	10/13/95
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLK1U

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Lab Sample ID: 261457 Lab File ID: 17OCT952130-I071

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 10/12/95

Date Analyzed (1): 10/17/95 Date Analyzed (2): 10/17/95

Time Analyzed (1): 2329 Time Analyzed (2): 2329

Instrument ID (1): 2759_1 Instrument ID (2): 2759_2

GC Column (1): RTX-5 ID: 0.32(mm) GC Column (2): RTX-35 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66115	273415	10/18/95	10/18/95
02	A66116	273416	10/18/95	10/18/95
03	A66117	273417	10/18/95	10/18/95
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLK9T

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: . SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 261456

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 13OCT951123-I031

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/10/95

Concentrated Extract Volume: 1.0 ~~1~~ (mL) 11/6/95 Date Analyzed: 10/13/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

699 REV 11/6/95 GBS

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLK1U

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Matrix: (soil/water) WATER Lab Sample ID: 261457

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 17OCT952130-I071

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/95

Concentrated Extract Volume: 1.0 ~~1~~ (mL) GBS 11/6/95 Date Analyzed: 10/17/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

708 REV 11/6/95 GBS

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016	13.420				
(2)	30.760				
(3)	18.780				
(4)	47.060				
(5)	22.720				
Aroclor-1221	6.940				
(2)	5.460				
(3)	21.040				
(4)	5.480				
(5)	4.120				
Aroclor-1232	12.760				
(2)	13.140				
(3)	18.440				
(4)	9.080				
(5)	7.280				
Aroclor-1242	24.440	22.750	22.595	20.210	19.265
(2)	15.160	14.150	14.780	13.640	13.175
(3)	36.400	34.450	36.575	34.785	35.164
(4)	22.760	16.820	17.645	16.518	16.206
(5)	13.900	13.280	14.170	13.572	13.764
Aroclor-1248	19.880	19.870	19.320	18.462	17.822
(2)	21.840	21.090	20.985	20.595	20.552
(3)	14.600	13.950	14.110	14.162	14.556
(4)	30.260	27.870	28.260	27.662	27.938
(5)	20.560	19.530	20.190	20.622	21.795
Aroclor-1254	44.440	41.050	39.500	38.398	37.522
(2)	15.540	14.660	14.195	13.935	13.784
(3)	12.060	11.280	11.285	11.058	11.162
(4)	22.940	21.710	21.765	22.025	22.834
(5)	45.520	42.660	43.330	43.738	44.484
Aroclor-1260	35.020	32.950	30.910	29.990	30.085
(2)	67.340	64.120	61.060	61.932	64.984
(3)	31.980	30.160	28.725	29.395	31.526
(4)	19.500	17.890	16.830	16.570	17.069
(5)	19.020	15.960	14.855	14.658	15.275
Tetrachloro-m-xylene	431.200	438.700	460.900	521.900	584.325

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	779.400	725.300	759.500	701.475	672.400

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2
Aroclor-1016	LINR	0.00000000	13.4200000	1.000
(2)	LINR	0.00000000	30.7600000	1.000
(3)	LINR	0.00000000	18.7800000	1.000
(4)	LINR	0.00000000	47.0600000	1.000
(5)	LINR	0.00000000	22.7200000	1.000
Aroclor-1221	LINR	0.00000000	6.94000000	1.000
(2)	LINR	0.00000000	5.46000000	1.000
(3)	LINR	0.00000000	21.0400000	1.000
(4)	LINR	0.00000000	5.48000000	1.000
(5)	LINR	0.00000000	4.12000000	1.000
Aroclor-1232	LINR	0.00000000	12.7600000	1.000
(2)	LINR	0.00000000	13.1400000	1.000
(3)	LINR	0.00000000	18.4400000	1.000
(4)	LINR	0.00000000	9.08000000	1.000
(5)	LINR	0.00000000	7.28000000	1.000
Aroclor-1242	LINR	-25.191944	18.8023612	0.999
(2)	LINR	-14.742329	13.0103150	0.999
(3)	LINR	-1.7098046	35.0486248	1.000
(4)	LINR	-16.154389	15.8949264	1.000
(5)	LINR	0.14847667	13.7465840	1.000
Aroclor-1248	LINR	-13.456161	17.6147518	1.000
(2)	LINR	-3.6308567	20.4558954	1.000
(3)	LINR	4.70157462	14.5804879	1.000
(4)	LINR	-1.8052916	27.8167184	1.000
(5)	LINR	12.2069460	21.9642464	0.999
Aroclor-1254	LINR	-11.740348	37.0509950	1.000
(2)	LINR	-7.3913640	13.6632577	1.000
(3)	LINR	-2.2299397	11.1078393	1.000
(4)	LINR	6.36123405	22.8877231	1.000
(5)	LINR	3.43634476	44.5519218	1.000
Aroclor-1260	LINR	-8.5151763	29.6952883	1.000
(2)	LINR	5.88230539	64.9426204	0.999
(3)	LINR	10.3624557	31.5975090	0.998
(4)	LINR	-2.3633674	16.9117142	1.000
(5)	LINR	-2.8696572	15.0867938	0.999
Tetrachloro-m-xylene	LINR	3.24722137	600.898390	0.997

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-1.5904100	663.943780	0.999

000188

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/12OCT19951601.b/8080_PCB.m RTX - 5
Cal Date : 29-Oct-1995 13:50 jab

Calibration File Names:
Level 1: /chem/2759_1.i/12OCT19951601.b/12oct951601-i341.d
Level 2: /chem/2759_1.i/12OCT19951601.b/12oct951601-i351.d
Level 3: /chem/2759_1.i/12OCT19951601.b/12oct951601-i361.d
Level 4: /chem/2759_1.i/12OCT19951601.b/12oct951601-i371.d
Level 5: /chem/2759_1.i/12OCT19951601.b/12oct951601-i381.d PHV ✓ed WBR

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2	
2 Aroclor-1016 (1)	671	+++++	+++++	+++++	+++++	LINR	0.000e+00	13.42000		1.00000	
(2)	1538	+++++	+++++	+++++	+++++	LINR	0.000e+00	30.76000		1.00000	<-
(3)	939	+++++	+++++	+++++	+++++	LINR	0.000e+00	18.78000		1.00000	<-
(4)	2353	+++++	+++++	+++++	+++++	LINR	0.000e+00	47.06000		1.00000	<-
(5)	1136	+++++	+++++	+++++	+++++	LINR	0.000e+00	22.72000		1.00000	<-
3 Aroclor-1221 (1)	347	+++++	+++++	+++++	+++++	LINR	0.000e+00	6.94000		1.00000	
(2)	273	+++++	+++++	+++++	+++++	LINR	0.000e+00	5.46000		1.00000	
(3)	1052	+++++	+++++	+++++	+++++	LINR	0.000e+00	21.04000		1.00000	
(4)	274	+++++	+++++	+++++	+++++	LINR	0.000e+00	5.48000		1.00000	
(5)	206	+++++	+++++	+++++	+++++	LINR	0.000e+00	4.12000		1.00000	

000159

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/12OCT19951601.b/8080_PCB.m
Cal Date : 29-Oct-1995 13:50 jab

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
4 Aroclor-1232(1)	638	+++++	+++++	+++++	+++++	LINR	0.000e+00	12.76000		1.00000
(2)	657	+++++	+++++	+++++	+++++	LINR	0.000e+00	13.14000		1.00000
(3)	922	+++++	+++++	+++++	+++++	LINR	0.000e+00	18.44000		1.00000
(4)	454	+++++	+++++	+++++	+++++	LINR	0.000e+00	9.08000		1.00000
(5)	364	+++++	+++++	+++++	+++++	LINR	0.000e+00	7.28000		1.00000
5 Aroclor-1242(1)	1222	2275	4519	8084	15412	LINR	-25.19194	18.80236		0.99891
(2)	758	1415	2956	5456	10540	LINR	-14.74233	13.01032		0.99926
(3)	1820	3445	7315	13914	28131	LINR	-1.70980	35.04862		0.99977
(4)	1138	1682	3529	6607	12965	LINR	-16.15439	15.89493		0.99954
(5)	695	1328	2834	5429	11011	LINR	0.14848	13.74658		0.99979
6 Aroclor-1248(1)	994	1987	3864	7385	14258	LINR	-13.45616	17.61475		0.99964
(2)	1092	2109	4197	8238	16442	LINR	-3.63086	20.45590		0.99999
(3)	730	1395	2822	5665	11645	LINR	4.70157	14.58049		0.99978
(4)	1513	2787	5652	11065	22350	LINR	-1.80529	27.81672		0.99992
(5)	1028	1953	4038	8249	17436	LINR	12.20695	21.96425		0.99924
7 Aroclor-1254(1)	2222	4105	7900	15359	30018	LINR	-11.74035	37.05099		0.99996
(2)	777	1466	2839	5574	11027	LINR	-7.39136	13.66326		1.00000
(3)	603	1128	2257	4423	8930	LINR	-2.22994	11.10784		0.99993
(4)	1147	2171	4353	8810	18267	LINR	6.36123	22.88772		0.99959
(5)	2276	4266	8666	17495	35587	LINR	3.43634	44.55192		0.99988

000190

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/12OCT19951601.b/8080_PCB.m
Cal Date : 29-Oct-1995 13:50 jab

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
8 Aroclor-1260(1)	1751	3295	6182	11996	24068	LINR	-8.51518	29.69529		0.99992
(2)	3367	6412	12212	24773	51987	LINR	5.88231	64.94262		0.99914
(3)	1599	3016	5745	11758	25221	LINR	10.36246	31.59751		0.99840
(4)	975	1789	3366	6628	13655	LINR	-2.36337	16.91171		0.99950
(5)	951	1596	2971	5863	12220	LINR	-2.86966	15.08679		0.99892
$ 1 Tetrachloro-m-xylene	2156	4387	9218	20876	46746	LINR	3.24722	601		0.99710
$ 9 Decachlorobiphenyl	3897	7253	15190	28059	53792	LINR	-1.59041	664		0.99909

AR 55 from 1248

Curve	Formula	Units
Linear	y = a0 + (1/a1) * x	Response

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016	21.300				
(2)	36.640				
(3)	9.220				
(4)	14.000				
(5)	20.600				
Aroclor-1221	2.880				
(2)	8.040				
(3)	6.000				
(4)	24.900				
(5)	5.740				
Aroclor-1232	16.880				
(2)	15.600				
(3)	16.920				
(4)	9.840				
(5)	8.480				
Aroclor-1242	29.040	26.880	26.560	23.965	22.768
(2)	35.000	33.030	33.950	32.338	33.179
(3)	15.960	15.120	16.055	15.075	15.361
(4)	12.100	11.550	12.435	11.855	12.202
(5)	11.280	10.740	11.230	10.660	11.246
Aroclor-1248	8.640	7.960	8.145	7.942	7.821
(2)	19.280	18.880	17.335	18.672	16.566
(3)	14.660	14.600	14.920	14.635	14.641
(4)	7.820	7.330	7.925	7.700	7.529
(5)	5.560	5.260	5.605	5.478	5.476
Aroclor-1254	25.880	20.660	18.070	17.285	16.359
(2)	31.220	29.740	28.265	27.392	26.725
(3)	39.380	37.500	36.115	34.972	34.080
(4)	46.800	44.850	44.930	45.122	45.655
(5)	26.340	24.720	24.015	23.528	23.306
Aroclor-1260	42.760	39.710	38.145	38.645	39.964
(2)	40.860	35.660	34.120	33.830	34.780
(3)	66.240	66.520	64.125	64.635	68.179
(4)	38.020	35.280	34.145	35.105	36.795
(5)	16.160	15.300	14.515	14.458	15.084
Tetrachloro-m-xylene	470.200	476.200	506.200	557.400	626.250

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	711.800	667.100	708.900	646.300	614.325

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR	0.00000000	21.3000000	1.000
(2)	LINR	0.00000000	36.6400000	1.000
(3)	LINR	0.00000000	9.22000000	1.000
(4)	LINR	0.00000000	14.0000000	1.000
(5)	LINR	0.00000000	20.6000000	1.000
Aroclor-1221	LINR	0.00000000	2.88000000	1.000
(2)	LINR	0.00000000	8.04000000	1.000
(3)	LINR	0.00000000	6.00000000	1.000
(4)	LINR	0.00000000	24.9000000	1.000
(5)	LINR	0.00000000	5.74000000	1.000
Aroclor-1232	LINR	0.00000000	16.8800000	1.000
(2)	LINR	0.00000000	15.6000000	1.000
(3)	LINR	0.00000000	16.9200000	1.000
(4)	LINR	0.00000000	9.84000000	1.000
(5)	LINR	0.00000000	8.48000000	1.000
Aroclor-1242	LINR	-25.147725	22.2301972	0.999
(2)	LINR	-0.9690325	33.0071452	1.000
(3)	LINR	-1.8223764	15.2907564	1.000
(4)	LINR	2.60766147	12.2000438	1.000
(5)	LINR	4.59353999	11.2276603	0.999
Aroclor-1248	LINR	-6.0411693	7.77810057	1.000
(2)	LINR	-16.393893	16.5695502	0.996
(3)	LINR	-1.0014016	14.6263006	1.000
(4)	LINR	-3.9146057	7.52561352	1.000
(5)	LINR	-0.1891299	5.47859301	1.000
Aroclor-1254	LINR	-32.019320	15.7739627	1.000
(2)	LINR	-12.487460	26.3731185	1.000
(3)	LINR	-11.908810	33.6710263	1.000
(4)	LINR	1.66707080	45.6545463	1.000
(5)	LINR	-7.2993084	23.0999558	1.000
Aroclor-1260	LINR	3.25195329	39.8809385	0.999
(2)	LINR	-1.9805697	34.4822756	0.999
(3)	LINR	7.82046340	68.2944988	0.999
(4)	LINR	7.59749892	36.8621290	0.999
(5)	LINR	2.48372470	15.0177417	0.999
Tetrachloro-m-xylene	LINR	3.09652913	642.450542	0.997

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-1.7911103	606.298470	0.998

FORM VI OTHER

000195

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/12OCT19951601.b/8080_PCB.m RTX-35
Cal Date : 30-Oct-1995 16:11 jab

Calibration File Names:
Level 1: /chem/2759_2.i/12OCT19951601.b/12oct951601-i341.d
Level 2: /chem/2759_2.i/12OCT19951601.b/12oct951601-i351.d
Level 3: /chem/2759_2.i/12OCT19951601.b/12oct951601-i361.d
Level 4: /chem/2759_2.i/12OCT19951601.b/12oct951601-i371.d
Level 5: /chem/2759_2.i/12OCT19951601.b/12oct951601-i381.d

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2	
2 Aroclor-1016(1)	1065	+++++	+++++	+++++	+++++	LINR	0.000e+00	21.30000		1.00000	
(2)	1832	+++++	+++++	+++++	+++++	LINR	0.000e+00	36.64000		1.00000	<-
(3)	461	+++++	+++++	+++++	+++++	LINR	0.000e+00	9.22000		1.00000	<-
(4)	700	+++++	+++++	+++++	+++++	LINR	0.000e+00	14.00000		1.00000	<-
(5)	1030	+++++	+++++	+++++	+++++	LINR	0.000e+00	20.60000		1.00000	<-
3 Aroclor-1221(1)	144	+++++	+++++	+++++	+++++	LINR	0.000e+00	2.88000		1.00000	
(2)	402	+++++	+++++	+++++	+++++	LINR	0.000e+00	8.04000		1.00000	
(3)	300	+++++	+++++	+++++	+++++	LINR	0.000e+00	6.00000		1.00000	
(4)	1245	+++++	+++++	+++++	+++++	LINR	0.000e+00	24.90000		1.00000	
(5)	287	+++++	+++++	+++++	+++++	LINR	0.000e+00	5.74000		1.00000	

000196

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/12OCT19951601.b/8080_PCB.m
Cal Date : 30-Oct-1995 16:11 jab

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
4 Aroclor-1232(1)	844	+++++	+++++	+++++	+++++	LINR	0.000e+00	16.88000		1.00000
(2)	780	+++++	+++++	+++++	+++++	LINR	0.000e+00	15.60000		1.00000
(3)	846	+++++	+++++	+++++	+++++	LINR	0.000e+00	16.92000		1.00000
(4)	492	+++++	+++++	+++++	+++++	LINR	0.000e+00	9.84000		1.00000
(5)	424	+++++	+++++	+++++	+++++	LINR	0.000e+00	8.48000		1.00000
5 Aroclor-1242(1)	1452	2688	5312	9586	18214	LINR	-25.14772	22.23020		0.99899
(2)	1750	3303	6790	12935	26543	LINR	-0.96903	33.00715		0.99968
(3)	798	1512	3211	6030	12289	LINR	-1.82238	15.29076		0.99964
(4)	605	1155	2487	4742	9762	LINR	2.60766	12.20004		0.99963
(5)	564	1074	2246	4264	8997	LINR	4.59354	11.22766		0.99913
6 Aroclor-1248(1)	432	796	1629	3177	6257	LINR	-6.04117	7.77810		0.99991
(2)	964	1888	3467	7469	13253	LINR	-16.39389	16.56955		0.99575
(3)	733	1460	2984	5854	11713	LINR	-1.00140	14.62630		0.99997
(4)	391	733	1585	3080	6023	LINR	-3.91461	7.52561		0.99964
(5)	278	526	1121	2191	4381	LINR	-0.18913	5.47859		0.99990
7 Aroclor-1254(1)	1294	2066	3614	6914	13087	LINR	-32.01932	15.77396		0.99985
(2)	1561	2974	5653	10957	21380	LINR	-12.48746	26.37312		0.99993
(3)	1969	3750	7223	13989	27264	LINR	-11.90881	33.67103		0.99990
(4)	2340	4485	8986	18049	36524	LINR	1.66707	45.65455		0.99994
(5)	1317	2472	4803	9411	18645	LINR	-7.29931	23.09996		1.00000

001197

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/12OCT19951601.b/8080_PCB.m
Cal Date : 30-Oct-1995 16:11 jab

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
8 Aroclor-1260(1)	2138	3971	7629	15458	31971	LINR	3.25195	39.88094		0.99948
(2)	2043	3566	6824	13532	27824	LINR	-1.98057	34.48228		0.99950
(3)	3312	6652	12825	25854	54543	LINR	7.82046	68.29450		0.99916
(4)	1901	3528	6829	14042	29436	LINR	7.59750	36.86213		0.99915
(5)	808	1530	2903	5783	12067	LINR	2.48372	15.01774		0.99928
$ 1 Tetrachloro-m-xylene	2351	4762	10124	22296	50100	LINR	3.09653	642		0.99714
$ 9 Decachlorobiphenyl	3559	6671	14178	25852	49146	LINR	-1.79111	606		0.99859

Curve	Formula	Units
Linear	y = a0 + (1/a1) * x	Response

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date: 10/13/95 Time: 1540

Lab File ID: 13OCT951123-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 2335 0053

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	230	200	LINR	15.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date: 10/13/95 Time: 1600

Lab File ID: 13OCT951123-I1 Init. Calib. Date(s): 10/13/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 0113 0231

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	19	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date: 10/13/95 Time: 2015

Lab File ID: 13OCT951123-I2 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 2335 0053

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date: 10/13/95 Time: 2035

Lab File ID: 13OCT951123-I2 Init. Calib. Date(s): 10/13/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 0250 0409

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	19	20	LINR	5.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date: 10/13/95 Time: 2312

Lab File ID: 13OCT951123-I3 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 2335 0053

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date: 10/13/95 Time: 2331

Lab File ID: 13OCT951123-I3 Init. Calib. Date(s): 10/12/95 10/12/95

Heated Purge: (Y/N) N Init. Calib. Times: 2157 2315

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date: 10/17/95 Time: 2231

Lab File ID: 17OCT952130-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 2335 0053

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	180	200	LINR	10.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	18	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date: 10/17/95 Time: 2250

Lab File ID: 17OCT952130-I0 Init. Calib. Date(s): 10/12/95 10/12/95

Heated Purge: (Y/N) N Init. Calib. Times: 2157 2315

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	18	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 0305

Lab File ID: 17OCT952130-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 2335 0053

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190	200	LINR	5.0	15.0
Tetrachloro-m-xylene	19	20	LINR	5.0	15.0
Decachlorobiphenyl	19	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 0324

Lab File ID: 17OCT952130-I1 Init. Calib. Date(s): 10/13/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 0113 0231

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	190	200	LINR	5.0	15.0
Tetrachloro-m-xylene	18	20	LINR	10.0	15.0
Decachlorobiphenyl	19	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 0739

Lab File ID: 17OCT952130-I3 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 2335 0053

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190	200	LINR	5.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 0758

Lab File ID: 17OCT952130-I3 Init. Calib. Date(s): 10/13/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 0250 0409

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	190	200	LINR	5.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/13/95 Time: 1100

Lab File ID: 12OCT951607-I2 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 2335 0053

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	180	200	LINR	10.0	15.0
Tetrachloro-m-xylene	19	20	LINR	5.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/13/95 Time: 1125

Lab File ID: 13OCT951123-I0 Init. Calib. Date(s): 10/12/95 10/12/95

Heated Purge: (Y/N) N Init. Calib. Times: 2157 2315

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	19	20	LINR	5.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/13/95 Time: 1540

Lab File ID: 13OCT951123-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 2335 0053

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/13/95 Time: 1600

Lab File ID: 13OCT951123-I1 Init. Calib. Date(s): 10/13/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 0113 0231

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	19	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/13/95 Time: 2015

Lab File ID: 13OCT951123-I2 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 2335 0053

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/13/95 Time: 2035

Lab File ID: 13OCT951123-I2 Init. Calib. Date(s): 10/13/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 0250 0409

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/13/95 Time: 2312

Lab File ID: 13OCT951123-I3 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 2335 0053

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/13/95 Time: 2331

Lab File ID: 13OCT951123-I3 Init. Calib. Date(s): 10/12/95 10/12/95

Heated Purge: (Y/N) N Init. Calib. Times: 2157 2315

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	19	20	LINR	5.0	15.0
Decachlorobiphenyl	19	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/17/95 Time: 2231

Lab File ID: 17OCT952130-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 2335 0053

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	170	200	LINR	15.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	18	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/17/95 Time: 2250

Lab File ID: 17OCT952130-I0 Init. Calib. Date(s): 10/12/95 10/12/95

Heated Purge: (Y/N) N Init. Calib. Times: 2157 2315

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	180	200	LINR	10.0	15.0
Tetrachloro-m-xylene	19	20	LINR	5.0	15.0
Decachlorobiphenyl	18	20	LINR	10.0	15.0

000219

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 0305

Lab File ID: 17OCT952130-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 2335 0053

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190	200	LINR	5.0	15.0
Tetrachloro-m-xylene	19	20	LINR	5.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 0324

Lab File ID: 17OCT952130-I1 Init. Calib. Date(s): 10/13/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 0113 0231

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	190	200	LINR	5.0	15.0
Tetrachloro-m-xylene	19	20	LINR	5.0	15.0
Decachlorobiphenyl	19	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 0739

Lab File ID: 17OCT952130-I3 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 2335 0053

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190	200	LINR	5.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54217

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 0758

Lab File ID: 17OCT952130-I3 Init. Calib. Date(s): 10/13/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 0250 0409

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	190	200	LINR	5.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

Blasland, Bouck & Lee, Inc.
6723 Tow Path Road, Box 66, Syracuse, New York 13214
(315) 446-9120

FEDX AIRBILL # 1372320596

COOLER # 1A

000003

CHAIN OF CUSTODY RECORD

PROJECT NO: 645.51
PROJECT NAME: ALLIED - OU KRSG

LAB ID	CUSTODY TAPE NUMBER	DATE	TIME	COMP.	GRAB	SAMPLE TYPE: SOLID	SAMPLE TYPE: WIPE	SAMPLE TYPE: WATER	NO. OF CONTAINERS	PCB'S	TEMPERATURE				REMARKS
A66100		10/3/95	1010		X			X	2	X					
A66101		10/3/95	1030		X			X	2	X					
A66102		10/3/95	1245		X			X	2	X					
A66103		10/4/95	0800		X			X	2	X					
A66104		10/3/95	1500		X			X	2	X					
A66105		10/3/95	1710		X			X	2	X					
A66106		10/3/95	1720		X			X	2	X					
A66107		10/3/95	1845		X			X	2	X					
A66109		10/4/95	0945		X			X	2	X					
A66110		10/4/95	1140		X			X	2	X					
TEMP BLANK								X	1		X				

SAMPLED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
[signature]							

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
[signature]	10/4/95	1800					

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	REMARKS
			[signature]	10/5/95	0930	PLEASE SEND RESULTS TO LAURIE JOHNSTON @ BBL

Blasland, Bouck & Lee, Inc.
6723 Tow Path Road, Box 66, Syracuse, New York 13214
(315) 446-9120

FED-X AIRBILL # 1372320596
COOLER # B

000004

CHAIN OF CUSTODY RECORD

PROJECT NO: 645.51
PROJECT NAME: ALLIED-OU KRSG

LAB ID	CUSTODY TAPE NUMBER	DATE	TIME	COMP.	GRAB	SAMPLE TYPE: SOLID	SAMPLE TYPE: WIPE	SAMPLE TYPE: WATER	NO. OF CONTAINERS	PCBs	TEMPERATURE					REMARKS
A66108		10/4/95	0940		X			X	2	X						
A66108 MS		10/4/95	0940		X			X	2	X						
A66108 MSD		10/4/95	0940		X			X	2	X						
A66111		10/4/95	1150		X			X	2	X						
A66112		10/4/95	1410		X			X	2	X						
A66113		10/4/95	1420		X			X	2	X						
A66114		10/4/95	1600		X			X	2	X						
TEMP BLANK								X	1		X					

SAMPLED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
Ronald D. [illegible]					

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
Ronald D. [illegible]	10/4/95 1800				

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE/TIME	REMARKS
		[illegible]	10/5/95 0930	PLEASE SEND RESULTS TO LAURIE JOHNSTON @ BBL

Blasland, Bouck & Lee, Inc.
6723 Tow Path Road, Box 66, Syracuse, New York 13214
(315) 446-9120

FED-X AIRBILL # 6786168174
COOLER # 2A

000005

CHAIN OF CUSTODY RECORD

PROJECT NO: 645.51
PROJECT NAME: ALLIED - C.U KRS6

LAB ID	CUSTODY TAPE NUMBER	DATE	TIME	COMP.	GRAB	SAMPLE TYPE: SOLID	SAMPLE TYPE: WIPE	SAMPLE TYPE: WATER	NO. OF CONTAINERS	PCB's	TEMPERATURE				REMARKS
A66115		10/5/95	0915		X			X	2	X					
A66116		10/5/95	1115		X			X	2	X					
A66117		10/5/95	1345		X			X	2	X					
A66118		10/5/95	1400		X			X	2	X					
A66119		10/5/95	1545		X			X	2	X					
A66120		10/5/95	1530		X			X	2	X					
A66121		10/5/95	1730		X			X	2	X					
A66122		10/5/95	1740		X			X	2	X					
A66123		10/5/95	1900		X			X	2	X					
A66124		10/6/95	1050		X			X	2	X					
Temp Blank									1		X				

SAMPLED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]	10/6/95 1630				
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
		[signature]			
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE/TIME	REMARKS	
		Maureen [signature]	10/7/95 1100	PLEASE SEND RESULTS TO LAURIE JOHNSON @ BBL	

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): DONALD C. DAWICKE JR. Log-in Date: 10/5/95

Received By (Signature): [signature]

Case Number: PCB

Sample Delivery Group No: 54217

ETR Number: 54217

REMARKS:

1. Custody Seal(s) ~~Present~~/~~Absent~~* ~~Intact~~/~~Broken~~
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records ~~Present~~/~~Absent~~*
4. Sample Information Sheets ~~Present~~/~~Absent~~*
5. Airbill ~~Airbill/Sticker Present~~/~~Absent~~*
6. Airbill No.: 1372320596
7. Sample Tags ~~Present~~/~~Absent~~*
   Sample Tag Numbers ~~Listed~~/~~Not Listed~~ on Chain-of-Custody
8. Sample Condition: ~~Intact~~/~~Broken~~*/~~Leaking~~
9. Does information on custody records, sample information sheets, and sample tags agree? Yes/No*
10. Date Received at Lab: 10/5/95
11. Time Received: 0930
12. Cooler Temperature 5°C, 4°C

CLIENT SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66100	N/A	273121	SAMPLES RECEIVED
A66101	"	273122	INTACT IN
A66102	"	273123	COOLERS W/ICE.
A66103	"	273124	COOLERS WERE
A66104	"	273125	INTACT AS
A66105	"	273126	WERE CUSTODY
A66106	"	273127	SEALS ON OUTSIDE
A66107	"	273128	OF COOLERS.
A66108	"	273129	
A66109	"	273132	
A66110	"	273133	
A66111	"	273134	
A66112	"	273135	
A66113	"	273136	
A66114	"	273137	
MSB	"	273138	

Sample Transfer

Fraction: ALL

Area #: LVL 4 FRIDGE

By: DU

On: 10/5/95

DU 10/5/95

* Contact Project Director.

Reviewed by: _____ Logbook No: _____

Date: _____ Logbook Page No: _____

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Maureen R. Henry Log-in Date: 10/9/95

Received By (Signature): Maureen R. Henry

Case Number: PCB

Sample Delivery Group No: 54217

ETR Number: 54263

REMARKS:

1. Custody Seal(s) ~~Present/Absent*~~ ~~Intact/Broken~~
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records ~~Present/Absent*~~
4. Sample Information Sheets ~~Present/Absent*~~
5. Airbill ~~Airbill/Sticker~~ ~~Present/Absent*~~
6. Airbill No.: 6786168174
7. Sample Tags ~~Present/Absent*~~
   Sample Tag Numbers ~~Listed/Not Listed on Chain-of-Custody~~
8. Sample Condition: ~~Intact/Broken*/Leaking~~
9. Does information on custody records, sample information sheets, and sample tags agree? ~~Yes/No*~~
10. Date Received at Lab: 10.7.95
11. Time Received: 1100
12. Cooler Temperature 1°C, 3°C

CLIENT SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66115	N/A	273415	All recv'd
A66116	"	273416	intact in
A66117	"	273417	Coolers w/ice
			Coolers
			were intact
			as were
			Custody
			Seals on
			Coolers.
			Custody
			Seals
			present
			and intact
			on all
			Containers.

Sample Transfer

Fraction: All

Area #: Wd. Fridge

By: MRH

On: 10/7/95

* Contact Project Director.

Reviewed by: _____ Logbook No: _____

Date: _____ Logbook Page No: _____

METHOD:8080_PCB:EXW MATRIX: WATER 6.9/10 LEVEL: LOW BATCH ID: 9DJ

CLIENT(s): BLABOZ 54263, 54265

CASE: PCB

SDG: 54217, 54265

DATE: 10/12/95

ANALYST: VSC MTP MSK

SPIKED BY: SFBK

WITNESSED BY: VSC

Lab sample id ETR	Client id	Sample Volume (1000ml)	pH between 5 and 9 1.	100 ul 0.2 ppm TCX/DCB surr. Surr lot# 2.#	100 ul 6.0 ppm AR1242/1254 matrix Mix lot# 3.#	Extract 3x with 60 ml CH2Cl2 CH2Cl2 lot# 4.	Hex exchange Hexane lot# 5.	Conc to 2-3 ml 6.	Sulfuric Acid Clean-up H2SO4 Lot# 7.	Conc to 1.0ml 8.	3 gm silica gel clean-up Silica gel Lot# 9.	Conc to 1.0ml 10.#
261457	PBLK1U	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓
273415	A66115	957	✓	✓		✓	✓	✓				
273416	A66116	969	✓	✓		✓	✓	✓				
273417	A66117	956	✓	✓		✓	✓	✓				
273418	A66118	936	✓	✓		✓	✓	✓				
273419	A66119	942	✓	✓		✓	✓	✓				
273420	A66120	944	✓	✓		✓	✓	✓				
273421	A66121	945	✓	✓		✓	✓	✓				
273422	A66122	913	✓	✓		✓	✓	✓				
273424	A66124	975	✓	✓		✓	✓	✓				
273425	A66125	957	✓	✓		✓	✓	✓				
273423	A66123	1000	✓	✓		✓	✓	✓				
273426	A66126	973	✓	✓		✓	✓	✓				
273427	A66127	~~987~~ 992	✓	✓		✓	✓	✓				

JD 10/16/95

10/16/95

METH: 8080_PCB:EXW **MATRIX: WATER** **LEVEL: LOW** **ATCH ID: 9C2**

CLIENT: AMBLOT, BLLLLC2 ETR 54233, 54217
CASE: PCB
SDG: 54217
DATE: 10-10-95
ANALYST: [illegible]
SPIKED BY: [illegible]
WITNESSED BY: VSC

Lab sample id ETR	Client id	Sample Volume (1000ml)	1. pH between 5 and 9	2. 100 ul 0.2 ppm TCX/DCB surr. Surr lot# JEC911552	3. 100 ul 6.0 ppm AR1242/1254 matrix Mtx lot# GEC826 9551	4. Extract 3x with 60 ml CH2Cl2 CH2Cl2 lot# 72931 2	5. Hex exchange Hexane lot# 312289	6. Conc to 2-3 ml	7. Sulfuric Acid Clean-up H2SO4 Lot# H510728	8. Conc to 1.0ml	9. 3 gm silica gel clean-up Silica gel Lot# 951572	10. Conc to 1.0ml 100%
				✓								
261456	PBLK 9T	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓
273244	~~983~~ 95697 02	983 ~~95-697~~ 02	✓	✓		✓	✓	✓	✓	✓	✓	✓
273121	~~931~~ AGG 100	931	✓	✓		✓	✓	✓	✓	✓	✓	✓
273122	~~930~~ AGG 101	930	✓	✓		✓	✓	✓	✓	✓	✓	✓
273123	AG6102	960	✓	✓		✓	✓	✓	✓	✓	✓	✓
273124	AG6103	962	✓	✓		✓	✓	✓	✓	✓	✓	✓
273125	AG6104	940	✓	✓		✓	✓	✓	✓	✓	✓	✓
273126	AG6105	942	✓	✓		✓	✓	✓	✓	✓	✓	✓
273127	AG6106	955	✓	✓		✓	✓	✓	✓	✓	✓	✓
273128	AG6107	948	✓	✓		✓	✓	✓	✓	✓	✓	✓
273129	AG6108	930	✓	✓		✓	✓	✓	✓	✓	✓	✓
273129MS	AG6108MD	975	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
273129MD	AG6108MM	982	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
273132	AG6109	963	✓	✓		✓	✓	✓	✓	✓	✓	✓
273133	AG6110	966	✓	✓		✓	✓	✓	✓	✓		✓
273134	AG6111	940	✓	✓		✓	✓	✓	✓	✓	✓	✓
273135	AG6112	972	✓	✓		✓	✓	✓	✓	✓	✓	✓
273136	AG6113	923	✓	✓		✓	✓	✓	✓	✓	✓	✓
273137	AG6114	933	✓	✓		✓	✓	✓	✓	✓	✓	✓
273138	MSB	1000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

10-11-95

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

ETR Number: _____

Case No.: PCB

Project Number: 91082

SDG Number: 56217

Memo: Samples #27345-17 placed in fridge on 10/7/95 @ 1115h by MLG

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
27345 - 27	MSK	10-12-95 9:00AM	EXT	10 12 95 5:0

Laboratory Transfer Record

Sample Management	Inchcape Testing Services
ETR: 54217	Date: 10.11.95

Laboratory I. D.	Fraction / Analysis
PBK 9T	8080 PCB
273121 - 129, MS, MD	
273132 - 136	

Relinquished @ GMD : by MSE Time: 16:30

Transported by BED

Received @ CP by DKZ Time: 17:00

Laboratory Transfer Record

Sample Management	Inchcape Testing Services
ETR: 54217	Date: 10/5/95

Laboratory I. D.	Fraction / Analysis
273121-28, 32-37	2 1L AMBERS PEL
273129	6 1L AMBERS

Relinquished @ CP by DUD Time: 1700

Transported by BED

Received @ GMD by FMD Time: 1730

Laboratory Transfer Record

Sample Management	Inchcape Testing Services
ETR: 54263	Date: 10/16/95

Laboratory I. D.	Fraction / Analysis
273415-17	PCB water 8080-PCB

Relinquished @ Gus : by JD Time: 4:30pm

Transported by Ben

Received @ _____ by _____ Time: _____

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER
SUPERFUND SITE

SDG# 54265

PCB ANALYSES

ALLIED OPERABLE UNIT

Analyses performed by:

Aquatec, Inc.
Colchester, Vermont

Review performed by:

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG# 54265 for the Allied Operable Unit groundwater sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date
A66118	273418	groundwater	10/5/95
A66119	273419	groundwater	10/5/95
A66120	273420	groundwater	10/5/95
A66121	273421	groundwater	10/5/95
A66122	273422	groundwater	10/5/95
A66123	273423	water	10/5/95
A66124	273424	groundwater	10/5/95
A66125	273425	groundwater	10/5/95
A66126	273426	groundwater	10/5/95
A66127	273427	groundwater	10/5/95
PR2	273428	soil	10/6/95
SD2	273429	soil	10/6/95
A66128	273681	groundwater	10/9/95
A66129	273682	groundwater	10/9/95
A66130	273683	groundwater	10/9/95
A66131	273684	groundwater	10/9/95
A66132	273685	groundwater	10/9/95
A66133	273686	groundwater	10/9/95
A66134*	273687	groundwater	10/9/95
A66135	273688	groundwater	10/9/95

* MS/MSD analyses performed on sample

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The QAPP-specified holding times for PCB analyses on water samples are 5 days from date of sample receipt to extraction and 40 days from extraction to analysis. The technical holding times are 7 days from date of collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding time.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blanks or field blanks.

3. System Performance

The system performance and column resolution was acceptable for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method allows a maximum RSD of 20% or a correlation coefficient of 0.995. The correlation coefficients were within acceptable limits for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recoveries were also below acceptable control limits for one surrogate in samples A66122, A66125 and A66128. Since recoveries of the remaining surrogate were within control limits, no qualifiers were added to the samples due to the deviation. All other surrogate recoveries were within acceptable control limits.

6. Compound Identification

The retention times of identified compounds must fall within the calculated retention time windows for both the primary and secondary columns.

All quantitated peaks fell within the appropriate retention time window.

7. Compound Quantitation

The differences between the quantitated concentrations for the two analytical columns exceeded the 25% limit for the following samples:

Sample ID	Aroclor	%D	RPD
A66131	1242	53.8%	J
A66132	1242	45.4%	J

Aroclor 1242 data in samples A66131 and A66132 have been qualified as estimated (J) due to the deviation.

8. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix and matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method relative to the sample matrix. Matrix spike blank (MSB) data is used to assess the precision and accuracy of the analytical method independent of matrix interferences.

All water matrix spike and matrix spike duplicate recoveries were within acceptable limits. The relative percent difference between recoveries for Aroclor 1242 was, however, outside control limits. In addition, Aroclor 1242 recoveries were below acceptable control limits in both the soil and water matrix spike blank samples. All positive Aroclor 1242 data have been qualified as estimated (J) due to these deviations.

9. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID / Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
A66117 / A66118	ND	--	--	NA
A66129 / A66130	ND	--	--	NA

ND - No target compounds detected in sample.
NA - Compounds not detected in samples, RPD value not applicable.

The samples replicate through non-detection.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

DATA REVIEW CHECKLIST

PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
0 out of 4			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
1 out of 2			
Blanks			
Is a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	X		

A54265

	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Do any field/rinse blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?	X		
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks		X	
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of a standard?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?	X		

	YES	NO	NA
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?		X	
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			X
PCB Identification			
Is both a primary and secondary column Aroclor Identification Report present for every sample?	X		
Do the Aroclor identifications for both columns agree?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			X
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Where field duplicates submitted with the samples?	X		

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding Time*	Surrogates* - Column 1		Surrogates* - Column 2	
		TCX	DCB	TCX	DCB
A66118					
A66119					
A66120					
A66121					
A66122		↓ (55)		↓ (54)	
A66123					
A66124					
A66125		↓ (58)		↓ (59)	
A66126					
A66127					
PR2					
SD2					
A66128				↓ (59)	
A66129					
A66130					
A66131					
A66132					
A66133					
A66134					
A66134MS					
A66134MSD					
A66135					

Surrogate Standards
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogates diluted out
↑ Recovery high
↓ Recovery low

* Unless otherwise noted, all parameters are within specified limits.

A54265

PCB Calibration Summary

Instrument: 2759 1/2
Column: RTX-5 / RTX-35

Date:	10/12/95 to	10/17/95	10/17/95	10/18/95	10/18/95
Time:	10/13/95	22:31	22:50	03:05	03:24
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	Corr. Coef.	%D	%D	%D	%D
Aroclor 1016	ok / ok				
Aroclor 1221	ok / ok				
Aroclor 1232	ok / ok				
Aroclor 1242	ok / ok		0.0 / 10.0		
Aroclor 1248	ok / ok	10.0 / 15.0		5.0 / 5.0	
Aroclor 1254	ok / ok				5.0 / 5.0
Aroclor 1260	ok / ok				
Tetrachloro-m-xylene	ok / ok	0.0 / 0.0	0.0 / 5.0	5.0 / 5.0	10.0 / 5.0
Decachlorobiphenyl	ok / ok	10.0 / 10.0	10.0 / 10.0	5.0 / 0.0	5.0 / 5.0

Affected Samples:

A54265

PCB Calibration Summary - Page 2

Instrument: 2759 1/2
Column: RTX-5 / RTX-35

Date:		10/18/95	10/18/95	10/18/95	10/18/95
Time:		07:39	07:58	12:12	12:32
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	Corr. Coef.	%D	%D	%D	%D
Aroclor 1016					
Aroclor 1221					
Aroclor 1232					
Aroclor 1242					0.0 / 0.0
Aroclor 1248		5.0 / 5.0		10.0 / 20.0	
Aroclor 1254					
Aroclor 1260			5.0 / 5.0		
Tetrachloro-m-xylene		0.0 / 0.0	0.0 / 0.0	0.0 / 0.0	10.0 / 10.0
Decachlorobiphenyl		0.0 / 0.0	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0
Affected Samples:					

A54265

PCB Calibration Summary - Page 3

Instrument: 2759 1/2
Column: RTX-5 / RTX-35

Date:		10/24/95	10/24/95	10/24/95	10/24/95
Time:		03:17	03:36	06:32	06:52
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	Corr. Coef.	%D	%D	%D	%D
Aroclor 1016					
Aroclor 1221					
Aroclor 1232					
Aroclor 1242					10.0 / 5.0
Aroclor 1248		0.0 / 10.0		0.0 / 5.0	
Aroclor 1254					
Aroclor 1260			0.0 / 5.0		
Tetrachloro-m-xylene		15.0 / 10.0	20.0 / 15.0	10.0 / 5.0	15.0 / 10.0
Decachlorobiphenyl		5.0 / 5.0	5.0 / 0.0	0.0 / 0.0	0.0 / 0.0
Affected Samples:					

A54265

CORRECTED ANALYSIS SUMMARY FORMS

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66118

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273418

Sample wt/vol: 936.0 (g/mL) ML Lab File ID: 17OCT952130-I111

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/07/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/12/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.21	U
11104-28-2------	Aroclor-1221	0.21	U
11141-16-5------	Aroclor-1232	0.21	U
53469-21-9------	Aroclor-1242	0.21	U
12672-29-6------	Aroclor-1248	0.21	U
11097-69-1------	Aroclor-1254	0.21	U
11096-82-5------	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66119

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273419

Sample wt/vol: 942.0 (g/mL) ML Lab File ID: 17OCT952130-I121

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/07/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/12/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66120

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273420

Sample wt/vol: 944.0 (g/mL) ML Lab File ID: 17OCT952130-I131

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/07/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/12/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66121

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273421

Sample wt/vol: 945.0 (g/mL) ML Lab File ID: 17OCT952130-I141

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/07/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/12/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66122

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273422

Sample wt/vol: 913.0 (g/mL) ML Lab File ID: 17OCT952130-I151

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/07/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/12/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.22	U
11104-28-2	Aroclor-1221	0.22	U
11141-16-5	Aroclor-1232	0.22	U
53469-21-9	Aroclor-1242	0.22	U
12672-29-6	Aroclor-1248	0.22	U
11097-69-1	Aroclor-1254	0.22	U
11096-82-5	Aroclor-1260	0.22	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66123

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273423

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 17OCT952130-I211

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/07/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/12/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66124

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273424

Sample wt/vol: 975.0 (g/mL) ML Lab File ID: 17OCT952130-I221

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/07/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/12/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.20	U
11104-28-2------	Aroclor-1221	0.20	U
11141-16-5------	Aroclor-1232	0.20	U
53469-21-9------	Aroclor-1242	0.20 ~~0.034~~ ~~JP~~	U
12672-29-6------	Aroclor-1248	0.20	U
11097-69-1------	Aroclor-1254	0.20	U
11096-82-5------	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66125

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273425

Sample wt/vol: 957.0 (g/mL) ML Lab File ID: 17OCT952130-I231

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/07/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/12/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66126

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273426

Sample wt/vol: 973.0 (g/mL) ML Lab File ID: 17OCT952130-I241

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/07/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/12/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66127

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273427

Sample wt/vol: 992.0 (g/mL) ML Lab File ID: 17OCT952130-I251

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/07/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/12/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66128

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273681

Sample wt/vol: 989.0 (g/mL) ML Lab File ID: 17OCT952130-I291

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66129

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273682

Sample wt/vol: 945.0 (g/mL) ML Lab File ID: 17OCT952130-I341

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66130

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273683

Sample wt/vol: 954.0 (g/mL) ML Lab File ID: 17OCT952130-I351

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66131

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273684

Sample wt/vol: 959.0 (g/mL) ML Lab File ID: 23OCT952154-I071

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/24/95

Injection Volume: _____(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.3	~~P~~ J
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66132

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273685

Sample wt/vol: 967.0 (g/mL) ML Lab File ID: 17OCT952130-I371

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.22	~~P~~ J
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66133

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273686

Sample wt/vol: 925.0 (g/mL) ML Lab File ID: 17OCT952130-I381

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.22	U
11104-28-2	Aroclor-1221	0.22	U
11141-16-5	Aroclor-1232	0.22	U
53469-21-9	Aroclor-1242	0.22	U
12672-29-6	Aroclor-1248	0.22	U
11097-69-1	Aroclor-1254	0.22	U
11096-82-5	Aroclor-1260	0.22	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66134

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273687

Sample wt/vol: 954.0 (g/mL) ML Lab File ID: 17OCT952130-I391

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.21	U
11104-28-2------	Aroclor-1221	0.21	U
11141-16-5------	Aroclor-1232	0.21	U
53469-21-9------	Aroclor-1242	0.62	J
12672-29-6------	Aroclor-1248	0.21	U
11097-69-1------	Aroclor-1254	0.21	U
11096-82-5------	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66135

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 273688

Sample wt/vol: 981.0 (g/mL) ML Lab File ID: 17OCT952130-I421

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.20	U
11104-28-2------	Aroclor-1221	0.20	U
11141-16-5------	Aroclor-1232	0.20	U
53469-21-9------	Aroclor-1242	0.20	U
12672-29-6------	Aroclor-1248	0.20	U
11097-69-1------	Aroclor-1254	0.20	U
11096-82-5------	Aroclor-1260	0.20	U

Inchcape Testing Services
Aquatec Laboratories

55 South Park Drive
Colchester, VT 05446
Tel. 802-655-1203
Fax 802-655-1248

November 8, 1995

Ms. Laurie Johnston
Blasland & Bouck Engineers
6723 Towpath Road, Box 66
Syracuse, NY 13214

Re: Analytical Results-Kalamazoo Site
ITS-Aquatec NYS ELAP ID # 10391
Project No.: 91082; Case No. PCB; SDG No. 54265

Dear Ms. Johnston:

Enclosed are the analytical results for samples received intact by Inchcape Testing Services-Aquatec Laboratories on October 7 and 11, 1995. The analyses for these samples were performed in accordance with the methodologies specified in the Quality Assurance Project Plan. Laboratory numbers and quality control samples were assigned as follows:

Client Sample ID	Laboratory Number	Sample Matrix
Samples Received on October 7, 1995 ETR No. 54265		
A66118	273418	Water
A66119	273419	Water
A66120	273420	Water
A66121	273421	Water
A66122	273422	Water
A66123	273423	Water
A66124	273424	Water
A66125	273425	Water
A66126	273426	Water
A66127	273427	Water
PR2	273428	Solid
SD2	273429	Solid
Samples Received on October 11, 1995 ETR No. 54321		
A66128	273681	Water
A66129	273682	Water
A66130	273683	Water
A66131	273684	Water
A66132	273685	Water
A66133	273686	Water
A66134	273687	Water
A66134MS	273687MS	Water
A66134MSD	273687MD	Water
A66135	273688	Water
MSB	273721	Liquid

Low surrogate recoveries for tetrachloro-m-xylene and/or decachlorobiphenyl were observed for many pesticide/PCB samples in this delivery group. Please note that the surrogate recovery limits are advisory.

The matrix spike blank sample exhibited recovery for *Aroclor* 1242 slightly below the quality control limits. No reanalysis was performed.

Samples in this delivery group were reported as the best match to combinations of the seven Aroclor standards. In general, the standard Aroclors are sufficiently unique to provide precise identifications and quantiations of complex mixtures with minimal weathering. For highly altered samples, certain subtle identification distinction, such as the difference between Aroclor 1016 and Aroclor 1242 become less precise. In all cases, quantitation remains highly reliable.

For the benefit of interested parties, documentation of sample handling and preparation is included at the end of the "Sample Data Package". A colored sheet of paper entitled "Sample Preparation Package" has been used to explicitly mark the location of these documents.

If there are any questions regarding this submittal, please contact Pauline Malik at (802) 655-1203.

Sincerely,

Joseph J. Quinn for

Karen R. Chirgwin
Laboratory Operations Director

Enclosure

KRC/jg

91082B10OCT95

FORM 2
WATER OTHER SURROGATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

GC Column(1): RTX-5 ID: 0.32 (mm) GC Column(2): RTX-35 ID: 0.32 (mm)

	CLIENT SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK1U	60	58*	64	67			1
02	A66118	69	69	74	76			0
03	A66119	63	63	68	69			0
04	A66120	62	60	72	72			0
05	A66121	66	67	79	81			0
06	A66122	55*	54*	63	64			2
07	PBLK2U	48*	47*	71	72			2
08	A66123	64	63	67	68			0
09	A66124	62	61	68	69			0
10	A66125	58*	59*	66	66			2
11	A66126	63	62	69	70			0
12	A66127	63	62	73	73			0
13	A66128	60	59*	66	67			1
14	A66129	78	75	91	92			0
15	A66130	63	62	78	80			0
16	A66132	67	65	86	87			0
17	A66133	62	62	80	81			0
18	A66134	68	67	86	86			0
19	A66135	61	60	74	74			0
20	2U-MBS	52*	50*	73	74			2
21	A66131	149D	131	67	58D			0
22	A66134MS	92	88	80	77			0
23	A66134MSD	91	84	69	64			0
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (60-140)
S2 (DCB) = Decachlorobiphenyl (60-140)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 2
SOIL OTHER SURROGATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

GC Column(1): RTX-5 ID: 0.32 (mm) GC Column(2): RTX-35 ID: 0.32 (mm)

	CLIENT SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKKN	75	75	83	84			0
02	KN-MBS	70	68	72	74			0
03	PR2	0D	0D	0D	0D			0
04	SD2	0D	0D	0D	0D			0
05								
06								
07								
08								
09								
10								
11								
12								
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17								
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27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (60-140)
S2 (DCB) = Decachlorobiphenyl (60-140)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
WATER OTHER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix Spike - Sample No.: A66134

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Aroclor-1242	0.65	0.62	1.1	74	60-140
Aroclor-1254	0.65	0.00	0.62	95	60-140

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1242	0.61	1.3	111	40*	30	60-140
Aroclor-1254	0.61	0.66	108	13	30	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS: _____

FORM 3
WATER OTHER BLANK SPIKE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix Spike - Sample No.: 2U-MBS

COMPOUND	SPIKE ADDED (ug/L)	BLANK CONCENTRATION (ug/L)	BS CONCENTRATION (ug/L)	BS % REC #	QC. LIMITS REC.
Aroclor-1242	0.60		0.32	53*	60-140
Aroclor-1254	0.60		0.45	75	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 1 out of 2 outside limits

COMMENTS: _____

FORM 3
SOIL OTHER BLANK SPIKE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix Spike - Sample No.: KN-MBS

COMPOUND	SPIKE ADDED (ug/Kg)	BLANK CONCENTRATION (ug/Kg)	BS CONCENTRATION (ug/Kg)	BS % REC #	QC. LIMITS REC.
Aroclor-1242	170		140	82	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 1 outside limits

COMMENTS:

Revised WBR 11/22/95

FORM III OTHER

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLKKN

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Lab Sample ID: 214952 Lab File ID: 17OCT952130-I061

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) SONC

Sulfur Cleanup (Y/N) N Date Extracted: 10/12/95

Date Analyzed (1): 10/17/95 Date Analyzed (2): 10/17/95

Time Analyzed (1): 2310 Time Analyzed (2): 2310

Instrument ID (1): 2759_1 Instrument ID (2): 2759_2

GC Column (1): RTX-5 ID: 0.32(mm) GC Column (2): RTX-35 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	KN-MBS	266272	10/18/95	10/18/95
02	PR2	273428	10/24/95	10/24/95
03	SD2	273429	10/24/95	10/24/95
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
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16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLK1U

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Lab Sample ID: 261457 Lab File ID: 17OCT952130-I071

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 10/12/95

Date Analyzed (1): 10/17/95 Date Analyzed (2): 10/17/95

Time Analyzed (1): 2329 Time Analyzed (2): 2329

Instrument ID (1): 2759_1 Instrument ID (2): 2759_2

GC Column (1): RTX-5 ID: 0.32(mm) GC Column (2): RTX-35 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66118	273418	10/18/95	10/18/95
02	A66119	273419	10/18/95	10/18/95
03	A66120	273420	10/18/95	10/18/95
04	A66121	273421	10/18/95	10/18/95
05	A66122	273422	10/18/95	10/18/95
06	A66123	273423	10/18/95	10/18/95
07	A66124	273424	10/18/95	10/18/95
08	A66125	273425	10/18/95	10/18/95
09	A66126	273426	10/18/95	10/18/95
10	A66127	273427	10/18/95	10/18/95
11				
12				
13				
14				
15				
16				
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21				
22				
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24				
25				
26				

COMMENTS:

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLK2U

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Lab Sample ID: 261458 Lab File ID: 17OCT952130-I201

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 10/16/95

Date Analyzed (1): 10/18/95 Date Analyzed (2): 10/18/95

Time Analyzed (1): 0344 Time Analyzed (2): 0344

Instrument ID (1): 2759_1 Instrument ID (2): 2759_2

GC Column (1): RTX-5 ID: 0.32(mm) GC Column (2): RTX-35 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66128	273681	10/18/95	10/18/95
02	A66129	273682	10/18/95	10/18/95
03	A66130	273683	10/18/95	10/18/95
04	A66132	273685	10/18/95	10/18/95
05	A66133	273686	10/18/95	10/18/95
06	A66134	273687	10/18/95	10/18/95
07	A66135	273688	10/18/95	10/18/95
08	2U-MBS	273721	10/18/95	10/18/95
09	A66131	273684	10/24/95	10/24/95
10	A66134MS	273687MS	10/24/95	10/24/95
11	A66134MSD	273687MD	10/24/95	10/24/95
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLK1U

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) WATER Lab Sample ID: 261457

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 17OCT952130-I071

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/12/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/17/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLKKN

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Matrix: (soil/water) SOIL Lab Sample ID: 214952

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 17OCT952130-I061

% Moisture: 0 decanted: (Y/N) N Date Received: _____

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/12/95

Concentrated Extract Volume: 10(mL) Date Analyzed: 10/17/95

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 9.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	17	U
11104-28-2	Aroclor-1221	17	U
11141-16-5	Aroclor-1232	17	U
53469-21-9	Aroclor-1242	17	U
12672-29-6	Aroclor-1248	17	U
11097-69-1	Aroclor-1254	17	U
11096-82-5	Aroclor-1260	17	U

Revised WAR 11/22/95

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016	13.420				
(2)	30.760				
(3)	18.780				
(4)	47.060				
(5)	22.720				
Aroclor-1221	49.620				
(2)	40.140				
(3)	141.940				
(4)	36.400				
(5)	22.780				
Aroclor-1232	45.280				
(2)	48.080				
(3)	28.260				
(4)	68.660				
(5)	34.020				
Aroclor-1242	24.440	22.750	22.595	20.210	19.265
(2)	15.160	14.150	14.780	13.640	13.175
(3)	36.400	34.450	36.575	34.785	35.164
(4)	22.760	16.820	17.645	16.518	16.206
(5)	13.900	13.280	14.170	13.572	13.764
Aroclor-1248	19.880	19.870	19.320	18.462	17.822
(2)	21.840	21.090	20.985	20.595	20.552
(3)	14.600	13.950	14.110	14.162	14.556
(4)	30.260	27.870	28.260	27.662	27.938
(5)	20.560	19.530	20.190	20.622	21.795
Aroclor-1254	44.440	41.050	39.500	38.398	37.522
(2)	15.540	14.660	14.195	13.935	13.784
(3)	12.060	11.280	11.285	11.058	11.162
(4)	22.940	21.710	21.765	22.025	22.834
(5)	45.520	42.660	43.330	43.738	44.484
Aroclor-1260	35.020	32.950	30.910	29.990	30.085
(2)	67.340	64.120	61.060	61.932	64.984
(3)	31.980	30.160	28.725	29.395	31.526
(4)	19.500	17.890	16.830	16.570	17.069
(5)	19.020	15.960	14.855	14.658	15.275
Tetrachloro-m-xylene	431.200	438.700	460.900	521.900	584.325

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	779.400	725.300	759.500	701.475	672.400

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR	0.00000000	13.4200000	1.000
(2)	LINR	0.00000000	30.7600000	1.000
(3)	LINR	0.00000000	18.7800000	1.000
(4)	LINR	0.00000000	47.0600000	1.000
(5)	LINR	0.00000000	22.7200000	1.000
Aroclor-1221	LINR	0.00000000	49.6200000	1.000
(2)	LINR	0.00000000	40.1400000	1.000
(3)	LINR	0.00000000	141.940000	1.000
(4)	LINR	0.00000000	36.4000000	1.000
(5)	LINR	0.00000000	22.7800000	1.000
Aroclor-1232	LINR	0.00000000	45.2800000	1.000
(2)	LINR	0.00000000	48.0800000	1.000
(3)	LINR	0.00000000	28.2600000	1.000
(4)	LINR	0.00000000	68.6600000	1.000
(5)	LINR	0.00000000	34.0200000	1.000
Aroclor-1242	LINR	-25.191944	18.8023612	0.999
(2)	LINR	-14.742329	13.0103150	0.999
(3)	LINR	-1.7098046	35.0486248	1.000
(4)	LINR	-16.154389	15.8949264	1.000
(5)	LINR	0.14847667	13.7465840	1.000
Aroclor-1248	LINR	-13.456161	17.6147518	1.000
(2)	LINR	-3.6308567	20.4558954	1.000
(3)	LINR	4.70157462	14.5804879	1.000
(4)	LINR	-1.8052916	27.8167184	1.000
(5)	LINR	12.2069460	21.9642464	0.999
Aroclor-1254	LINR	-11.740348	37.0509950	1.000
(2)	LINR	-7.3913640	13.6632577	1.000
(3)	LINR	-2.2299397	11.1078393	1.000
(4)	LINR	6.36123405	22.8877231	1.000
(5)	LINR	3.43634476	44.5519218	1.000
Aroclor-1260	LINR	-8.5151763	29.6952883	1.000
(2)	LINR	5.88230539	64.9426204	0.999
(3)	LINR	10.3624557	31.5975090	0.998
(4)	LINR	-2.3633674	16.9117142	1.000
(5)	LINR	-2.8696572	15.0867938	0.999
Tetrachloro-m-xylene	LINR	3.24722137	600.898390	0.997

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-1.5904100	663.943780	0.999

000215

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 02-Nov-1995 14:47 amg

RTX-5

Calibration File Names:
Level 1: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i341.d
Level 2: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i351.d
Level 3: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i361.d
Level 4: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i371.d
Level 5: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i381.d

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2	
2 Aroclor-1016 (1)	671	*****	*****	*****	*****	LINR	0.000e+00	13.42000		1.00000	
(2)	1538	*****	*****	*****	*****	LINR	0.000e+00	30.76000		1.00000	<-
(3)	939	*****	*****	*****	*****	LINR	0.000e+00	18.78000		1.00000	<-
(4)	2353	*****	*****	*****	*****	LINR	0.000e+00	47.06000		1.00000	<-
(5)	1136	*****	*****	*****	*****	LINR	0.000e+00	22.72000		1.00000	<-
3 Aroclor-1221 (1)	2481	*****	*****	*****	*****	LINR	0.000e+00	49.62000		1.00000	
(2)	2007	*****	*****	*****	*****	LINR	0.000e+00	40.14000		1.00000	
(3)	7097	*****	*****	*****	*****	LINR	0.000e+00	142		1.00000	
(4)	1820	*****	*****	*****	*****	LINR	0.000e+00	36.40000		1.00000	
(5)	1139	*****	*****	*****	*****	LINR	0.000e+00	22.78000		1.00000	

000216

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 02-Nov-1995 14:47 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
4 Aroclor-1232 (1)	2264	+++++	+++++	+++++	+++++	LINR	0.000e+00	45.28000		1.00000
(2)	2404	+++++	+++++	+++++	+++++	LINR	0.000e+00	48.08000		1.00000
(3)	1413	+++++	+++++	+++++	+++++	LINR	0.000e+00	28.26000		1.00000
(4)	3433	+++++	+++++	+++++	+++++	LINR	0.000e+00	68.66000		1.00000
(5)	1701	+++++	+++++	+++++	+++++	LINR	0.000e+00	34.02000		1.00000
5 Aroclor-1242 (1)	1222	2275	4519	8084	15412	LINR	-25.19194	18.80236		0.99891
(2)	758	1415	2956	5456	10540	LINR	-14.74233	13.01032		0.99926
(3)	1820	3445	7315	13914	28131	LINR	-1.70980	35.04862		0.99977
(4)	1138	1682	3529	6607	12965	LINR	-16.15439	15.89493		0.99954
(5)	695	1328	2834	5429	11011	LINR	0.14848	13.74658		0.99979
6 Aroclor-1248 (1)	994	1987	3864	7385	14258	LINR	-13.45616	17.61475		0.99964
(2)	1092	2109	4197	8238	16442	LINR	-3.63086	20.45590		0.99999
(3)	730	1395	2822	5665	11645	LINR	4.70157	14.58049		0.99978
(4)	1513	2787	5652	11065	22350	LINR	-1.80529	27.81672		0.99992
(5)	1028	1953	4038	8249	17436	LINR	12.20695	21.96425		0.99924
7 Aroclor-1254 (1)	2222	4105	7900	15359	30018	LINR	-11.74035	37.05099		0.99996
(2)	777	1466	2839	5574	11027	LINR	-7.39136	13.66326		1.00000
(3)	603	1128	2257	4423	8930	LINR	-2.22994	11.10784		0.99993
(4)	1147	2171	4353	8810	18267	LINR	6.36123	22.88772		0.99959
(5)	2276	4266	8666	17495	35587	LINR	3.43634	44.55192		0.99988

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 02-Nov-1995 14:47 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
8 Aroclor-1260(1)	1751	3295	6182	11996	24068	LINR	-8.51518	29.69529		0.99992
(2)	3367	6412	12212	24773	51987	LINR	5.88231	64.94262		0.99914
(3)	1599	3016	5745	11758	25221	LINR	10.36246	31.59751		0.99840
(4)	975	1789	3366	6628	13655	LINR	-2.36337	16.91171		0.99950
(5)	951	1596	2971	5863	12220	LINR	-2.86966	15.08679		0.99892
$ 1 Tetrachloro-m-xylene	2156	4387	9218	20876	46746	LINR	3.24722	601		0.99710
$ 9 Decachlorobiphenyl	3897	7253	15190	28059	53792	LINR	-1.59041	664		0.99909

Curve	Formula	Units
Linear	y = a0 + (1/a1) * x	Response

000247

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016	21.300				
(2)	36.640				
(3)	9.220				
(4)	14.000				
(5)	20.600				
Aroclor-1221	42.600				
(2)	125.400				
(3)	89.420				
(4)	288.220				
(5)	76.280				
Aroclor-1232	195.140				
(2)	214.400				
(3)	55.880				
(4)	117.240				
(5)	147.900				
Aroclor-1242	29.040	26.880	26.565	23.965	22.768
(2)	35.000	33.030	33.950	32.338	33.179
(3)	15.960	15.120	16.055	15.075	15.361
(4)	12.100	11.550	12.435	11.855	12.202
(5)	11.280	10.740	11.230	10.660	11.246
Aroclor-1248	8.660	7.970	8.150	7.945	7.822
(2)	19.280	18.880	17.335	18.672	16.566
(3)	14.660	14.600	14.920	14.635	14.641
(4)	7.820	7.330	7.925	7.700	7.529
(5)	5.560	5.260	5.605	5.478	5.476
Aroclor-1254	25.880	20.660	18.075	17.288	16.359
(2)	31.220	29.740	28.265	27.392	26.725
(3)	39.380	37.500	36.115	34.972	34.080
(4)	46.800	44.850	44.930	45.122	45.655
(5)	26.340	24.720	24.015	23.528	23.306
Aroclor-1260	42.760	39.710	38.145	38.648	39.964
(2)	40.860	35.660	34.120	33.830	34.780
(3)	66.240	66.520	64.125	64.635	68.179
(4)	38.020	35.280	34.145	35.105	36.795
(5)	16.160	15.300	14.515	14.458	15.084
Tetrachloro-m-xylene	470.200	476.200	506.200	557.400	626.250

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	711.800	667.100	708.900	646.300	614.325

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR	0.00000000	21.3000000	1.000
(2)	LINR	0.00000000	36.6400000	1.000
(3)	LINR	0.00000000	9.22000000	1.000
(4)	LINR	0.00000000	14.0000000	1.000
(5)	LINR	0.00000000	20.6000000	1.000
Aroclor-1221	LINR	0.00000000	42.6000000	1.000
(2)	LINR	0.00000000	125.400000	1.000
(3)	LINR	0.00000000	89.4200000	1.000
(4)	LINR	0.00000000	288.220000	1.000
(5)	LINR	0.00000000	76.2800000	1.000
Aroclor-1232	LINR	0.00000000	195.140000	1.000
(2)	LINR	0.00000000	214.400000	1.000
(3)	LINR	0.00000000	55.8800000	1.000
(4)	LINR	0.00000000	117.240000	1.000
(5)	LINR	0.00000000	147.900000	1.000
Aroclor-1242	LINR	-25.160063	22.2299756	0.999
(2)	LINR	-0.9690325	33.0071452	1.000
(3)	LINR	-1.8223764	15.2907564	1.000
(4)	LINR	2.60766147	12.2000438	1.000
(5)	LINR	4.59353999	11.2276603	0.999
Aroclor-1248	LINR	-6.1697353	7.77810057	1.000
(2)	LINR	-16.393893	16.5695502	0.996
(3)	LINR	-1.0014016	14.6263006	1.000
(4)	LINR	-3.9146057	7.52561352	1.000
(5)	LINR	-0.1891299	5.47859301	1.000
Aroclor-1254	LINR	-32.045444	15.7739274	1.000
(2)	LINR	-12.487460	26.3731185	1.000
(3)	LINR	-11.908810	33.6710263	1.000
(4)	LINR	1.66707080	45.6545463	1.000
(5)	LINR	-7.2993084	23.0999558	1.000
Aroclor-1260	LINR	3.24842229	39.8811315	0.999
(2)	LINR	-1.9805697	34.4822756	0.999
(3)	LINR	7.82046340	68.2944988	0.999
(4)	LINR	7.59749892	36.8621290	0.999
(5)	LINR	2.48372470	15.0177417	0.999
Tetrachloro-m-xylene	LINR	3.09652913	642.450542	0.997

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-1.7911103	606.298470	0.998

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 02-Nov-1995 15:24 amg

RTX-35

Calibration File Names:
Level 1: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i341.d
Level 2: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i351.d
Level 3: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i361.d
Level 4: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i371.d
Level 5: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i381.d

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2	
2 Aroclor-1016(1)	1065	+++++	+++++	+++++	+++++	LINR	0.000e+00	21.30000		1.00000	
(2)	1832	+++++	+++++	+++++	+++++	LINR	0.000e+00	36.64000		1.00000	<-
(3)	461	+++++	+++++	+++++	+++++	LINR	0.000e+00	9.22000		1.00000	<-
(4)	700	+++++	+++++	+++++	+++++	LINR	0.000e+00	14.00000		1.00000	<-
(5)	1030	+++++	+++++	+++++	+++++	LINR	0.000e+00	20.60000		1.00000	<-
3 Aroclor-1221(1)	2130	+++++	+++++	+++++	+++++	LINR	0.000e+00	42.60000		1.00000	
(2)	6270	+++++	+++++	+++++	+++++	LINR	0.000e+00	125		1.00000	
(3)	4471	+++++	+++++	+++++	+++++	LINR	0.000e+00	89.42000		1.00000	
(4)	14411	+++++	+++++	+++++	+++++	LINR	0.000e+00	288		1.00000	
(5)	3814	+++++	+++++	+++++	+++++	LINR	0.000e+00	76.28000		1.00000	

000222

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 02-Nov-1995 15:24 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
4 Aroclor-1232 (1)	9757	+++++	+++++	+++++	+++++	LINR	0.000e+00	195		1.00000
(2)	10720	+++++	+++++	+++++	+++++	LINR	0.000e+00	214		1.00000
(3)	2794	+++++	+++++	+++++	+++++	LINR	0.000e+00	55.88000		1.00000
(4)	5862	+++++	+++++	+++++	+++++	LINR	0.000e+00	117		1.00000
(5)	7395	+++++	+++++	+++++	+++++	LINR	0.000e+00	148		1.00000
5 Aroclor-1242 (1)	1452	2688	5313	9586	18214	LINR	-25.16006	22.22998		0.99899
(2)	1750	3303	6790	12935	26543	LINR	-0.96903	33.00715		0.99968
(3)	798	1512	3211	6030	12289	LINR	-1.82238	15.29076		0.99964
(4)	605	1155	2487	4742	9762	LINR	2.60766	12.20004		0.99963
(5)	564	1074	2246	4264	8997	LINR	4.59354	11.22766		0.99913
6 Aroclor-1248 (1)	433	797	1630	3178	6250	LINR	-6.16974	7.77810		0.99991
(2)	964	1888	3467	7469	13253	LINR	-16.39389	16.56955		0.99575
(3)	733	1460	2984	5854	11713	LINR	-1.00140	14.62630		0.99997
(4)	391	733	1585	3080	6023	LINR	-3.91461	7.52561		0.99964
(5)	278	526	1121	2191	4381	LINR	-0.18913	5.47859		0.99990
7 Aroclor-1254 (1)	1294	2066	3615	6915	13087	LINR	-32.04544	15.77393		0.99985
(2)	1561	2974	5653	10957	21380	LINR	-12.48746	26.37312		0.99993
(3)	1969	3750	7223	13989	27264	LINR	-11.90881	33.67103		0.99990
(4)	2340	4485	8986	18049	36524	LINR	1.66707	45.65455		0.99994
(5)	1317	2472	4803	9411	18645	LINR	-7.29931	23.09996		1.00000

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Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 02-Nov-1995 15:24 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
8 Aroclor-1260(1)	2138	3971	7629	15459	31971	LINR	3.24842	39.88113		0.99948
(2)	2043	3566	6824	13532	27824	LINR	-1.98057	34.48228		0.99950
(3)	3312	6652	12825	25854	54543	LINR	7.82046	68.29450		0.99916
(4)	1901	3528	6829	14042	29436	LINR	7.59750	36.86213		0.99915
(5)	808	1530	2903	5783	12067	LINR	2.48372	15.01774		0.99928
$ 1 Tetrachloro-m-xylene	2351	4762	10124	22296	50100	LINR	3.09653	642		0.99714
$ 9 Decachlorobiphenyl	3559	6671	14178	25852	49146	LINR	-1.79111	606		0.99859

Curve	Formula	Units
Linear	y = a0 + (1/a1) * x	Response

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date: 10/17/95 Time: 2231

Lab File ID: 17OCT952130-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	180.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	18.000	20.000	LINR	10.000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date: 10/17/95 Time: 2250

Lab File ID: 17OCT952130-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	18.000	20.000	LINR	10.000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 0305

Lab File ID: 17OCT952130-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 0324

Lab File ID: 17OCT952130-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	18.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 0739

Lab File ID: 17OCT952130-I3 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 0758

Lab File ID: 17OCT952130-I3 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 1212

Lab File ID: 17OCT952130-I4 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	220.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 1232

Lab File ID: 17OCT952130-I4 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	18.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date: 10/24/95 Time: 0317

Lab File ID: 23OCT952154-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	23.000	20.000	LINR	15.000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date: 10/24/95 Time: 0336

Lab File ID: 23OCT952154-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	24.000	20.000	LINR	20.000	15.0
Decachlorobiphenyl	21.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date: 10/24/95 Time: 0632

Lab File ID: 23OCT952154-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	22.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_1 Calibration Date: 10/24/95 Time: 0652

Lab File ID: 23OCT952154-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	220.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	23.000	20.000	LINR	15.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date: 10/17/95 Time: 2231

Lab File ID: 17OCT952130-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	170.00	200.00	LINR	15.000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	18.000	20.000	LINR	10.000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date: 10/17/95 Time: 2250

Lab File ID: 17OCT952130-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	180.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	18.000	20.000	LINR	10.000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 0305

Lab File ID: 17OCT952130-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 0324

Lab File ID: 17OCT952130-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 0739

Lab File ID: 17OCT952130-I3 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 0758

Lab File ID: 17OCT952130-I3 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 1212

Lab File ID: 17OCT952130-I4 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	160.00	200.00	LINR	20.000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

000243

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 1232

Lab File ID: 17OCT952130-I4 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	18.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date: 10/24/95 Time: 0317

Lab File ID: 23OCT952154-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	180.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	22.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date: 10/24/95 Time: 0336

Lab File ID: 23OCT952154-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	23.000	20.000	LINR	15.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date: 10/24/95 Time: 0632

Lab File ID: 23OCT952154-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	21.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

000247

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54265

Instrument ID: 2759_2 Calibration Date: 10/24/95 Time: 0652

Lab File ID: 23OCT952154-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	210.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	22.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

Blasland, Bouck & Lee, Inc.
6723 Tow Path Road, Box 66, Syracuse, New York 13214
(315) 446-9120

FED-X AIRBILL # 6786168174
COOLER # 2B

000003

CHAIN OF CUSTODY RECORD

PROJECT NO: 645.51
PROJECT NAME: Allied O.U. KRS6

LAB ID	CUSTODY TAPE NUMBER	DATE	TIME	COMP.	GRAB	SAMPLE TYPE: SOLID	SAMPLE TYPE: WIPE	SAMPLE TYPE: WATER	NO. OF CONTAINERS	PCB'S	TEMPERATURE				REMARKS
A66125		10/6/95	1020		X			X	2	X					
A66126		10/6/95	1520		X			X	2	X					
A66127		10/6/95	1450		X			X	2	X					
TEMP Blank									1		X				

SAMPLED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]	10/6/95 1630				

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE/TIME	REMARKS
		[signature]	10/7/95 1100	PLEASE SEND RESULTS TO LAURIE JOHNSTON @ BBL

COPY - ORIGINAL ON FILE
SDG # 54247 ETR # 54263

FED-X AIRBILL # 6786168174
COOLER # 2A

Blasland, Bouck & Lee, Inc.
6723 Tow Path Road, Box 66, Syracuse, New York 13214
(315) 446-9120

CHAIN OF CUSTODY RECORD

PROJECT NO.: 645.51
PROJECT NAME: ALLIED - O.U. KRSG

LAB ID	CUSTODY TAPE NUMBER	DATE	TIME	COMP.	GRAB	SAMPLE TYPE: SOLID	SAMPLE TYPE: WIPE	SAMPLE TYPE: WATER	NO. OF CONTAINERS	PCB's	TEMPERATURE					REMARKS
A66115		10/5/95	0915		X			X	2	X						
A66116		10/5/95	1115		X			X	2	X						
A66117		10/5/95	1345		X			X	2	X						
A66118		10/5/95	1400		X			X	2	X						
A66119		10/5/95	1545		X			X	2	X						
A66120		10/5/95	1530		X			X	2	X						
A66121		10/5/95	1730		X			X	2	X						
A66122		10/5/95	1740		X			X	2	X						
A66123		10/5/95	1900		X			X	2	X						
A66124		10/6/95	1030		X			X	2	X						
TEMP BLANK									1		X					

SAMPLED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]	10/6/95 1630				

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE/TIME	REMARKS
		Maureen [signature]	10/7/95 1100	PLEASE SEND RESULTS TO LAURIE JOHNSON @ BBL

FED-X AIRBILL # 1372320600
COOLER # 3A

Blasland, Bouck & Lee, Inc.
6723 Tow Path Road, Box 66, Syracuse, New York 13214
(315) 446-9120

CHAIN OF CUSTODY RECORD

PROJECT NO: 645.51
PROJECT NAME: ALLIED - O.U. KRSG

LAB ID	CUSTODY TAPE NUMBER	DATE	TIME	COMP.	GRAB	SAMPLE TYPE: SOLID	SAMPLE TYPE: WIPE	SAMPLE TYPE: WATER	NO. OF CONTAINERS	PCB'S	TEMPERATURE				REMARKS
A66128		10/9/95	1000		X			X	2	X					
A66129		10/9/95	0930		X			X	2	X					
A66130		10/9/95	0945		X			X	2	X					
A66131		10/9/95	1215		X			X	2	X					
A66133		10/9/95	1410		X			X	2	X					
A66134		10/9/95	1400		X			X	2	X					
A66134/MS		10/9/95	1400		X			X	2	X					
A66134/MSD		10/9/95	1400		X			X	2	X					
A66135		10/9/95	1615		X			X	2	X					
A66137		10/9/95	1800		X			X	2	X					
TEMP BLANK									1		X				

SAMPLED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE) Maureen	DATE/TIME 10/11/95 1030	REMARKS: PLEASE SEND RESULTS TO LAURIE JOHNSON @ BBL	

FED-X AIRBILL # 1372320600
COOLER # 3B

000007

Blasland, Bouck & Lee, Inc.
6723 Tow Path Road, Box 66, Syracuse, New York 13214
(315) 446-9120

CHAIN OF CUSTODY RECORD

PROJECT NO: 645.51
PROJECT NAME: ALLIED - O.U. KRS6

LAB ID	CUSTODY TAPE NUMBER	DATE	TIME	COMP.	GRAB	SAMPLE TYPE: SOLID	SAMPLE TYPE: WIPE	SAMPLE TYPE: WATER	NO. OF CONTAINERS	PCB'S	TEMPERATURE				REMARKS
A66132		10/9/95	1830		X			X	2	X					
A66136		10/10/95	0815		X			X	2	X					
A66138		10/9/95	1930		X			X	2	X					
A66139		10/10/95	0930		X			X	2	X					
A66140		10/10/95	0935		X			X	2	X					
A66141		10/10/95	1200		X			X	2	X					
A66142		10/10/95	1130		X			X	2	X					
A66143		10/10/95	1500		X			X	2	X					
A66144		10/10/95	1515		X			X	2	X					
TEMP BLANK									1		X				

SAMPLED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]					

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]	10/10/95 1800				

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE/TIME	REMARKS
		[signature]	10/11/95 1030	PLEASE SEND RESULTS TO LARRY JOHNSTON @ BBL

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Maureen R. Lenny Log-in Date: 10/9/95

Received By (Signature): Maureen R. Lenny

Case Number: PDB

Sample Delivery Group No: 54

ETR Number:

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records — Present/Absent*
4. Sample Information Sheets — Present/Absent*
5. Airbill — Airbill/Sticker Present/Absent*
6. Airbill No.: 6786168174
7. Sample Tags — Present/Absent*
   Sample Tag Numbers — Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking
9. Does information on custody records, sample information sheets, and sample tags agree? Yes/No* See *
10. Date Received at Lab: 10.7.95
11. Time Received: 1100
12. Cooler Temperature 1°C, 3°C

CLIENT SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66118	N/A	273418	All recvd
A66119	"	273419	intact in
A66120	"	273420	Coolers w/ice.
A66121	"	273421	Coolers were
A66122	"	273422	intact as
A66123	"	273423	were custody
A66124	"	273424	Seals on
A66125	"	273425	Coolers.
A66126	"	273426	Custody
A66127	"	273427	Seals
PR2	"	273428	present
SD2	"	273429	and intact
			on all
			Sample
			containers.

*A66125: Time on c-of-c 1020, time on bottles 1025.

Sample Transfer

Fraction: All

Area #: Lvl. Fridge

By: MRL

On: 10/7/95

* Contact Project Director.

Reviewed by: Logbook No:

Date: Logbook Page No:

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Maureen R. Lenzy Log-in Date: 10/11/95

Received By (Signature): Maureen R. Lenzy

Case Number: PCB

Sample Delivery Group No: 54265

ETR Number: 54321

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records — Present/Absent*
4. Sample Information Sheets — ~~Present/Absent*~~
5. Airbill — Airbill/Sticker Present/Absent*
6. Airbill No.: 1372320600
7. Sample Tags — ~~Present/Absent*~~
   Sample Tag Numbers — Listed/Not Listed on Chain-of-Custody
8. Sample Condition: — Intact/Broken*/Leaking
9. Does information on custody records, sample information sheets, and sample tags agree? — Yes/No*
10. Date Received at Lab: 10-11-95
11. Time Received: 1030
12. Cooler Temperature 3°C, 3°C

	CORRESPONDING		
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66128	N/A	273681	All secured
A66129	"	273682	intact in
A66130	"	273683	Coolers
A66131	"	273684	w/ ice.
A66132	"	273685	Coolers
A66133	"	273686	were intact
A66134	"	273687	as were
A66135	"	273688	Custody
MSB	"	273721	Seals on
			Coolers.
* Samples			Custody
A66134			Seals present
A66134MS,			and intact
and A66134MSD			on all
Combined and			containers.
Called A66134.			

Sample Transfer

Fraction: All

Area #: Wet. Fridge

By: MRL

On: 10/11/95

* Contact Project Director.

Reviewed by: _____ Logbook No: _____

Date: _____ Logbook Page No: _____

METHOD:8080_PCB:EXW MATRIX: WATER 6.9/10 LEVEL: LOW BATCH ID: 9DJ

CLIENT(s): BLABOZ 54263, 54265

CASE: PCB

SDG: 54217, 54265

DATE: 10/12/95

ANALYST: VSC, MTP MSK

SPIKED BY: MSK

WITNESSED BY: VSC

Lab sample id FTR	Client id	Sample Volume (1000ml)	pH between 5 and 9 1.	100 ul 0.2 ppm TCX/DCB surr. Surr lot# GEO9115502 2.#	100 ul 6.0 ppm AR1242/1254 matrix Mtx lot# — 3.#	Extract 3x with 60 ml CH2Cl2 CH2Cl2 lot# J272312 4.	Hex exchange Hexane lot# J12289 5.	Conc to 2-3 ml 6.	Sulfuric Acid Clean-up H2SO4 Lot# H5182 7.	Conc to 1.0ml 8.	3 gm silica gel clean-up Silica gel Lot# SX15372 9.	Conc to 1.0ml 10.#
261457	PBLK1U	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓
273415	A66115	957	✓	✓		✓	✓	✓				
273416	A66116	969	✓	✓		✓	✓	✓				
273417	A66117	956	✓	✓		✓	✓	✓				
273418	A66118	936	✓	✓		✓	✓	✓				
273419	A66119	942	✓	✓		✓	✓	✓				
273420	A66120	944	✓	✓		✓	✓	✓				
273421	A66121	945	✓	✓		✓	✓	✓				
273422	A66122	913	✓	✓		✓	✓	✓				
273424	A66124	975	✓	✓		✓	✓	✓				
273425	A66125	957	✓	✓		✓	✓	✓				
273423	A66123	1000	✓	✓		✓	✓	✓				
273426	A66126	973	✓	✓		✓	✓	✓				
273427	A66127	~~907~~ 992	✓	✓		✓	✓	✓				

JD 10/16/95

10/16/95

0007442

(4)

JATEC, INC

277/05

80_PCB:EXS

CLIENT: BLABOZ
CASE: PCB
SDG: 54265
ETR: 54265
DATE: 10/12/95

ANALYST: GCB, JAS
SPIKER: GCB
WITNESS: JAS
FLORISIL LOT # 940448

MeCL2 LOT # J36327
SURR LOT # E08309501
MTX LOT # E07149501
HEXANE LOT # J19299
ACETONE LOT # J19331

AQUATEC ID	CLIENT ID	gms Sample (30.0 + gm)	60 gm Na2SO4 + Mix	2.0 ml DEC + TMX 0.2 ppm E08309501	Matrix Spike 1242 10 ppm E07149501	100 ml CH2CL2: Acetone 1:1	Sonicate 3.0 min.	2 X 100 ml CH2CL2: Acetone 1:1	30 ml - Rinse w/CH2CL2 *	Hexane Exchange w/50 ml	Conc —> 2-3 mls	H2SO4 Clean-up	5 ml H2SO4 to Sample + Vortex	Remove Hexane Extract	Conc —> 10 ml	Florisil Clean-up	1.0 ml of the 10 ml thru precleaned florisil cart.	Elute with 8 ml 9:1 Hex/Ace	Conc. to 1.0 ml			pH
* 952	PBK KN	30.0	GCB	✓	X	GCB	GCB	GCB	GCB		KWB	KWB	KWB	KWB	KWB	KWB	KWB	KWB	KWB			9.7
* 273428	PR2	30.1	↓	✓	X	↓	↓	↓	↓		↓	↓	↓	↓	↓	↓	↓	↓	↓			8.5
* 273429	SD2	30.0	↓	✓	X	↓	↓	↓	↓		↓	↓	↓	↓	↓	↓	↓	↓	↓			8.1
* 266272	MSB KN-MBS	30.0	↓	✓	✓	↓	↓	↓	↓		↓	↓	↓	↓	↓	↓	↓	↓	↓			9.7

* All Samples were Acid cleaned in MeCl2 (Hexane exchanged after acid clean up)

KWB 10-12-95

KWB 10/12/95

METHOD:8080_PCB:EXW **MATRIX: WATER** 69/23 **LEVEL: LOW** **BATCH ID: 9DR**

CLIENT(s): Blabo 2

CASE: VCB ETR. 54321, 54324

SDG: 54265

DATE: 10.16.95

ANALYST: MFX

SPIKED BY: MFX

WITNESSED BY: MTP

Lab sample id ETR	Client id	Sample Volume (1000ml)	pH between 5 and 9 1.	100 ul 0.2 ppm TCX/DCB surr. Surr lot# SE0911952 2.#	100 ul 6.0 ppm AR1242/1254 matrix Mtx lot# SE0829501 3.#	Extract 3x with 60 ml CH2Cl2 CH2Cl2 lot# 329312 4.	Hex exchange Hexane lot# J-12289 5.	Conc to 2-3 ml 6.	Sulfuric Acid Clean-up H2SO4 Lot# H5102B 7.	Conc to 1.0ml 8.	3 gm silica gel clean-up Silica gel Lot# 951312 9.	Conc to 1.0ml 10.#
PBLK 24	261458	1000		✓		✓	✓	✓	✓	✓	✓	✓
273681	A66128	989		✓								
273682	A66129	945		✓								
273683	A66130	954		✓								
273684	A66131	959		✓								
273685	A66132	967		✓								
273686	A66133	925		✓								
273687	A66134	954		✓								
273687 MS	A66134MS	927		✓	✓							
273687 MD	A66134 MSD	990		✓	✓							
273688	A66135	981		✓								
273721 24MSB		969		✓	✓							
273689	A66136	959		✓								
273690	A66137	943		✓								
273691	A66138	964		✓								
273692	A66139	954		✓								
273693	A66140	955		✓								
273694	A66141	974		✓								
273695	A66142	966		✓								
273696	A66143	969		✓								
273697	A66144	983	▽	✓								

JD 10/16/95

F-01

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

ETR Number: 54265

Project Number: 91082

Case No.: PCB

SDG Number: 54265

Memo: Sample # 273418 - 29 placed in fridge on 10/7/95 @ 1115. MCJ

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TI RETURNED
273418-27	JD	10/12/95 1:00pm	EXT	10/12/95 3:00pm

Laboratory Transfer Record

Sample Management	Inchcape Testing Services
ETR: 54265	Date: 10/16/95

Laboratory I. D.	Fraction / Analysis
273418-27	PCB water 8080 - PCB

Relinquished @ Gmu : by JD Time: 4:30pm

Transported by BED

Received @ CP by JKZ Time: 5:00pm

Laboratory Transfer Record

Sample Management | Inchcape Testing Services

ETR: 54321

Date: 10/16/95

Laboratory I. D.	Fraction / Analysis
273681-87,87MS,87MD,88,	8080-PCB
273721MSD	

Relinquished @ GMD : by JD Time: 4:30pm

Transported by BED

Received @ CP by JKZ Time: 500pm

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER
SUPERFUND SITE

SDG# 54324

PCB ANALYSES

ALLIED OPERABLE UNIT

Analyses performed by:

Aquatec, Inc.
Colchester, Vermont

Review performed by:

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG# 54324 for the Allied Operable Unit groundwater sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date
A66136	273689	groundwater	10/10/95
A66137	273690	groundwater	10/9/95
A66138	273691	water	10/9/95
A66139	273692	groundwater	10/10/95
A66140	273693	groundwater	10/10/95
A66141	273694	groundwater	10/10/95
A66142	273695	groundwater	10/10/95
A66143	273696	groundwater	10/10/95
A66144	273697	groundwater	10/10/95
A66145*	274132	groundwater	10/11/95
A66146	274133	groundwater	10/11/95
A66147	274134	groundwater	10/11/95
A66148	274135	groundwater	10/11/95
A66149	274136	groundwater	10/12/95
A66150	274137	groundwater	10/11/95
A66151	274138	groundwater	10/11/95
A66152	274139	groundwater	10/11/95
A66153	274140	groundwater	10/11/95
A66154	274141	groundwater	10/11/95
A66155	274142	water	10/11/95

* MS/MSD analyses performed on sample

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The QAPP-specified holding times for PCB analyses on water samples are 5 days from date of sample receipt to extraction and 40 days from extraction to analysis. The technical holding times are 7 days from date of collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding time.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method or rinse blanks.

3. System Performance

The column resolution and system performance were acceptable for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method allows a maximum RSD of 20% or a correlation coefficient of 0.995. All correlation coefficients were within acceptable limits.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recoveries were below acceptable control limits for one surrogate in samples A66149 and A66155. Since recoveries for the remaining surrogate were within control limits, no qualifiers were added to the sample data based on the deviation. All other surrogate recoveries were within acceptable control limits.

6. Compound Identification

The retention times of identified compounds must fall within the calculated retention time windows for both the primary and secondary columns.

All quantitated peaks fell within the appropriate retention time windows.

7. Compound Quantitation

The differences between the quantitated concentrations for the two analytical columns exceeded the 25% limit for the following samples:

Sample ID	Aroclor	%D	Qualification
A66144	1242	43.6%	J
A66152	1242	27.1%	J

Aroclor 1242 data in samples A66144 and A66152 have been qualified as estimated (J) due to the deviations.

8. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix and matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method relative to the sample matrix. Matrix spike blank (MSB) data is used to assess the precision and accuracy of the analytical method independent of matrix interferences.

All matrix spike and matrix spike duplicate recoveries and the relative percent difference (RPD) between recoveries were within acceptable control limits. The matrix spike blank recovery was also within acceptable limits.

9. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID / Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
A66146 / A66147	ND	--	--	NA

ND - No target compounds detected in sample.
NA - Compounds not detected in samples, RPD value not applicable.

The samples replicate through non-detection.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

DATA REVIEW CHECKLIST

PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits? 0 out of 4			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? 0 out of 2			
Blanks			
Is a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	X		

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	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Do any field/rinse blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?	X		
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks		X	
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of a standard?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?	X		

	YES	NO	NA
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?		X	
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			X
PCB Identification			
Is both a primary and secondary column Aroclor Identification Report present for every sample?	X		
Do the Aroclor identifications for both columns agree?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			X
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Where field duplicates submitted with the samples?	X		

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding Time*	Surrogates* - Column 1		Surrogates* - Column 2	
		TCX	DCB	TCX	DCB
A66136					
A66137					
A66138					
A66139					
A66140					
A66141					
A66142					
A66143					
A66144		D	D	D	D
A66145					
A66145MS					
A66145MSD					
A66146					
A66147					
A66148					
A66149					↓ (59)
A66150					
A66151					
A66152					
A66153					
A66154					
A66155			↓ (35)		↓ (32)

Surrogate Standards
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogates diluted out
↑ Recovery high
↓ Recovery low

* Unless otherwise noted, all parameters are within specified limits.

PCB Calibration Summary

Instrument: 2759 1/2
Column: RTX-5 / RTX-35

Date:	10/12/95 to	10/18/95	10/18/95	10/18/95	10/18/95
Time:	10/13/95	03:05	03:24	07:39	07:58
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	Corr. Coef.	%D	%D	%D	%D
Aroclor 1016	ok / ok				
Aroclor 1221	ok / ok				
Aroclor 1232	ok / ok				
Aroclor 1242	ok / ok				
Aroclor 1248	ok / ok	5.0 / 5.0		5.0 / 5.0	
Aroclor 1254	ok / ok		5.0 / 5.0		
Aroclor 1260	ok / ok				5.0 / 5.0
Tetrachloro-m-xylene	ok / ok	5.0 / 5.0	0.0 / 5.0	0.0 / 0.0	10.0 / 0.0
Decachlorobiphenyl	ok / ok	5.0 / 0.0	5.0 / 5.0	0.0 / 0.0	0.0 / 0.0
Affected Samples:					

A54324

PCB Calibration Summary - Page 2

Instrument: 2759 1/2
Column: RTX-5 / RTX-35

Date:		10/18/95	10/18/95	10/18/95	10/18/95
Time:		12:12	12:32	16:27	16:47
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	Corr. Coef.	%D	%D	%D	%D
Aroclor 1016					
Aroclor 1221					
Aroclor 1232					
Aroclor 1242			0.0 / 0.0		
Aroclor 1248		10.0 / 20.0		0.0 / 0.0	
Aroclor 1254					0.0 / 0.0
Aroclor 1260					
Tetrachloro-m-xylene		0.0 / 0.0	10.0 / 10.0	5.0 / 5.0	0.0 / 0.0
Decachlorobiphenyl		0.0 / 0.0	0.0 / 0.0	0.0 / 5.0	0.0 / 0.0

Affected Samples:

A54324

PCB Calibration Summary - Page 3

Instrument: 2759 1/2
Column: RTX-5 / RTX-35

Date:		10/24/95	10/24/95	10/24/95	10/24/95
Time:		03:17	03:36	06:32	06:52
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	Corr. Coef.	%D	%D	%D	%D
Aroclor 1016					
Aroclor 1221					
Aroclor 1232					
Aroclor 1242					10.0 / 5.0
Aroclor 1248		0.0 / 10.0		0.0 / 5.0	
Aroclor 1254					
Aroclor 1260			0.0 / 5.0		
Tetrachloro-m-xylene		15.0 / 10.0	20.0 / 15.0	10.0 / 5.0	15.0 / 10.0
Decachlorobiphenyl		5.0 / 5.0	5.0 / 0.0	0.0 / 0.0	0.0 / 0.0
Affected Samples:					

A54324

PCB Calibration Summary - Page 4

Instrument: 2759 1/2
Column: RTX-5 / RTX-35

Date:		10/26/95	10/26/95	10/26/95	10/26/95
Time:		17:08	17:27	21:42	22:01
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	Corr. Coef.	%D	%D	%D	%D
Aroclor 1016					
Aroclor 1221					
Aroclor 1232					
Aroclor 1242					
Aroclor 1248		0.0 /5.0		5.0 / 5.0	
Aroclor 1254			0.0 / 5.0		
Aroclor 1260					10.0 / 10.0
Tetrachloro-m-xylene		5.0 / 0.0	20.0 / 5.0	5.0 / 0.0	5.0 / 5.0
Decachlorobiphenyl		0.0 / 5.0	5.0 / 10.0	0.0 / 5.0	5.0 / 10.0
Affected Samples:					

A54324

PCB Calibration Summary - Page 5

Instrument: 2759 1/2
Column: RTX-5 / RTX-35

Date:		10/27/95	10/27/95		
Time:		01:17	01:37		
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	Corr. Coef.	%D	%D	%D	%D
Aroclor 1016					
Aroclor 1221					
Aroclor 1232					
Aroclor 1242			0.0 / 0.0		
Aroclor 1248		0.0 /5.0			
Aroclor 1254					
Aroclor 1260					
Tetrachloro-m-xylene		10.0 / 5.0	5.0 / 0.0		
Decachlorobiphenyl		0.0 / 5.0	5.0 / 10.0		
Affected Samples:					

A54324

CORRECTED ANALYSIS SUMMARY FORMS

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66136

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 273689

Sample wt/vol: 959.0 (g/mL) ML Lab File ID: 17OCT952130-I481

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66137

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 273690

Sample wt/vol: 943.0 (g/mL) ML Lab File ID: 17OCT952130-I491

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.21	U
11104-28-2------	Aroclor-1221	0.21	U
11141-16-5------	Aroclor-1232	0.21	U
53469-21-9------	Aroclor-1242	0.21	U
12672-29-6------	Aroclor-1248	0.21	U
11097-69-1------	Aroclor-1254	0.21	U
11096-82-5------	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66138

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 273691

Sample wt/vol: 964.0 (g/mL) ML Lab File ID: 17OCT952130-I501

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.21	U
11104-28-2------	Aroclor-1221	0.21	U
11141-16-5------	Aroclor-1232	0.21	U
53469-21-9------	Aroclor-1242	0.21	U
12672-29-6------	Aroclor-1248	0.21	U
11097-69-1------	Aroclor-1254	0.21	U
11096-82-5------	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66139

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 273692

Sample wt/vol: 954.0 (g/mL) ML Lab File ID: 17OCT952130-I511

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66140

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 273693

Sample wt/vol: 955.0 (g/mL) ML Lab File ID: 17OCT952130-I521

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.21	U
11104-28-2------	Aroclor-1221	0.21	U
11141-16-5------	Aroclor-1232	0.21	U
53469-21-9------	Aroclor-1242	0.21	U
12672-29-6------	Aroclor-1248	0.21	U
11097-69-1------	Aroclor-1254	0.21	U
11096-82-5------	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66141

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 273694

Sample wt/vol: 974.0 (g/mL) ML Lab File ID: 17OCT952130-I531

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66142

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 273695

Sample wt/vol: 966.0 (g/mL) ML Lab File ID: 17OCT952130-I541

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66143

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 273696

Sample wt/vol: 969.0 (g/mL) ML Lab File ID: 17OCT952130-I551

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66144

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 273697

Sample wt/vol: 983.0 (g/mL) ML Lab File ID: 23OCT952154-I101

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/11/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/24/95

Injection Volume: _____(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	1.0	U
11104-28-2------	Aroclor-1221	1.0	U
11141-16-5------	Aroclor-1232	1.0	U
53469-21-9------	Aroclor-1242	1.0	J
12672-29-6------	Aroclor-1248	1.0	U
11097-69-1------	Aroclor-1254	1.0	U
11096-82-5------	Aroclor-1260	1.0	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66145

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 274132

Sample wt/vol: 969.0 (g/mL) ML Lab File ID: 26OCT951530-I051

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/13/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66146

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 274133

Sample wt/vol: 966.0 (g/mL) ML Lab File ID: 26OCT951530-I081

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/13/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66147

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 274134

Sample wt/vol: 986.0 (g/mL) ML Lab File ID: 26OCT951530-I091

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/13/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66148

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 274135

Sample wt/vol: 983.0 (g/mL) ML Lab File ID: 26OCT951530-I101

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/13/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.20	U
11104-28-2------	Aroclor-1221	0.20	U
11141-16-5------	Aroclor-1232	0.20	U
53469-21-9------	Aroclor-1242	0.20	U
12672-29-6------	Aroclor-1248	0.20	U
11097-69-1------	Aroclor-1254	0.20	U
11096-82-5------	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66149

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 274136

Sample wt/vol: 951.0 (g/mL) ML Lab File ID: 26OCT951530-I111

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/13/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66150

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 274137

Sample wt/vol: 976.0 (g/mL) ML Lab File ID: 26OCT951530-I211

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/13/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66151

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 274138

Sample wt/vol: 976.0 (g/mL) ML Lab File ID: 26OCT951530-I161

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/13/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.20	U
11104-28-2------	Aroclor-1221	0.20	U
11141-16-5------	Aroclor-1232	0.20	U
53469-21-9------	Aroclor-1242	0.20	U
12672-29-6------	Aroclor-1248	0.20	U
11097-69-1------	Aroclor-1254	0.20	U
11096-82-5------	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66152

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 274139

Sample wt/vol: 985.0 (g/mL) ML Lab File ID: 26OCT951530-I171

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/13/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.24	~~P~~ J
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66153

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 274140

Sample wt/vol: 963.0 (g/mL) ML Lab File ID: 26OCT951530-I221

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/13/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/27/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66154

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 274141

Sample wt/vol: 972.0 (g/mL) ML Lab File ID: 26OCT951530-I181

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/13/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66155

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 274142

Sample wt/vol: 966.0 (g/mL) ML Lab File ID: 26OCT951530-I191

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/13/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.21	U
11104-28-2	Aroclor-1221	0.21	U
11141-16-5	Aroclor-1232	0.21	U
53469-21-9	Aroclor-1242	0.21	U
12672-29-6	Aroclor-1248	0.21	U
11097-69-1	Aroclor-1254	0.21	U
11096-82-5	Aroclor-1260	0.21	U

Inchcape Testing Services
Aquatec Laboratories

55 South Park Drive
Colchester, VT 05446
Tel. 802-655-1203
Fax 802-655-1248

November 9, 1995

Ms. Laurie Johnston
Blasland & Bouck Engineers
6723 Towpath Road, Box 66
Syracuse, NY 13214

Re: Site: Kalamazoo
Project No. 91082; Case No. PCB; SDG No. 54324

Dear Ms. Johnston:

Enclosed are the analytical results for samples received intact by Inchcape Testing Services-Aquatec Laboratories on October 11 and 13, 1995. The analyses for these samples were performed in accordance with the methodologies specified in the Quality Assurance Project Plan. Laboratory numbers and quality control samples were assigned as follows:

Client Sample ID	Laboratory Number	Sample Matrix
Samples Received on October 11, 1995 ETR No. 54324		
A66136	273689	Water
A66137	273690	Water
A66138	273691	Water
A66139	273692	Water
A66140	273693	Water
A66141	273694	Water
A66142	273695	Water
A66143	273696	Water
A66144	273697	Water
Samples Received on October 13, 1995 ETR No. 54383		
A66145	274132	Water
A66145MS	274132MS	Water
A66145MSD	274132MD	Water
A66146	274133	Water
A66147	274134	Water
A66148	274135	Water
A66149	274136	Water
A66150	274137	Water
A66151	274138	Water
A66152	274139	Water
A66153	274140	Water
A66154	274141	Water
A66155	274142	Water
MSB	274143	Liquid

001

Low Aroclor surrogate recoveries were observed for a few samples in the delivery group.

The method blank labeled PBLKU5, which was extracted with the samples received on October 13, 1995, was compromised during the extraction procedure. The method blank labeled PBLKU4, which was also extracted on October 18, 1995, was evaluated with these samples.

Samples in this delivery group were reported as the best match to combinations of the seven Aroclor standards. In general, the standard Aroclors are sufficiently unique to provide precise identifications and quantiations of complex mixtures with minimal weathering. For highly altered samples, certain subtle identification distinction, such as the difference between Aroclor 1016 and Aroclor 1242 become less precise. In all cases, quantitation remains highly reliable.

For the benefit of interested parties, documentation of sample handling and preparation is included at the end of the "Sample Data Package". A colored sheet of paper entitled "Sample Preparation Package" has been used to explicitly mark the location of these documents.

If there are any questions regarding this submittal, please contact Pauline Malik at (802) 655-1203.

Sincerely,

Joseph J. Arsini for

Karen R. Chirgwin
Laboratory Operations Director

KRC/jg

Enclosure

91082180CT95

002

FORM 2
WATER OTHER SURROGATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

GC Column(1): RTX-5 ID: 0.32 (mm) GC Column(2): RTX-35 ID: 0.32 (mm)

	CLIENT SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK2U	48*	47*	71	72			2
02	A66136	70	68	82	83			0
03	A66137	65	63	60	60			0
04	A66138	62	62	67	67			0
05	A66139	65	64	85	84			0
06	A66140	67	66	85	85			0
07	A66141	60	60	76	76			0
08	A66142	61	62	80	82			0
09	A66143	73	72	80	80			0
10	A66144	152D	130	65	54D			0
11	PBLK4U	57*	55*	84	82			2
12	A66145	90	87	98	94			0
13	A66145MS	99	88	94	90			0
14	A66145MSD	88	79	91	90			0
15	A66146	95	92	105	101			0
16	A66147	89	88	101	99			0
17	A66148	88	87	101	98			0
18	A66149	93	68	66	59*			1
19	A66151	99	95	99	93			0
20	A66152	92	85	87	82			0
21	A66154	88	83	93	87			0
22	A66155	70	67	35*	32*			2
23	MBS	90	81	91	87			0
24	A66150	98	95	107	103			0
25	A66153	92	89	97	95			0
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (60-140)
S2 (DCB) = Decachlorobiphenyl (60-140)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
WATER OTHER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix Spike - Sample No.: A66145

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Aroclor-1242	0.62	0.00	0.63	102	60-140
Aroclor-1254	0.62	0.00	0.66	106	60-140

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1242	0.62	0.61	98	4	30	60-140
Aroclor-1254	0.62	0.70	113	6	30	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS: _____

FORM 3
WATER OTHER BLANK SPIKE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix Spike - Sample No.: MBS

COMPOUND	SPIKE ADDED (ug/L)	BLANK CONCENTRATION (ug/L)	BS CONCENTRATION (ug/L)	BS % REC #	QC. LIMITS REC.
Aroclor-1242	0.60		0.58	97	60-140
Aroclor-1254	0.60		0.66	110	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLK2U

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Lab Sample ID: 261458 Lab File ID: 17OCT952130-I201

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 10/16/95

Date Analyzed (1): 10/18/95 Date Analyzed (2): 10/18/95

Time Analyzed (1): 0344 Time Analyzed (2): 0344

Instrument ID (1): 2759_1 Instrument ID (2): 2759_2

GC Column (1): RTX-5 ID: 0.32(mm) GC Column (2): RTX-35 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66136	273689	10/18/95	10/18/95
02	A66137	273690	10/18/95	10/18/95
03	A66138	273691	10/18/95	10/18/95
04	A66139	273692	10/18/95	10/18/95
05	A66140	273693	10/18/95	10/18/95
06	A66141	273694	10/18/95	10/18/95
07	A66142	273695	10/18/95	10/18/95
08	A66143	273696	10/18/95	10/18/95
09	A66144	273697	10/24/95	10/24/95
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLK4U

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Lab Sample ID: PBLK4U Lab File ID: 26OCT951530-I021

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 10/18/95

Date Analyzed (1): 10/26/95 Date Analyzed (2): 10/26/95

Time Analyzed (1): 1747 Time Analyzed (2): 1747

Instrument ID (1): 2759_1 Instrument ID (2): 2759_2

GC Column (1): RTX-5 ID: 0.32(mm) GC Column (2): RTX-35 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66145	274132	10/26/95	10/26/95
02	A66145MS	274132MS	10/26/95	10/26/95
03	A66145MSD	274132MD	10/26/95	10/26/95
04	A66146	274133	10/26/95	10/26/95
05	A66147	274134	10/26/95	10/26/95
06	A66148	274135	10/26/95	10/26/95
07	A66149	274136	10/26/95	10/26/95
08	A66151	274138	10/26/95	10/26/95
09	A66152	274139	10/26/95	10/26/95
10	A66154	274141	10/26/95	10/26/95
11	A66155	274142	10/26/95	10/26/95
12	MBS	274143	10/26/95	10/26/95
13	A66150	274137	10/26/95	10/26/95
14	A66153	274140	10/27/95	10/27/95
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLK2U

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: 261458

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 17OCT952130-I201

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/16/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/18/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.20	U
11104-28-2------	Aroclor-1221	0.20	U
11141-16-5------	Aroclor-1232	0.20	U
53469-21-9------	Aroclor-1242	0.20	U
12672-29-6------	Aroclor-1248	0.20	U
11097-69-1------	Aroclor-1254	0.20	U
11096-82-5------	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLK4U

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Matrix: (soil/water) WATER Lab Sample ID: PBLK4U

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 26OCT951530-I021

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016	13.420				
(2)	30.760				
(3)	18.780				
(4)	47.060				
(5)	22.720				
Aroclor-1221	49.620				
(2)	40.140				
(3)	141.940				
(4)	36.400				
(5)	22.780				
Aroclor-1232	45.280				
(2)	48.080				
(3)	28.260				
(4)	68.660				
(5)	34.020				
Aroclor-1242	24.440	22.750	22.595	20.210	19.265
(2)	15.160	14.150	14.780	13.640	13.175
(3)	36.400	34.450	36.575	34.785	35.164
(4)	22.760	16.820	17.645	16.518	16.206
(5)	13.900	13.280	14.170	13.572	13.764
Aroclor-1248	19.880	19.870	19.320	18.462	17.822
(2)	21.840	21.090	20.985	20.595	20.552
(3)	14.600	13.950	14.110	14.162	14.556
(4)	30.260	27.870	28.260	27.662	27.938
(5)	20.560	19.530	20.190	20.622	21.795
Aroclor-1254	44.440	41.050	39.500	38.398	37.522
(2)	15.540	14.660	14.195	13.935	13.784
(3)	12.060	11.280	11.285	11.058	11.162
(4)	22.940	21.710	21.765	22.025	22.834
(5)	45.520	42.660	43.330	43.738	44.484
Aroclor-1260	35.020	32.950	30.910	29.990	30.085
(2)	67.340	64.120	61.060	61.932	64.984
(3)	31.980	30.160	28.725	29.395	31.526
(4)	19.500	17.890	16.830	16.570	17.069
(5)	19.020	15.960	14.855	14.658	15.275
Tetrachloro-m-xylene	431.200	438.700	460.900	521.900	584.325

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	779.400	725.300	759.500	701.475	672.400

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR	0.00000000	13.4200000	1.000
(2)	LINR	0.00000000	30.7600000	1.000
(3)	LINR	0.00000000	18.7800000	1.000
(4)	LINR	0.00000000	47.0600000	1.000
(5)	LINR	0.00000000	22.7200000	1.000
Aroclor-1221	LINR	0.00000000	49.6200000	1.000
(2)	LINR	0.00000000	40.1400000	1.000
(3)	LINR	0.00000000	141.940000	1.000
(4)	LINR	0.00000000	36.4000000	1.000
(5)	LINR	0.00000000	22.7800000	1.000
Aroclor-1232	LINR	0.00000000	45.2800000	1.000
(2)	LINR	0.00000000	48.0800000	1.000
(3)	LINR	0.00000000	28.2600000	1.000
(4)	LINR	0.00000000	68.6600000	1.000
(5)	LINR	0.00000000	34.0200000	1.000
Aroclor-1242	LINR	-25.191944	18.8023612	0.999
(2)	LINR	-14.742329	13.0103150	0.999
(3)	LINR	-1.7098046	35.0486248	1.000
(4)	LINR	-16.154389	15.8949264	1.000
(5)	LINR	0.14847667	13.7465840	1.000
Aroclor-1248	LINR	-13.456161	17.6147518	1.000
(2)	LINR	-3.6308567	20.4558954	1.000
(3)	LINR	4.70157462	14.5804879	1.000
(4)	LINR	-1.8052916	27.8167184	1.000
(5)	LINR	12.2069460	21.9642464	0.999
Aroclor-1254	LINR	-11.740348	37.0509950	1.000
(2)	LINR	-7.3913640	13.6632577	1.000
(3)	LINR	-2.2299397	11.1078393	1.000
(4)	LINR	6.36123405	22.8877231	1.000
(5)	LINR	3.43634476	44.5519218	1.000
Aroclor-1260	LINR	-8.5151763	29.6952883	1.000
(2)	LINR	5.88230539	64.9426204	0.999
(3)	LINR	10.3624557	31.5975090	0.998
(4)	LINR	-2.3633674	16.9117142	1.000
(5)	LINR	-2.8696572	15.0867938	0.999
Tetrachloro-m-xylene	LINR	3.24722137	600.898390	0.997

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-1.5904100	663.943780	0.999

FORM VI OTHER

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 03-Nov-1995 12:26 amg

RTX-5

Calibration File Names:
Level 1: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i341.d
Level 2: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i351.d
Level 3: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i361.d
Level 4: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i371.d
Level 5: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i381.d

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2	
2 Aroclor-1016(1)	671	+++++	+++++	+++++	+++++	LINR	0.000e+00	13.42000		1.00000	
(2)	1538	+++++	+++++	+++++	+++++	LINR	0.000e+00	30.76000		1.00000	<-
(3)	939	+++++	+++++	+++++	+++++	LINR	0.000e+00	18.78000		1.00000	<-
(4)	2353	+++++	+++++	+++++	+++++	LINR	0.000e+00	47.06000		1.00000	<-
(5)	1136	+++++	+++++	+++++	+++++	LINR	0.000e+00	22.72000		1.00000	<-
3 Aroclor-1221(1)	2481	+++++	+++++	+++++	+++++	LINR	0.000e+00	49.62000		1.00000	
(2)	2007	+++++	+++++	+++++	+++++	LINR	0.000e+00	40.14000		1.00000	
(3)	7097	+++++	+++++	+++++	+++++	LINR	0.000e+00	142		1.00000	
(4)	1820	+++++	+++++	+++++	+++++	LINR	0.000e+00	36.40000		1.00000	
(5)	1139	+++++	+++++	+++++	+++++	LINR	0.000e+00	22.78000		1.00000	

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 03-Nov-1995 12:26 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
4 Aroclor-1232(1)	2264	+++++	+++++	+++++	+++++	LINR	0.000e+00	45.28000		1.00000
(2)	2404	+++++	+++++	+++++	+++++	LINR	0.000e+00	48.08000		1.00000
(3)	1413	+++++	+++++	+++++	+++++	LINR	0.000e+00	28.26000		1.00000
(4)	3433	+++++	+++++	+++++	+++++	LINR	0.000e+00	68.66000		1.00000
(5)	1701	+++++	+++++	+++++	+++++	LINR	0.000e+00	34.02000		1.00000
5 Aroclor-1242(1)	1222	2275	4519	8084	15412	LINR	-25.19194	18.80236		0.99891
(2)	758	1415	2956	5456	10540	LINR	-14.74233	13.01032		0.99926
(3)	1820	3445	7315	13914	28131	LINR	-1.70980	35.04862		0.99977
(4)	1138	1682	3529	6607	12965	LINR	-16.15439	15.89493		0.99954
(5)	695	1328	2834	5429	11011	LINR	0.14848	13.74658		0.99979
6 Aroclor-1248(1)	994	1987	3864	7385	14258	LINR	-13.45616	17.61475		0.99964
(2)	1092	2109	4197	8238	16442	LINR	-3.63086	20.45590		0.99999
(3)	730	1395	2822	5665	11645	LINR	4.70157	14.58049		0.99978
(4)	1513	2787	5652	11065	22350	LINR	-1.80529	27.81672		0.99992
(5)	1028	1953	4038	8249	17436	LINR	12.20695	21.96425		0.99924
7 Aroclor-1254(1)	2222	4105	7900	15359	30018	LINR	-11.74035	37.05099		0.99996
(2)	777	1466	2839	5574	11027	LINR	-7.39136	13.66326		1.00000
(3)	603	1128	2257	4423	8930	LINR	-2.22994	11.10784		0.99993
(4)	1147	2171	4353	8810	18267	LINR	6.36123	22.88772		0.99959
(5)	2276	4266	8666	17495	35587	LINR	3.43634	44.55192		0.99988

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 03-Nov-1995 12:26 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
3 Aroclor-1260(1)	1751	3295	6182	11996	24068	LINR	-8.51518	29.69529		0.99992
(2)	3367	6412	12212	24773	51987	LINR	5.88231	64.94262		0.99914
(3)	1599	3016	5745	11758	25221	LINR	10.36246	31.59751		0.99840
(4)	975	1789	3366	6628	13655	LINR	-2.36337	16.91171		0.99950
(5)	951	1596	2971	5863	12220	LINR	-2.86966	15.08679		0.99892
$ 1 Tetrachloro-m-xylene	2156	4387	9218	20876	46746	LINR	3.24722	601		0.99710
$ 9 Decachlorobiphenyl	3897	7253	15190	28059	53792	LINR	-1.59041	664		0.99909

Curve	Formula	Units
Linear	y = a0 + (1/a1) * x	Response

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016	21.300				
(2)	36.640				
(3)	9.220				
(4)	14.000				
(5)	20.600				
Aroclor-1221	42.600				
(2)	125.400				
(3)	89.420				
(4)	288.220				
(5)	76.280				
Aroclor-1232	195.140				
(2)	214.400				
(3)	55.880				
(4)	117.240				
(5)	147.900				
Aroclor-1242	29.040	26.880	26.565	23.965	22.768
(2)	35.000	33.030	33.950	32.338	33.179
(3)	15.960	15.120	16.055	15.075	15.361
(4)	12.100	11.550	12.435	11.855	12.202
(5)	11.280	10.740	11.230	10.660	11.246
Aroclor-1248	8.660	7.970	8.150	7.945	7.822
(2)	19.280	18.880	17.335	18.672	16.566
(3)	14.660	14.600	14.920	14.635	14.641
(4)	7.820	7.330	7.925	7.700	7.529
(5)	5.560	5.260	5.605	5.478	5.476
Aroclor-1254	25.880	20.660	18.075	17.288	16.359
(2)	31.220	29.740	28.265	27.392	26.725
(3)	39.380	37.500	36.115	34.972	34.080
(4)	46.800	44.850	44.930	45.122	45.655
(5)	26.340	24.720	24.015	23.528	23.306
Aroclor-1260	42.760	39.710	38.145	38.648	39.964
(2)	40.860	35.660	34.120	33.830	34.780
(3)	66.240	66.520	64.125	64.635	68.179
(4)	38.020	35.280	34.145	35.105	36.795
(5)	16.160	15.300	14.515	14.458	15.084
Tetrachloro-m-xylene	470.200	476.200	506.200	557.400	626.250

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	711.800	667.100	708.900	646.300	614.325

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR	0.00000000	21.3000000	1.000
(2)	LINR	0.00000000	36.6400000	1.000
(3)	LINR	0.00000000	9.22000000	1.000
(4)	LINR	0.00000000	14.0000000	1.000
(5)	LINR	0.00000000	20.6000000	1.000
Aroclor-1221	LINR	0.00000000	42.6000000	1.000
(2)	LINR	0.00000000	125.400000	1.000
(3)	LINR	0.00000000	89.4200000	1.000
(4)	LINR	0.00000000	288.220000	1.000
(5)	LINR	0.00000000	76.2800000	1.000
Aroclor-1232	LINR	0.00000000	195.140000	1.000
(2)	LINR	0.00000000	214.400000	1.000
(3)	LINR	0.00000000	55.8800000	1.000
(4)	LINR	0.00000000	117.240000	1.000
(5)	LINR	0.00000000	147.900000	1.000
Aroclor-1242	LINR	-25.160063	22.2299756	0.999
(2)	LINR	-0.9690325	33.0071452	1.000
(3)	LINR	-1.8223764	15.2907564	1.000
(4)	LINR	2.60766147	12.2000438	1.000
(5)	LINR	4.59353999	11.2276603	0.999
Aroclor-1248	LINR	-6.1697353	7.77810057	1.000
(2)	LINR	-16.393893	16.5695502	0.996
(3)	LINR	-1.0014016	14.6263006	1.000
(4)	LINR	-3.9146057	7.52561352	1.000
(5)	LINR	-0.1891299	5.47859301	1.000
Aroclor-1254	LINR	-32.045444	15.7739274	1.000
(2)	LINR	-12.487460	26.3731185	1.000
(3)	LINR	-11.908810	33.6710263	1.000
(4)	LINR	1.66707080	45.6545463	1.000
(5)	LINR	-7.2993084	23.0999558	1.000
Aroclor-1260	LINR	3.24842229	39.8811315	0.999
(2)	LINR	-1.9805697	34.4822756	0.999
(3)	LINR	7.82046340	68.2944988	0.999
(4)	LINR	7.59749892	36.8621290	0.999
(5)	LINR	2.48372470	15.0177417	0.999
Tetrachloro-m-xylene	LINR	3.09652913	642.450542	0.997

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-1.7911103	606.298470	0.998

FORM VI OTHER

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 03-Nov-1995 13:20 amg

RTX-35

Calibration File Names:
Level 1: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i341.d
Level 2: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i351.d
Level 3: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i361.d
Level 4: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i371.d
Level 5: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i381.d

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2	
2 Aroclor-1016(1)	1065	+++++	+++++	+++++	+++++	LINR	0.000e+00	21.30000		1.00000	
(2)	1832	+++++	+++++	+++++	+++++	LINR	0.000e+00	36.64000		1.00000	<-
(3)	461	+++++	+++++	+++++	+++++	LINR	0.000e+00	9.22000		1.00000	<-
(4)	700	+++++	+++++	+++++	+++++	LINR	0.000e+00	14.00000		1.00000	<-
(5)	1030	+++++	+++++	+++++	+++++	LINR	0.000e+00	20.60000		1.00000	<-
3 Aroclor-1221(1)	2130	+++++	+++++	+++++	+++++	LINR	0.000e+00	42.60000		1.00000	
(2)	6270	+++++	+++++	+++++	+++++	LINR	0.000e+00	125		1.00000	
(3)	4471	+++++	+++++	+++++	+++++	LINR	0.000e+00	89.42000		1.00000	
(4)	14411	+++++	+++++	+++++	+++++	LINR	0.000e+00	288		1.00000	
(5)	3814	+++++	+++++	+++++	+++++	LINR	0.000e+00	76.28000		1.00000	

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 03-Nov-1995 13:20 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
4 Aroclor-1232(1)	9757	+++++	+++++	+++++	+++++	LINR	0.000e+00	195		1.00000
(2)	10720	+++++	+++++	+++++	+++++	LINR	0.000e+00	214		1.00000
(3)	2794	+++++	+++++	+++++	+++++	LINR	0.000e+00	55.88000		1.00000
(4)	5862	+++++	+++++	+++++	+++++	LINR	0.000e+00	117		1.00000
(5)	7395	+++++	+++++	+++++	+++++	LINR	0.000e+00	148		1.00000
5 Aroclor-1242(1)	1452	2688	5313	9586	18214	LINR	-25.16006	22.22998		0.99899
(2)	1750	3303	6790	12935	26543	LINR	-0.96903	33.00715		0.99968
(3)	798	1512	3211	6030	12289	LINR	-1.82238	15.29076		0.99964
(4)	605	1155	2487	4742	9762	LINR	2.60766	12.20004		0.99963
(5)	564	1074	2246	4264	8997	LINR	4.59354	11.22766		0.99913
6 Aroclor-1248(1)	433	797	1630	3178	6258	LINR	-6.16974	7.77810		0.99991
(2)	964	1888	3467	7469	13253	LINR	-16.39389	16.56955		0.99575
(3)	733	1460	2984	5854	11713	LINR	-1.00140	14.62630		0.99997
(4)	391	733	1585	3080	6023	LINR	-3.91461	7.52561		0.99964
(5)	278	526	1121	2191	4381	LINR	-0.18913	5.47859		0.99990
7 Aroclor-1254(1)	1294	2066	3615	6915	13087	LINR	-32.04544	15.77393		0.99985
(2)	1561	2974	5653	10957	21380	LINR	-12.48746	26.37312		0.99993
(3)	1969	3750	7223	13989	27264	LINR	-11.90881	33.67103		0.99990
(4)	2340	4485	8986	18049	36524	LINR	1.66707	45.65455		0.99994
(5)	1317	2472	4803	9411	18645	LINR	-7.29931	23.09996		1.00000

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 03-Nov-1995 13:20 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
8 Aroclor-1260(1)	2138	3971	7629	15459	31971	LINR	3.24842	39.88113		0.99948
(2)	2043	3566	6824	13532	27824	LINR	-1.98057	34.48228		0.99950
(3)	3312	6652	12825	25854	54543	LINR	7.82046	68.29450		0.99916
(4)	1901	3528	6829	14042	29436	LINR	7.59750	36.86213		0.99915
(5)	808	1530	2903	5783	12067	LINR	2.48372	15.01774		0.99928
$ 1 Tetrachloro-m-xylene	2351	4762	10124	22296	50100	LINR	3.09653	642		0.99714
$ 9 Decachlorobiphenyl	3559	6671	14178	25852	49146	LINR	-1.79111	606		0.99859

Curve	Formula	Units
Linear	y = a0 + (1/a1) * x	Response

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 0305

Lab File ID: 17OCT952130-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 0324

Lab File ID: 17OCT952130-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	18.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 0739

Lab File ID: 17OCT952130-I3 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 0758

Lab File ID: 17OCT952130-I3 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 1212

Lab File ID: 17OCT952130-I4 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	220.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 1232

Lab File ID: 17OCT952130-I4 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	18.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 1627

Lab File ID: 17OCT952130-I5 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/18/95 Time: 1647

Lab File ID: 17OCT952130-I6 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	21.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/24/95 Time: 0317

Lab File ID: 23OCT952154-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	23.000	20.000	LINR	15.000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

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FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/24/95 Time: 0336

Lab File ID: 23OCT952154-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	24.000	20.000	LINR	20.000	15.0
Decachlorobiphenyl	21.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/24/95 Time: 0632

Lab File ID: 23OCT952154-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	22.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/24/95 Time: 0652

Lab File ID: 23OCT952154-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	220.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	23.000	20.000	LINR	15.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/26/95 Time: 1708

Lab File ID: 26OCT951325-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	21.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/26/95 Time: 1727

Lab File ID: 26OCT951530-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/26/95 Time: 2142

Lab File ID: 26OCT951530-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	21.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/26/95 Time: 2201

Lab File ID: 26OCT951530-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	180.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/27/95 Time: 0117

Lab File ID: 26OCT951530-I2 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	22.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_1 Calibration Date: 10/27/95 Time: 0137

Lab File ID: 26OCT951530-I2 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	21.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 0305

Lab File ID: 17OCT952130-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 0324

Lab File ID: 17OCT952130-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 0739

Lab File ID: 17OCT952130-I3 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 0758

Lab File ID: 17OCT952130-I3 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 1212

Lab File ID: 17OCT952130-I4 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	180.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 1232

Lab File ID: 17OCT952130-I4 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	18.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 1627

Lab File ID: 17OCT952130-I5 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	21.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/18/95 Time: 1647

Lab File ID: 17OCT952130-I6 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/24/95 Time: 0317

Lab File ID: 23OCT952154-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	180.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	22.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/24/95 Time: 0336

Lab File ID: 23OCT952154-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	23.000	20.000	LINR	15.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/24/95 Time: 0632

Lab File ID: 23OCT952154-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	21.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/24/95 Time: 0652

Lab File ID: 23OCT952154-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	210.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	22.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/26/95 Time: 1708

Lab File ID: 26OCT951325-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/26/95 Time: 1727

Lab File ID: 26OCT951530-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	18.000	20.000	LINR	10.000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/26/95 Time: 2142

Lab File ID: 26OCT951530-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/26/95 Time: 2201

Lab File ID: 26OCT951530-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	180.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	18.000	20.000	LINR	10.000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/27/95 Time: 0117

Lab File ID: 26OCT951530-I2 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	21.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

000254

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54324

Instrument ID: 2759_2 Calibration Date: 10/27/95 Time: 0137

Lab File ID: 26OCT951530-I2 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	18.000	20.000	LINR	10.000	15.0

Blasland, Bouck & Lee, Inc.
6723 Tow Path Road, Box 66, Syracuse, New York 132
(315) 446-9120

COPY - ORIGINAL ON FILE
SDG # 54265 ETR # 54321

FED-X AIRBILL # 1372320600
COOLER # 3B

000003

CHAIN OF CUSTODY RECORD

COPY - ORIGINAL
SDG #

PROJECT NO: 645.51
PROJECT NAME: ALLIED - O.U. KRS6

LAB ID	CUSTODY TAPE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE TYPE: SOLID	SAMPLE TYPE: WIPE	SAMPLE TYPE: WATER	NO. OF CONTAINERS	PCB'S	TEMPERATURE				REMARKS
A6d132		10/7/95	1830		X			X	2	X					
A6d136		10/10/95	0815		X			X	2	X					
A6d138		10/9/95	1930		X			X	2	X					
A6d139		10/10/95	0930		X			X	2	X					
A6d140		10/10/95	0935		X			X	2	X					
A6d141		10/10/95	1200		X			X	2	X					
A6d142		10/10/95	1130		X			X	2	X					
A6d143		10/10/95	1500		X			X	2	X					
A6d144		10/10/95	1515		X			X	2	X					
TEMP BLANK									1		X				

SAMPLED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]					
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]	10/10/95 1800				
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE/TIME	REMARKS	
		[signature]	10/11/95 1030	PLEASE SEND RESULTS TO LARRY JOHNSTON @ BBL	

FED-X AIRBILL # 1372320600
COOLER # 3A

000004

Blasland, Bouck & Lee, Inc.
6723 Tow Path Road, Box 66, Syracuse, New York 13214
(315) 446-9120

COPY - ORIGINAL ON FILE
SDG # 54265 ETR # 54321

CHAIN OF CUSTODY RECORD

PROJECT NO: 645.51
PROJECT NAME: ALLIED - O.U. KRSG

LAB ID	CUSTODY TAPE NUMBER	DATE	TIME	COMP.	GRAB	SAMPLE TYPE: SOLID	SAMPLE TYPE: WIPE	SAMPLE TYPE: WATER	NO. OF CONTAINERS	PCBs	TEMPERATURE				REMARKS
A66128		10/9/95	1000		X			X	2	X					
A66129		10/9/95	0930		X			X	2	X					
A66130		10/9/95	0945		X			X	2	X					
A66131		10/9/95	1215		X			X	2	X					
A66133		10/9/95	1410		X			X	2	X					
A66134		10/9/95	1400		X			X	2	X					
A66134/MS		10/9/95	1400		X			X	2	X					
A66134/MSD		10/9/95	1400		X			X	2	X					
A66135		10/9/95	1615		X			X	2	X					
A66137		10/9/95	1800		X			X	2	X					
TEMP BLANK									1		X				

SAMPLED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE) Maureen [illegible]	DATE/TIME 10/11/95 1030	REMARKS: PLEASE SEND RESULTS TO LAURIE JOHNSON @ CBI	

FED-X AIR BILL # 1372320611
COOLER # 4B

000005

Blasland, Bouck & Lee, Inc.
6723 Tow Path Road, Box 66, Syracuse, New York 13214
(315) 446-9120

CHAIN OF CUSTODY RECORD

PROJECT NO: 645.51
PROJECT NAME: ALLIED-O.U. KRSG

LAB ID	CUSTODY TAPE NUMBER	DATE	TIME	COMP.	GRAB	SAMPLE TYPE: SOLID	SAMPLE TYPE: WIPE	SAMPLE TYPE: WATER	NO. OF CONTAINERS	PCB'S	TEMPERATURE					REMARKS
A6b149		10/12/95	1530		X			X	2	X						
A6b154		10/11/95	1900		X			X	2	X						
A6b155		10/11/95	1830		X			X	2	X						
A6b156		10/12/95	0930		X			X	2	X						
A6b157		10/12/95	0945		X			X	2	X						
A6b158		10/12/95	1030		X			X	2	X						
A6b159		10/12/95	1235		X			X	2	X						
A6b160		10/12/95	1215		X			X	2	X						
A6b161		10/12/95	1435		X			X	2	X						1 LITER FULL / 1 LITER 1/4 FULL
TEMP BLANK											X					

SAMPLED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]					

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]	10/12/95 1800				

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE/TIME	REMARKS
		[signature]	10/13/95 0930	PLEASE SEND RESULTS TO LAURIE JOHNSTON @ BBL

FED-X AIRBILL # 1372320611
COOLER # 4A

000006

Blasland, Bouck & Lee, Inc.
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(315) 446-9120

CHAIN OF CUSTODY RECORD

PROJECT NO: 6455I
PROJECT NAME: ALLIED-O.U. KR56

LAB ID	CUSTODY TAPE NUMBER	DATE	TIME	COMP.	GRAB	SAMPLE TYPE: SOLID	SAMPLE TYPE: WIPE	SAMPLE TYPE: WATER	NO. OF CONTAINERS	PCBS	TEMPERATURE					REMARKS
A6e145		10/4/95	0850		X			X	2	X						
A6e145MS		10/4/95	0850		X			X	2	X						
A6e145MSD		10/4/95	0850		X			X	2	X						
A6e146		10/4/95	0925		X			X	2	X						
A6e147		10/4/95	0935		X			X	2	X						
A6e148		10/4/95	1015		X			X	2	X						
A6e150		10/4/95	1245		X			X	2	X						
A6e151		10/4/95	1430		X			X	2	X						
A6e152		10/4/95	1700		X			X	2	X						
A6e153		10/4/95	1645		X			X	2	X						
TEMP BLANK											X					

SAMPLED BY (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
Ronald [illegible]	10/11/95				
RELINQUISHED BY (SIGNATURE)	**DATE/TIME**	**RECEIVED BY: (SIGNATURE)**	**RELINQUISHED BY: (SIGNATURE)**	**DATE/TIME**	**RECEIVED BY: (SIGNATURE)**
Ronald [illegible]	10/12/95 1800				
RELINQUISHED BY (SIGNATURE)	**DATE/TIME**	**RECEIVED FOR LABORATORY BY: (SIGNATURE)**	**DATE/TIME**	**REMARKS**	
		[illegible]	10/13/95 0930	PLEASE SEND RESULTS TO LAURIE JOHNSTON @ BBL	

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Maureen R. Fry Log-in Date: 10/11/95

Received By (Signature): Maureen R. Fry

Case Number: PCB

Sample Delivery Group No: 54324 ~~54321~~

ETR Number: 54324 ~~54321~~

REMARKS:

1. Custody Seal(s) — Present/Absent* Intact/Broken
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records — Present/Absent*
4. Sample Information Sheets — ~~Present/Absent*~~ n/a
5. Airbill — Airbill/Sticker Present/Absent*
6. Airbill No.: 1372320000
7. Sample Tags — Present/Absent* Sample Tag Numbers — Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking
9. Does information on custody records, sample information sheets, and sample tags agree? Yes/No*
10. Date Received at Lab: 10.11.95
11. Time Received: 1030
12. Cooler Temperature 3°C, 3°C

CLIENT SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66136	N/A	273689	All seal
A66137	"	273690	intact in
A66138	"	273691	Coolers
A66139	"	273692	w/ice. Coolers
A66140	"	273693	were
A66141	"	273694	intact on
~~A66142~~	"	273695	were custody
A66143	"	273696	Seals on
A66144	"	273697	Coolers.
			Custody Seals
			Present and
			intact on
			all containers.

Sample Transfer

Fraction: All

Area #: Wed. Friday

By: MRF

On: 10/11/95

* Contact Project Director.

Reviewed by: _____ Logbook No: _____

Date: _____ Logbook Page No: _____

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): DONALD C. DAWICKI SR. Log-in Date: 10/13/95

Received By (Signature): [signature]

Case Number: PCB

Sample Delivery Group No: 54324

ETR Number: 54383

REMARKS:

1. Custody Seal(s) ~~Present/Absent*~~ ~~Intact/Broken~~
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records ~~Present/Absent*~~
4. Sample Information Sheets ~~Present/Absent*~~
5. Airbill ~~Airbill/Sticker Present/Absent*~~
6. Airbill No.: 137232 0611
7. Sample Tags ~~Present/Absent*~~
   Sample Tag Numbers ~~Listed/Not Listed on Chain-of-Custody~~
8. Sample Condition: ~~Intact/Broken*/Leaking~~
9. Does information on custody records, sample information sheets, and sample tags agree? Yes/No*
10. Date Received at Lab: 10/13/95
11. Time Received: 0930
12. Cooler Temperature 4°C, 6°C

	CORRESPONDING		
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66145	N/A	274132	SAMPLES RECVD
A66146	"	274133	INTACT IN
A66147	"	274134	COOLERS W/ICE.
A66148	"	274135	COOLERS WERE
A66149	"	274136	INTACT AS
A66150	"	274137	WERE CUSTODY
A66151	"	274138	SEALS ON OUTSIDE
A66152	"	274139.	OF COOLERS.
A66153	"	274140	
A66154	"	274141	
A66155	"	274142	
MSB	"	274143	

Sample Transfer

Fraction: ALL

Area #: WL 4 FRIDGE

By: DCD

On: 10/13/95

DCD 10/13/95

* Contact Project Director.

Reviewed by: _____ Logbook No: _____

Date: _____ Logbook Page No: _____

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

ETR Number: 54324

Project Number: 91082

Case No.: PCB

SDG Number: ~~54265~~ 54324

Memo: Samples # 273689-97 placed in fridge on 10/11/95 @ 120 by MR

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TI RETURNED
273689-97	JD	1:00 pm 10/16/95	EXT	3:00 pm 10/16/95

F-0169A

000005

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

ETR Number: 54383

Case No.: PCB

Project Number: 91082

SDG Number: 54324

Memo: 274132-42 PUT IN LVL 4 FRIDGE 10/13/95

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
274132-274143	VSC	10/18/95 09:00	E.A.	10/18/95 15:00

Laboratory Transfer Record

Sample Management	Inchcape Testing Services
ETR: 54324	Date: 10/11/98
Laboratory I. D.	Fraction / Analysis
Q73689-97	2-1l. per - PCB's

Relinquished @ CP by MRH Time: 1700

Transported by BED

Received @ GMO by FMD Time: 1730

Laboratory Transfer Record

Sample Management	Inchcape Testing Services
ETR: 541383	Date: 10/13/95

Laboratory I. D.	Fraction / Analysis
274132	6 1L AMBERS
274133-42	2 1L AMBERS PEL

Relinquished @ CP by DCS Time: 1600

Transported by BED

Received @ GMD by FNB Time: 1630

Laboratory Transfer Record

Sample Management	Inchcape Testing Services
ETR: 54324	Date: 10/16/95

Laboratory I. D.	Fraction / Analysis
273689-397	8080 - PCB

Relinquished @ Gmo : by JD Time: 4:30pm

Transported by BED

Received @ CP by JKZ Time: 1700

Laboratory Transfer Record

Sample Management | Inchcape Testing Services

ETR: 54383 | Date: 10/24/95

Laboratory I. D.	Fraction / Analysis
274132	
132 MS	
132 MD	
133	
134	
135	
136	8080 PCB
137	
138	
139	
140	
141	
142	
143 MSB	

Relinquished @ GMD by MTP Time: 1630

Transported by BED

Received @ CP by CFO Time: 17:00

Laboratory Transfer Record

Sample Management	Inchcape Testing Services
ETR: 543413	Date: 10/24/95

Laboratory I. D.	Fraction / Analysis
261460 (PB1K4U)	
273854, 56, 58, 6062, 64, 66, 68, 70, 72	8080-PCB

Relinquished @ GMD : by VSC Time: 09.00

Transported by BEN

Received @ CD by DKB Time: 10:00

69/37

METHOD:8080_PCB:EXW MATRIX: WATER LEVEL: LOW BATCH ID: 9EE

CLIENT(s): BLAB02 / ENSEAC VSC 10/18/95
CASE: PCB1
DG: 54384/ 54324
DATE: 10/18/95
ANALYST: MSK VSC
SPIKED BY: MSK
WITNESSED BY: VSC

Lab sample id ETR	Client id	Sample Volume (1000ml)	1. pH between 5 and 9	2. 100 ul 0.2 ppm TCX/DCB surr. Surr lot# GE-09119502	3. 100 ul 6.0 ppm AR1242/1254 matrix Mtx lot# GE-08-2-8950	4. Extract 3x with 60 ml CH2Cl2 CH2Cl2 lot# J29312	5. Hex exchange Hexane lot# J12289	6. Conc to 2-3 ml	7. Sulfuric Acid Clean-up H2SO4 Lot# H51026	8. Conc to 1.0ml	9. 3 gm silica gel clean-up Silica gel Lot# 951572	10. Conc to 1.0ml
261461	PBLK5U	1000	MTP	✓					USE PBLK4U FROM			
274144	A66156	972		✓					ENSERC 54343, PBLK5U			
274145	A66157	980		✓					WAS LOST AFTER			
274146	A66158	958		✓								
274147	A66159	979		✓					SILICA GEL. WAS 10/24			
274148	A66160	988		✓								
274149	A66161	936		✓					✓	✓	✓	✓
274132	A66145	969		✓					✓	✓	✓	✓
274132MS	A66145MS	972		✓	✓				✓	✓	✓	✓
274132MD	A66145MSD	970		✓	✓				✓	✓	✓	✓
274133	A66146	966		✓					✓	✓	✓	✓
274134	A66147	986		✓					✓	✓	✓	✓
274135	A66148	983		✓					✓	✓	✓	✓
274136	A66149	951		✓					✓	✓	✓	✓
274137	A66150	976		✓					✓	✓	✓	✓
274138	A66151	976		✓					✓	✓	✓	✓
274139	A66152	985		✓					✓	✓	✓	✓
274140	A66153	963		✓					✓	✓	✓	✓
274141	A66154	972		✓					✓	✓	✓	✓
274142	A66155	966		✓					✓	✓	✓	✓
274143	MSB	1000	↓	✓	✓	↓	↓	↓	✓	✓	✓	✓

WAS 10/24/95

METHOD: 8080_PCB:EXW **MATRIX: WATER** 69/23 **LEVEL: LOW** **BATCH ID: 9DR**

CLIENT(s): Blabo 2

CASE: VCB ETR: 54321, 54324

SDG: 54265

DATE: 10-16-95

ANALYST: MSK

SPIKED BY: MSK

WITNESSED BY: MTP

Lab sample id ETR	Client id	Sample Volume (1000ml)	1. pH between 5 and 9	2.# 100 ul 0.2 ppm TCX/DCB surr. Surr lot# CE091195B2	3.# 100 ul 6.0 ppm AR1242/1254 matrix Mtx lot# CE0625951	4. Extract 3x with 60 ml CH_2Cl_2 CH_2Cl_2 lot# J27312	5. Hex exchange Hexane lot# J12289	6. Conc to 2-3 ml	7. Sulfuric Acid Clean-up H_2SO_4 Lot# H51128	8. Conc to 1.0ml	9. 3 gm silica gel clean-up Silica gel Lot# 951512	10.# Conc to 1.0ml
273K24	261458	1000		✓		✓	✓	✓	✓	✓	✓	✓
273681	A66128	989		✓								
273682	A66129	945		✓								
273683	A66130	954		✓								
273684	A66131	959		✓								
273685	A66132	967		✓								
273686	A66133	925		✓								
273687	A66134	954		✓								
273687 MS	A66134MS	927		✓	✓							
273687 MD	A66134 MSD	990		✓	✓							
273688	A66135	981		✓								
273721	MSB	969		✓	✓							
273689	A66136	959		✓								
273690	A66137	943		✓								
273691	A66138	964		✓								
273692	A66139	954		✓								
273693	A66140	955		✓								
273694	A66141	974		✓								
273695	A66142	966		✓								
273696	A66143	969		✓								
273697	A66144	983	▽	✓								

JD 10/16/95

000798

METHOD: 8080_PCB:EXW MATRIX: WATER 6.1.35 LEVEL: LOW BATCH ID: 9EF

CLIENT(s): ENSERC

CASE:

SDG: 54343

DATE: 10/18/95

ANALYST: MSK

SPIKED BY: MSK

WITNESSED BY: MTP

Lab sample id ETR	Client id	Sample Volume (1000ml)	pH between 5 and 9 1.	100 ul 0.2 ppm TCX/DCB surr. Surr lot# GE09119502 2.#	100 ul 6.0 ppm AR1242/1254 matrix Mtx lot# 3.#	Extract 3x with 60 ml CH2Cl2 CH2Cl2 lot# 329312 4.	Hex exchange Hexane lot# 312289 5.	Conc to 2-3 ml 6.	Sulfuric Acid Clean-up H2SO4 Lot# 451028 7.	Conc to 1.0ml 8.	3 gm silica gel clean-up Silica gel Lot# 951572 9.	Conc to 1.0ml 10.#
261460	PB1K4U	1000	MTP	✓		✓	✓	VSC	✓	✓	✓	✓
273854	D07-B-4	862		✓		✓	✓					
273856	D07-B-9	807		✓		✓	✓					
273858	D07-B-22	838		✓		✓	✓					
273860	D07-B-28	786		✓		✓	✓					
273862	D07-ME-8	840		✓		✓	✓					
273864	D07-MW-3A	819		✓		✓	✓					
273866	D07-MW-3B	815		✓		✓	✓					
273868	D07-MW-6A	841		✓		✓	✓					
273870	D07-MW-6B	818		✓		✓	✓					
273872	D07-MW-31	821		✓		✓	✓					

MTP 10/23/95

COPY - ORIGINAL ON FILE AT INCHCAPE TESTING SERVICE AQUATEC LABORATORIES

DKC 10/24/95

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER
SUPERFUND SITE

SDG# 54384

PCB ANALYSES

ALLIED OPERABLE UNIT

Analyses performed by:

Aquatec, Inc.
Colchester, Vermont

Review performed by:

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG# 54384 for the Allied Operable Unit groundwater sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date
A66156*	274144	groundwater	10/12/95
A66157*	274145	groundwater	10/12/95
A66158*	274146	groundwater	10/12/95
A66159*	274147	groundwater	10/12/95
A66160	274148	water	10/12/95
A66161	273122	groundwater	10/12/95

* Samples lost during extraction - no data reported.

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The QAPP-specified holding times for PCB analyses on water samples are 7 days from date of sample receipt to extraction and 40 days from extraction to analysis. The technical holding times are 7 days from collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blank or rinse blank.

3. System Performance

The system performance and column resolution was acceptable for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The %RSD was within acceptable limits for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. The %D was within acceptable limits for all Aroclors.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Surrogate recoveries were within acceptable limits for all samples.

6. Compound Identification

The retention times of pesticide/PCB compounds must fall within the calculated retention time windows for both the primary and confirmation columns.

All quantitated peaks fell within the appropriate retention time windows.

7. Compound Quantitation

All samples were properly quantitated with acceptable agreement between analytical columns.

8. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix and matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method relative to the sample matrix. Matrix spike blank (MSB) data is used to assess the precision and accuracy of the analytical method independent of matrix interferences.

Matrix spike/matrix spike duplicate analysis was not requested for any samples in this data set.

9. Field Duplicates

No field duplicates were included in this data set.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

11. General Comments

The extracts of the samples A66156 through A66159 were lost during the extraction process. There insufficient sample remaining for re-extraction. The wells were resampled and the samples were analyzed at a later date.

DATA REVIEW CHECKLIST

PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?			X
Were the blanks reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?		X	
Were matrix spikes analyzed at the required frequency?		X	
How many spike recoveries were outside of QC limits?			
NA out of NA			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
NA out of NA			
Blanks			
Is a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		

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	YES	NO	NA
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	X		
Is the chromatographic performance acceptable for each instrument?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Do any field/rinse blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?	X		
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks		X	
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of a standard?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?	X		
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		

	YES	NO	NA
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?			X
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			X
PCB Identification			
Is both a primary and secondary column Aroclor Identification Report present for every sample?	X		
Do the Aroclor identifications from both columns agree?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			X
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?	X		
Field Duplicates			
Where field duplicates submitted with the samples?		X	

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding Time*	Surrogates* - Column 1		Surrogates* - Column 2	
		TCX	DCB	TCX	DCB
A66160					
A66161					

Surrogate Standards
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogates diluted out
↑ Recovery high
↓ Recovery low

* Unless otherwise noted, all parameters are within specified limits.

A54384

PCB Calibration Summary

Instrument: HP2759
Column: RTX-5 / RTX-35

Date:	10/12/95 to	10/26	10/26	10/26	10/26		
Time:	10/13/95	1708	1727	2142	2201		
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	Corr. Coef.	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok / ok						
Aroclor 1221	ok / ok						
Aroclor 1232	ok / ok						
Aroclor 1242	ok / ok						
Aroclor 1248	ok / ok	0/5		5/5			
Aroclor 1254	ok / ok		0/5				
Aroclor 1260	ok / ok				10/10		
Tetrachloro-m-xylene	ok / ok						
Decachlorobiphenyl	ok / ok						

Affected Samples:

A54384

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66160

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Matrix: (soil/water) WATER Lab Sample ID: 274148

Sample wt/vol: 988.0 (g/mL) ML Lab File ID: 26OCT951530-I031

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/13/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66161

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Matrix: (soil/water) WATER Lab Sample ID: 274149

Sample wt/vol: 936.0 (g/mL) ML Lab File ID: 26OCT951530-I041

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/13/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.21	U
11104-28-2------	Aroclor-1221	0.21	U
11141-16-5------	Aroclor-1232	0.21	U
53469-21-9------	Aroclor-1242	0.21	U
12672-29-6------	Aroclor-1248	0.21	U
11097-69-1------	Aroclor-1254	0.21	U
11096-82-5------	Aroclor-1260	0.21	U

Inchcape Testing Services
Aquatec Laboratories

55 South Park Drive
Colchester, VT 05446
Tel. 802-655-1203
Fax 802-655-1248

November 30, 1995

Ms. Laurie Johnston
Blasland & Bouck Engineers
6723 Towpath Road, Box 66
Syracuse, NY 13214

Re: Site: Kalamazoo
ITS-Aquatec Project No. 91082
Case No. PCB; SDG No. 54384

Dear Ms. Johnston:

Enclosed are the analytical results for samples received intact by Inchcape Testing Services-Aquatec Laboratories on October 13, 1995. The analyses for these samples were performed in accordance with the methodologies specified in the Quality Assurance Project Plan. Laboratory numbers and quality control samples were assigned as follows:

Client Sample ID	Laboratory Number	Sample Matrix
Samples Received on October 13, 1995 ETR No. 54384		
A66156	274144	Water
A66157	274145	Water
A66158	274146	Water
A66159	274147	Water
A66160	274148	Water
A66161	274149	Water

The polychlorinated biphenyl extracts of the samples labeled A66156 through A66159 and their associated method blank, PBLK5U, were compromised during the extraction process. There was no sample remaining for re-extraction. The method blank labeled PBLK4U, which was extracted on the same day, was included as reference to the remaining samples.

Samples in this delivery group were reported as the best match to combinations of the seven Aroclor standards. In general, the standard Aroclors are sufficiently unique to provide precise identifications and quantiations of complex mixtures with minimal weathering. For highly altered samples, certain subtle identification distinction, such as the difference between Aroclor 1016 and Aroclor 1242 become less precise. In all cases, quantitation remains highly reliable.

For the benefit of interested parties, documentation of sample handling and preparation is included at the end of the "Sample Data Package". A colored sheet of paper entitled "Sample Preparation Package" has been used to explicitly mark the location of these documents.

If there are any questions regarding this submittal, please contact Pauline Malik at (802) 655-1203.

Sincerely,

Karen R. Chirgwin
Laboratory Operations Director

KRC/jg

Enclosure

91082B18OCT95

FORM 2
WATER OTHER SURROGATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

GC Column(1): RTX-35 ID: 0.32 (mm) GC Column(2): RTX-5 ID: 0.32 (mm)

	CLIENT SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK4U	55*	57*	82	84			2
02	A66160	78	80	60	64			0
03	A66161	87	90	90	93			0
04								
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								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (60-140)
S2 (DCB) = Decachlorobiphenyl (60-140)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLK4U

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Lab Sample ID: PBLK4U Lab File ID: 26OCT951530-I021

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 10/18/95

Date Analyzed (1): 10/26/95 Date Analyzed (2): 10/26/95

Time Analyzed (1): 1747 Time Analyzed (2): 1747

Instrument ID (1): 2759_1 Instrument ID (2): 2759_2

GC Column (1): RTX-5 ID: 0.32(mm) GC Column (2): RTX-35 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66160	274148	10/26/95	10/26/95
02	A66161	274149	10/26/95	10/26/95
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLK4U

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Matrix: (soil/water) WATER Lab Sample ID: PBLK4U

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 26OCT951530-I021

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/18/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/26/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016	13.420				
(2)	30.760				
(3)	18.780				
(4)	47.060				
(5)	22.720				
Aroclor-1221	49.620				
(2)	40.140				
(3)	141.940				
(4)	36.400				
(5)	22.780				
Aroclor-1232	45.280				
(2)	48.080				
(3)	28.260				
(4)	68.660				
(5)	34.020				
Aroclor-1242	24.440	22.750	22.595	20.210	19.265
(2)	15.160	14.150	14.780	13.640	13.175
(3)	36.400	34.450	36.575	34.785	35.164
(4)	22.760	16.820	17.645	16.518	16.206
(5)	13.900	13.280	14.170	13.572	13.764
Aroclor-1248	19.880	19.870	19.320	18.462	17.822
(2)	21.840	21.090	20.985	20.595	20.552
(3)	14.600	13.950	14.110	14.162	14.556
(4)	30.260	27.870	28.260	27.662	27.938
(5)	20.560	19.530	20.190	20.622	21.795
Aroclor-1254	44.440	41.050	39.500	38.398	37.522
(2)	15.540	14.660	14.195	13.935	13.784
(3)	12.060	11.280	11.285	11.058	11.162
(4)	22.940	21.710	21.765	22.025	22.834
(5)	45.520	42.660	43.330	43.738	44.484
Aroclor-1260	35.020	32.950	30.910	29.990	30.085
(2)	67.340	64.120	61.060	61.932	64.984
(3)	31.980	30.160	28.725	29.395	31.526
(4)	19.500	17.890	16.830	16.570	17.069
(5)	19.020	15.960	14.855	14.658	15.275
Tetrachloro-m-xylene	431.200	438.700	460.900	521.900	584.325

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	779.400	725.300	759.500	701.475	672.400

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR	0.00000000	13.4200000	1.000
(2)	LINR	0.00000000	30.7600000	1.000
(3)	LINR	0.00000000	18.7800000	1.000
(4)	LINR	0.00000000	47.0600000	1.000
(5)	LINR	0.00000000	22.7200000	1.000
Aroclor-1221	LINR	0.00000000	49.6200000	1.000
(2)	LINR	0.00000000	40.1400000	1.000
(3)	LINR	0.00000000	141.940000	1.000
(4)	LINR	0.00000000	36.4000000	1.000
(5)	LINR	0.00000000	22.7800000	1.000
Aroclor-1232	LINR	0.00000000	45.2800000	1.000
(2)	LINR	0.00000000	48.0800000	1.000
(3)	LINR	0.00000000	28.2600000	1.000
(4)	LINR	0.00000000	68.6600000	1.000
(5)	LINR	0.00000000	34.0200000	1.000
Aroclor-1242	LINR	-25.191944	18.8023612	0.999
(2)	LINR	-14.742329	13.0103150	0.999
(3)	LINR	-1.7098046	35.0486248	1.000
(4)	LINR	-16.154389	15.8949264	1.000
(5)	LINR	0.14847667	13.7465840	1.000
Aroclor-1248	LINR	-13.456161	17.6147518	1.000
(2)	LINR	-3.6308567	20.4558954	1.000
(3)	LINR	4.70157462	14.5804879	1.000
(4)	LINR	-1.8052916	27.8167184	1.000
(5)	LINR	12.2069460	21.9642464	0.999
Aroclor-1254	LINR	-11.740348	37.0509950	1.000
(2)	LINR	-7.3913640	13.6632577	1.000
(3)	LINR	-2.2299397	11.1078393	1.000
(4)	LINR	6.36123405	22.8877231	1.000
(5)	LINR	3.43634476	44.5519218	1.000
Aroclor-1260	LINR	-8.5151763	29.6952883	1.000
(2)	LINR	5.88230539	64.9426204	0.999
(3)	LINR	10.3624557	31.5975090	0.998
(4)	LINR	-2.3633674	16.9117142	1.000
(5)	LINR	-2.8696572	15.0867938	0.999
Tetrachloro-m-xylene	LINR	3.24722137	600.898390	0.997

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_1 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-1.5904100	663.943780	0.999

000031

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 15-Nov-1995 16:37 amg

Calibration File Names:
Level 1: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i341.d
Level 2: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i351.d
Level 3: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i361.d
Level 4: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i371.d
Level 5: /chem/2759_1.i/12OCT951601_BLABO.b/12oct951601-i381.d

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2	
2 Aroclor-1016(1)	671	+++++	+++++	+++++	+++++	LINR	0.000e+00	13.42000		1.00000	
(2)	1538	+++++	+++++	+++++	+++++	LINR	0.000e+00	30.76000		1.00000	<-
(3)	939	+++++	+++++	+++++	+++++	LINR	0.000e+00	18.78000		1.00000	<-
(4)	2353	+++++	+++++	+++++	+++++	LINR	0.000e+00	47.06000		1.00000	<-
(5)	1136	+++++	+++++	+++++	+++++	LINR	0.000e+00	22.72000		1.00000	<-
3 Aroclor-1221(1)	2481	+++++	+++++	+++++	+++++	LINR	0.000e+00	49.62000		1.00000	
(2)	2007	+++++	+++++	+++++	+++++	LINR	0.000e+00	40.14000		1.00000	
(3)	7097	+++++	+++++	+++++	+++++	LINR	0.000e+00	142		1.00000	
(4)	1820	+++++	+++++	+++++	+++++	LINR	0.000e+00	36.40000		1.00000	
(5)	1139	+++++	+++++	+++++	+++++	LINR	0.000e+00	22.78000		1.00000	

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 15-Nov-1995 16:37 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
4 Aroclor-1232(1)	2264	+++++	+++++	+++++	+++++	LINR	0.000e+00	45.28000		1.00000
(2)	2404	+++++	+++++	+++++	+++++	LINR	0.000e+00	48.08000		1.00000
(3)	1413	+++++	+++++	+++++	+++++	LINR	0.000e+00	28.26000		1.00000
(4)	3433	+++++	+++++	+++++	+++++	LINR	0.000e+00	68.66000		1.00000
(5)	1701	+++++	+++++	+++++	+++++	LINR	0.000e+00	34.02000		1.00000
5 Aroclor-1242(1)	1222	2275	4519	8084	15412	LINR	-25.19194	18.80236		0.99891
(2)	758	1415	2956	5456	10540	LINR	-14.74233	13.01032		0.99926
(3)	1820	3445	7315	13914	28131	LINR	-1.70980	35.04862		0.99977
(4)	1138	1682	3529	6607	12965	LINR	-16.15439	15.89493		0.99954
(5)	695	1328	2834	5429	11011	LINR	0.14848	13.74658		0.99979
6 Aroclor-1248(1)	994	1987	3864	7385	14258	LINR	-13.45616	17.61475		0.99964
(2)	1092	2109	4197	8238	16442	LINR	-3.63086	20.45590		0.99999
(3)	730	1395	2822	5665	11645	LINR	4.70157	14.58049		0.99978
(4)	1513	2787	5652	11065	22350	LINR	-1.80529	27.81672		0.99992
(5)	1028	1953	4038	8249	17436	LINR	12.20695	21.96425		0.99924
7 Aroclor-1254(1)	2222	4105	7900	15359	30018	LINR	-11.74035	37.05099		0.99996
(2)	777	1466	2839	5574	11027	LINR	-7.39136	13.66326		1.00000
(3)	603	1128	2257	4423	8930	LINR	-2.22994	11.10784		0.99993
(4)	1147	2171	4353	8810	18267	LINR	6.36123	22.88772		0.99959
(5)	2276	4266	8666	17495	35587	LINR	3.43634	44.55192		0.99988

000032

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 15-Nov-1995 16:37 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
8 Aroclor-1260(1)	1751	3295	6182	11996	24068	LINR	-8.51518	29.69529		0.99992
(2)	3367	6412	12212	24773	51987	LINR	5.88231	64.94262		0.99914
(3)	1599	3016	5745	11758	25221	LINR	10.36246	31.59751		0.99840
(4)	975	1789	3366	6628	13655	LINR	-2.36337	16.91171		0.99950
(5)	951	1596	2971	5863	12220	LINR	-2.86966	15.08679		0.99892
$ 1 Tetrachloro-m-xylene	2156	4387	9218	20876	46746	LINR	3.24722	601		0.99710
$ 9 Decachlorobiphenyl	3897	7253	15190	28059	53792	LINR	-1.59041	664		0.99909

Curve	Formula	Units
Linear	y = a0 + (1/a1) * x	Response

000032

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016	21.300				
(2)	36.640				
(3)	9.220				
(4)	14.000				
(5)	20.600				
Aroclor-1221	42.600				
(2)	125.400				
(3)	89.420				
(4)	288.220				
(5)	76.280				
Aroclor-1232	195.140				
(2)	214.400				
(3)	55.880				
(4)	117.240				
(5)	147.900				
Aroclor-1242	29.040	26.880	26.565	23.965	22.768
(2)	35.000	33.030	33.950	32.338	33.179
(3)	15.960	15.120	16.055	15.075	15.361
(4)	12.100	11.550	12.435	11.855	12.202
(5)	11.280	10.740	11.230	10.660	11.246
Aroclor-1248	8.660	7.970	8.150	7.945	7.822
(2)	19.280	18.880	17.335	18.672	16.566
(3)	14.660	14.600	14.920	14.635	14.641
(4)	7.820	7.330	7.925	7.700	7.529
(5)	5.560	5.260	5.605	5.478	5.476
Aroclor-1254	25.880	20.660	18.075	17.288	16.359
(2)	31.220	29.740	28.265	27.392	26.725
(3)	39.380	37.500	36.115	34.972	34.080
(4)	46.800	44.850	44.930	45.122	45.655
(5)	26.340	24.720	24.015	23.528	23.306
Aroclor-1260	42.760	39.710	38.145	38.648	39.964
(2)	40.860	35.660	34.120	33.830	34.780
(3)	66.240	66.520	64.125	64.635	68.179
(4)	38.020	35.280	34.145	35.105	36.795
(5)	16.160	15.300	14.515	14.458	15.084
Tetrachloro-m-xylene	470.200	476.200	506.200	557.400	626.250

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

LAB FILE ID: RF2: 12OCT951601-IRF4: 12OCT951601-IRF8: 12OCT951601-I
RF16: 12OCT951601-RF32: 12OCT951601-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	711.800	667.100	708.900	646.300	614.325

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR	0.00000000	21.3000000	1.000
(2)	LINR	0.00000000	36.6400000	1.000
(3)	LINR	0.00000000	9.22000000	1.000
(4)	LINR	0.00000000	14.0000000	1.000
(5)	LINR	0.00000000	20.6000000	1.000
Aroclor-1221	LINR	0.00000000	42.6000000	1.000
(2)	LINR	0.00000000	125.400000	1.000
(3)	LINR	0.00000000	89.4200000	1.000
(4)	LINR	0.00000000	288.220000	1.000
(5)	LINR	0.00000000	76.2800000	1.000
Aroclor-1232	LINR	0.00000000	195.140000	1.000
(2)	LINR	0.00000000	214.400000	1.000
(3)	LINR	0.00000000	55.8800000	1.000
(4)	LINR	0.00000000	117.240000	1.000
(5)	LINR	0.00000000	147.900000	1.000
Aroclor-1242	LINR	-25.160063	22.2299756	0.999
(2)	LINR	-0.9690325	33.0071452	1.000
(3)	LINR	-1.8223764	15.2907564	1.000
(4)	LINR	2.60766147	12.2000438	1.000
(5)	LINR	4.59353999	11.2276603	0.999
Aroclor-1248	LINR	-6.1697353	7.77810057	1.000
(2)	LINR	-16.393893	16.5695502	0.996
(3)	LINR	-1.0014016	14.6263006	1.000
(4)	LINR	-3.9146057	7.52561352	1.000
(5)	LINR	-0.1891299	5.47859301	1.000
Aroclor-1254	LINR	-32.045444	15.7739274	1.000
(2)	LINR	-12.487460	26.3731185	1.000
(3)	LINR	-11.908810	33.6710263	1.000
(4)	LINR	1.66707080	45.6545463	1.000
(5)	LINR	-7.2993084	23.0999558	1.000
Aroclor-1260	LINR	3.24842229	39.8811315	0.999
(2)	LINR	-1.9805697	34.4822756	0.999
(3)	LINR	7.82046340	68.2944988	0.999
(4)	LINR	7.59749892	36.8621290	0.999
(5)	LINR	2.48372470	15.0177417	0.999
Tetrachloro-m-xylene	LINR	3.09652913	642.450542	0.997

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_2 Calibration Date(s): 10/12/95 10/13/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1703 0409

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-1.7911103	606.298470	0.998

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 09-Nov-1995 11:04 amg

Calibration File Names:
Level 1: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i341.d
Level 2: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i351.d
Level 3: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i361.d
Level 4: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i371.d
Level 5: /chem/2759_2.i/12OCT951601_BLABO.b/12oct951601-i381.d

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2	
2 Aroclor-1016 (1)	1065	+++++	+++++	+++++	+++++	LINR	0.000e+00	21.30000		1.00000	
(2)	1832	+++++	+++++	+++++	+++++	LINR	0.000e+00	36.64000		1.00000	<-
(3)	461	+++++	+++++	+++++	+++++	LINR	0.000e+00	9.22000		1.00000	<-
(4)	700	+++++	+++++	+++++	+++++	LINR	0.000e+00	14.00000		1.00000	<-
(5)	1030	+++++	+++++	+++++	+++++	LINR	0.000e+00	20.60000		1.00000	<-
3 Aroclor-1221 (1)	2130	+++++	+++++	+++++	+++++	LINR	0.000e+00	42.60000		1.00000	
(2)	6270	+++++	+++++	+++++	+++++	LINR	0.000e+00	125		1.00000	
(3)	4471	+++++	+++++	+++++	+++++	LINR	0.000e+00	89.42000		1.00000	
(4)	14411	+++++	+++++	+++++	+++++	LINR	0.000e+00	288		1.00000	
(5)	3814	+++++	+++++	+++++	+++++	LINR	0.000e+00	76.28000		1.00000	

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 09-Nov-1995 11:04 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
4 Aroclor-1232(1)	9757	++++++	++++++	++++++	++++++	LINR	0.000e+00	195		1.00000
(2)	10720	++++++	++++++	++++++	++++++	LINR	0.000e+00	214		1.00000
(3)	2794	++++++	++++++	++++++	++++++	LINR	0.000e+00	55.88000		1.00000
(4)	5862	++++++	++++++	++++++	++++++	LINR	0.000e+00	117		1.00000
(5)	7395	++++++	++++++	++++++	++++++	LINR	0.000e+00	148		1.00000
5 Aroclor-1242(1)	1452	2688	5313	9586	18214	LINR	-25.16006	22.22998		0.99899
(2)	1750	3303	6790	12935	26543	LINR	-0.96903	33.00715		0.99968
(3)	798	1512	3211	6030	12289	LINR	-1.82238	15.29076		0.99964
(4)	605	1155	2487	4742	9762	LINR	2.60766	12.20004		0.99963
(5)	564	1074	2246	4264	8997	LINR	4.59354	11.22766		0.99913
6 Aroclor-1248(1)	433	797	1630	3178	6258	LINR	-6.16974	7.77810		0.99991
(2)	964	1888	3467	7469	13253	LINR	-16.39389	16.56955		0.99575
(3)	733	1460	2984	5854	11713	LINR	-1.00140	14.62630		0.99997
(4)	391	733	1585	3080	6023	LINR	-3.91461	7.52561		0.99964
(5)	278	526	1121	2191	4381	LINR	-0.18913	5.47859		0.99990
7 Aroclor-1254(1)	1294	2066	3615	6915	13087	LINR	-32.04544	15.77393		0.99985
(2)	1561	2974	5653	10957	21380	LINR	-12.48746	26.37312		0.99993
(3)	1969	3750	7223	13989	27264	LINR	-11.90881	33.67103		0.99990
(4)	2340	4485	8986	18049	36524	LINR	1.66707	45.65455		0.99994
(5)	1317	2472	4803	9411	18645	LINR	-7.29931	23.09996		1.00000

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Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-OCT-1995 17:03
End Cal Date : 13-OCT-1995 04:09
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/12OCT951601_BLABO.b/8080_PCB_BLABO.m
Cal Date : 09-Nov-1995 11:04 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
8 Aroclor-1260(1)	2138	3971	7629	15459	31971	LINR	3.24842	39.88113		0.99948
(2)	2043	3566	6824	13532	27824	LINR	-1.98057	34.48228		0.99950
(3)	3312	6652	12825	25854	54543	LINR	7.82046	68.29450		0.99916
(4)	1901	3528	6829	14042	29436	LINR	7.59750	36.86213		0.99915
(5)	808	1530	2903	5783	12067	LINR	2.48372	15.01774		0.99928
$ 1 Tetrachloro-m-xylene	2351	4762	10124	22296	50100	LINR	3.09653	642		0.99714
$ 9 Decachlorobiphenyl	3559	6671	14178	25852	49146	LINR	-1.79111	606		0.99859

Curve	Formula	Units
Linear	y = a0 + (1/a1) * x	Response

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_1 Calibration Date: 10/26/95 Time: 1708

Lab File ID: 26OCT951325-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	21.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_1 Calibration Date: 10/26/95 Time: 1727

Lab File ID: 26OCT951530-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	200.00	200.00	LINR	0.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_1 Calibration Date: 10/26/95 Time: 2142

Lab File ID: 26OCT951530-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	21.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_1 Calibration Date: 10/26/95 Time: 2201

Lab File ID: 26OCT951530-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	180.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_2 Calibration Date: 10/26/95 Time: 1708

Lab File ID: 26OCT951325-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_2 Calibration Date: 10/26/95 Time: 1727

Lab File ID: 26OCT951530-I0 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	18.000	20.000	LINR	10.000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_2 Calibration Date: 10/26/95 Time: 2142

Lab File ID: 26OCT951530-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190.00	200.00	LINR	5.0000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	19.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 54384

Instrument ID: 2759_2 Calibration Date: 10/26/95 Time: 2201

Lab File ID: 26OCT951530-I1 Init. Calib. Date(s): 10/12/95 10/13/95

Heated Purge: (Y/N) N Init. Calib. Times: 1703 0409

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1260	180.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	19.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	18.000	20.000	LINR	10.000	15.0

FED-X AIR BILL # 1372320611
COOLER # 4B

000003

Blasland, Bouck & Lee, Inc.
6723 Tow Path Road, Box 66, Syracuse, New York 13214
(315) 446-9120

CHAIN OF CUSTODY RECORD

PROJECT NO: 645.51
PROJECT NAME: ALLIED-O.U. KRSG

LAB ID	CUSTODY TAPE NUMBER	DATE	TIME	COMP.	GRAB	SAMPLE TYPE: SOLID	SAMPLE TYPE: WIPE	SAMPLE TYPE: WATER	NO. OF CONTAINERS	PCB'S	TEMPERATURE				REMARKS
A66149		10/12/95	1530		X			X	2	X					
A66154		10/11/95	1900		X			X	2	X					
A66155		10/11/95	1830		X			X	2	X					
A66156		10/12/95	0930		X			X	2	X					
A66157		10/12/95	0945		X			X	2	X					
A66158		10/12/95	1030		X			X	2	X					
A66159		10/12/95	1235		X			X	2	X					
A66160		10/12/95	1215		X			X	2	X					
A66161		10/12/95	1435		X			X	2	X					1 LITER FULL / 1 LITER 1/4 FULL
TEMP BLANK											X				

SAMPLED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]					
RELINQUISHED BY: (SIGNATURE)	**DATE/TIME**	**RECEIVED BY: (SIGNATURE)**	**RELINQUISHED BY: (SIGNATURE)**	**DATE/TIME**	**RECEIVED BY: (SIGNATURE)**
[signature]	10/12/95 1800				
RELINQUISHED BY: (SIGNATURE)	**DATE/TIME**	**RECEIVED FOR LABORATORY BY: (SIGNATURE)**	**DATE/TIME**	**REMARKS**	
		[signature]	10/13/95 0930	PLEASE SEND RESULTS TO LAURIE JOHNSTON @ BBL	

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): DONALD C. DANICKI JR. Log-in Date: 10/13/95

Received By (Signature): [signature]

Case Number: PCB

Sample Delivery Group No: 54384

ETR Number: 54384

REMARKS:

1. Custody Seal(s) ~~Present~~/Absent* ~~Intact~~/Broken
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records ~~Present~~/Absent*
4. Sample Information Sheets ~~Present~~/Absent*
5. Airbill ~~Airbill/Sticker Present~~/Absent*
6. Airbill No.: 137 232 0611
7. Sample Tags ~~Present~~/Absent*
   Sample Tag Numbers ~~Listed~~/Not Listed on Chain-of-Custody
8. Sample Condition: ~~Intact~~/Broken*/ ~~Leaking~~
9. Does information on custody records, sample information sheets, and sample tags agree? Yes/No*
10. Date Received at Lab: 10/13/95
11. Time Received: 0930
12. Cooler Temperature 4°C, 6°C

CLIENT SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66156	N/A	274144	SAMPLES RECVD
A66157	"	274145	INTACT IN
A66158	"	274146	COOLERS W/ICE.
A66159	"	274147	COOLERS WERE
A66160	"	274148	INTACT AS WERE
A66161	"	274149	CUSTODY SEALS
			ON OUTSIDE
			OF COOLERS.

Sample Transfer

Fraction: ALL

Area #: LVL 4 FRIDGE

By: DVD

On: 10/13/95

DVD 10/13/95

* Contact Project Director.

Reviewed by: _____ Logbook No: _____

Date: _____ Logbook Page No: _____

(9/37

METHOD:8080_PCB:EXW MATRIX: WATER LEVEL: LOW BATCH ID: 9EE.

CLIENT(s): BLAB02 HENSEAC VSC 10/18/95
CASE: PCB1
SDG: 54384/ 54324
DATE: 10/18/95
ANALYST: MSK VSC
SPIKED BY: MSK
WITNESSED BY: VSC

Lab sample id BTR	Client id	Sample Volume (1000ml)	1. pH between 5 and 9	2. 100 ul 0.2 ppm TCX/DCB surr. Surr lot# GC-09119502	3. 100 ul 6.0 ppm AR1242/1254 matrix Mtx lot# GC-05-S9503	4. Extract 3x with 60 ml CH_2Cl_2 CH_2Cl_2 lot# J2931B	5. Hex exchange Hexane lot# J12289	6. Conc to 2-3 ml	7. Sulfuric Acid Clean-up H_2SO_4 Lot# HS10 26	8. Conc to 1.0ml	9. 3 gm silica gel clean-up Silica gel Lot# 951572	10. Conc to 1.0ml
261461	PBLK5U	1000	MTP	✓					USE PBLK4U FROM			
274144	A66156	972		✓					HENSEAC 51343 FOR			
274145	A66157	980		✓					THESE SAMPLES, PBLK5U			
274146	A66158	958		✓					WAS LOST POST SILICA GEL			
274147	A66159	979		✓								
274148	A66160	988		✓								
274149	A66161	936		✓					✓	✓	✓	✓ was 10/24
274132	A66145	969		✓					✓	✓	✓	✓
274132MS	A66145MS	972		✓	✓				✓	✓	✓	✓
274132MD	A66145MSD	970		✓	✓				✓	✓	✓	✓
274133	A66146	966		✓					✓	✓	✓	✓
274134	A66147	986		✓					✓	✓	✓	✓
274135	A66148	983		✓					✓	✓	✓	✓
274136	A66144	951		✓					✓	✓	✓	✓
274137	A66150	976		✓					✓	✓	✓	✓
274138	A66151	976		✓					✓	✓	✓	✓
274139	A66152	985		✓					✓	✓	✓	✓
274140	A66153	963		✓					✓	✓	✓	✓
274141	A66154	972		✓					✓	✓	✓	✓
274142	A66155	966		✓					✓	✓	✓	✓
274143	MSB	1000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

10/24/95 10/24/95

000298

METHOD: 8 PCB:EXW MATRIX: WATER 69/75 LEVEL: LOW BAT ID: 9EF

CLIENT(s): ENDERC

CASE:

SDG: 54343

DATE: 10/18/95

ANALYST: MSK

SPIKED BY: MSK

WITNESSED BY: MTP

000399

Lab sample id ETR	Client id	Sample Volume (1000ml)	1. pH between 5 and 9	2.# 100 ul 0.2 ppm TCX/DCB surr. Surr lot# GEO911 9502	3.# 100 ul 6.0 ppm AR1242/1254 matrix Mtx lot#	4. Extract 3x with 60 ml CH2Cl2 CH2Cl2 lot# 52931 2	5. Hex exchange Hexane lot# 51228 9	6. Conc to 2-3 ml	7. Sulfuric Acid Clean-up H2SO4 Lot# 451028	8. Conc to 1.0ml	9. 3 gm silica gel clean-up Silica gel Lot# 051572	10.# Conc to 1.0ml
261460	PB1K4U	1000	MTP	✓		✓	✓	VSC	✓	✓	✓	✓
273854	D07-B-4	862		✓		✓	✓					
273856	D07-B-9	857		✓		✓	✓					
273858	D07-B-22	838		✓		✓	✓					
273860	D07-B-28	786		✓		✓	✓					
273862	D07-ME-8	840		✓		✓	✓					
273864	D07-MW-3A	819		✓		✓	✓					
273866	D07-MW-3B	815		✓		✓	✓					
273868	D07-MW-6A	841		✓		✓	✓					
273870	D07-MW-6B	818		✓		✓	✓					
273872	D07-MW-31	821		✓		✓	✓					

MTP 10/23/95

VSC 10/24/95

35

Aquatec, Inc. -- Extraction worksheet -- printed by: VSC on 10-18-95 07:31:01

#Indicate

F-0169A

000003

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

ETR Number: 54384

Project Number: 91082

Case No.: PCB

SDG Number: 54384

Memo: 274144-49 PUT IN CUL 4 FRIDGE 10/13/95

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
274144-147	VCS	10/18/95 09:00	EXT	10/18/95 15:00

Laboratory Transfer Record

Sample Management	Inchcape Testing Services
ETR: 54384	Date: 10/24/95

Laboratory I. D.	Fraction / Analysis
274148	
149	
	8080_PCB

Relinquished @ GMD by MTP Time: 1630

Transported by BED

Received @ CP by CFO Time: 17:00

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER
SUPERFUND SITE

SDG# 55702

PCB ANALYSES

ALLIED OPERABLE UNIT

Analyses performed by:

Aquatec, Inc.
Colchester, Vermont

Review performed by:

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG# 55702 for the Allied Operable Unit groundwater sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date
A66165	281977	groundwater	12/14/95
A66166	281978	groundwater	12/14/95
A66167	281979	groundwater	12/14/95
A66168	281980	water	12/14/95

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The QAPP-specified holding times for PCB analyses on water samples are 7 days from date of sample receipt to extraction and 40 days from extraction to analysis. The technical holding times are 7 days from collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blank or rinse blank.

3. System Performance

The system performance and column resolution was acceptable for both columns.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The %RSD was within acceptable limits for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. The %D was within acceptable limits with the following exception:

12/28/95 02:59 RTX-35

Aroclor 1248 20.0%

Since the %D for the Aroclor 1254 stnadard anlayzed along with the non-compliant standard was within acceptable limits and since no Aroclors were detected in the associated samples, no data have been qualified based on the deviation.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recovery was below acceptable control limits for one surrogate in sample A66166. However, since recovery of the remaining surrogate was within control limits, no qualifiers were added to the sample based on the deviation. Recoveries for both surrogates were above control limits in sample A66167. The laboratory reported that it suspected double the amount of surrogate had been added to the sample. Based on this suspicion and that fact that no aroclors were detected in the sample, no data has been qualified based on the recoveries. All other surrogate recoveries were within acceptable control limits.

6. Compound Identification

The retention times of pesticide/PCB compounds must fall within the calculated retention time windows for both the primary and confirmation columns.

All quantitated peaks fell within the appropriate retention time windows.

7. Compound Quantitation

All samples were properly quantitated with acceptable agreement between analytical columns.

8. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix and matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method relative to the sample matrix. Matrix spike blank (MSB) data is used to assess the precision and accuracy of the analytical method independent of matrix interferences.

Matrix spike/matrix spike duplicate analysis was not requested for any of the samples in this data set.

9. Field Duplicates

No field duplicates were included in this data set.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

DATA REVIEW CHECKLIST

A55702

PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Are the outliers correctly marked with an asterisk?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?		X	
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
NA out of NA			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
NA out of NA			
Blanks			
Is a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?		X	

	YES	NO	NA
Is the chromatographic performance acceptable for each instrument?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Do any field/rinse blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?	X		
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks		X	
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of a standard?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?		X	
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		

	YES	NO	NA
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?			X
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			X
PCB Identification			
Is both a primary and secondary column Aroclor Identification Report present for every sample?	X		
Do the Aroclor identifications from both columns agree?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			X
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?	X		
Field Duplicates			
Where field duplicates submitted with the samples?	X		

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding Time*	Surrogates* - Column 1		Surrogates* - Column 2	
		TCX	DCB	TCX	DCB
A66165					
A66166				↓ (59)	↓ (56)
A66167		↑ (190)	↑ (193)	↑ (219)	↑ (219)
A66168					

Surrogate Standards
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogates diluted out
↑ Recovery high
↓ Recovery low

* Unless otherwise noted, all parameters are within specified limits.

PCB Calibration Summary

Instrument: HP2759
Column: RTX-5 / RTX-35

Date:	12/14/95 to	12/27	12/27	12/28	12/28		
Time:	12/15/95	2226	2245	0259	0319		
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	Corr. Coef.	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok / ok						
Aroclor 1221	ok / ok						
Aroclor 1232	ok / ok						
Aroclor 1242	ok / ok		15/10				
Aroclor 1248	ok / ok	15/10		20/10			
Aroclor 1254	ok / ok				10/10		
Aroclor 1260	ok / ok						
Tetrachloro-m-xylene	ok / ok						
Decachlorobiphenyl	ok / ok						

Affected Samples:

A55702

CORRECTED ANALYSIS SUMMARY FORMS

A55702

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66165

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Matrix: (soil/water) WATER Lab Sample ID: 281977

Sample wt/vol: 988.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 12/15/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:12/20/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 12/28/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66166

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Matrix: (soil/water) WATER Lab Sample ID: 281978

Sample wt/vol: 995.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 12/15/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:12/20/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 12/28/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66167

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Matrix: (soil/water) WATER Lab Sample ID: 281979

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 12/15/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:12/20/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 12/28/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66168

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Matrix: (soil/water) WATER Lab Sample ID: 281980

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 12/15/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:12/20/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 12/28/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

Inchcape Testing Services
Aquatec Laboratories

55 South Park Drive
Colchester, VT 05446
Tel. 802-655-1203
Fax. 802-655-1248

January 8, 1996

Ms. Laurie Johnston
Blasland & Bouck Engineers
6723 Towpath Road, Box 66
Syracuse, NY 13214

Re: Site: Kalamazoo
Project No. 91082
Case No. PCB; SDG No. 55702

Dear Ms. Johnston:

Enclosed are the analytical results for samples received intact by Inchcape Testing Services Environmental Laboratories on December 15, 1995. The analyses for these samples were performed in accordance with the methodologies specified in the Quality Assurance Project Plan. Laboratory numbers and quality control samples were assigned as follows:

Client Sample ID	Laboratory Number	Sample Matrix
Samples Received on December 15, 1995 ETR No. 55702		
A66165	281977	Water
A66166	281978	Water
A66167	281979	Water
A66168	281980	Water
MSD	281981	Liquid

The sample labeled A66167 exhibited very high surrogate recoveries which exceeded the established limits. The laboratory suspects that double the amount of surrogate standard was added to the sample. Aroclors were not detected in the sample, therefore no re-extraction or reanalysis occurred.

Samples in this delivery group were reported as the best match to combinations of the seven Aroclor standards. In general, the standard Aroclors are sufficiently unique to provide precise identifications and quantiations of complex mixtures with minimal weathering. For highly altered samples, certain subtle identification distinction, such as the difference between Aroclor 1016 and Aroclor 1242 become less precise. In all cases, quantitation remains highly reliable.

For the benefit of interested parties, documentation of sample handling and preparation is included at the end of the "Sample Data Package". A colored sheet of paper entitled "Sample Preparation Package" has been used to explicitly mark the location of these documents.

If there are any questions regarding this submittal, please contact Pauline Malik at (802) 655-1203.

Sincerely,

for

Karen R. Chirgwin
Laboratory Operations Director

KRC/jg

Enclosure

91082B26DEC95

002

FORM 2
WATER OTHER SURROGATE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

GC Column(1): RTX-5 ID: 0.32 (mm) GC Column(2): RTX-35 ID: 0.32 (mm)

	CLIENT SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK1V	77	78	100	97			0
02	A66165	80	80	103	101			0
03	A66166	62	64	59*	56*			2
04	A66167	190*	193*	219*	219*			4
05	A66168	75	76	104	106			0
06	MBS	79	80	105	105			0
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (60-140)
S2 (DCB) = Decachlorobiphenyl (60-140)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
WATER OTHER BLANK SPIKE RECOVERY

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Matrix Spike - Sample No.: MBS

COMPOUND	SPIKE ADDED (ug/L)	BLANK CONCENTRATION (ug/L)	BS CONCENTRATION (ug/L)	BS % REC #	QC. LIMITS REC.
Aroclor-1242	0.60		0.47	78	60-140
Aroclor-1254	0.60		0.62	103	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLK1V

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Lab Sample ID: 261466 Lab File ID: _____

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 12/20/95

Date Analyzed (1): 12/27/95 Date Analyzed (2): 12/27/95

Time Analyzed (1): 2344 Time Analyzed (2): 2344

Instrument ID (1): 2759_1 Instrument ID (2): 2759_2

GC Column (1): RTX-5 ID: 0.32(mm) GC Column (2): RTX-35 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66165	281977	12/28/95	12/28/95
02	A66166	281978	12/28/95	12/28/95
03	A66167	281979	12/28/95	12/28/95
04	A66168	281980	12/28/95	12/28/95
05	MBS	281981	12/28/95	12/28/95
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: _____

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLK1V

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Matrix: (soil/water) WATER Lab Sample ID: 261466

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:12/20/95

Concentrated Extract Volume: 1(mL) Date Analyzed: 12/27/95

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_2 Calibration Date(s): 12/14/95 12/15/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1726 0431

LAB FILE ID: RF2: 14DEC951625-IRF4: 14DEC951625-IRF8: 14DEC951625-I
RF16: 14DEC951625-RF32: 14DEC951625-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016					
(2)					
(3)					
(4)					
(5)					
Aroclor-1221					
(2)					
(3)					
(4)					
(5)					
Aroclor-1232					
(2)					
(3)					
(4)					
(5)					
Aroclor-1242	29.620	27.680	25.740	24.028	22.869
(2)	33.980	32.690	31.880	31.935	32.874
(3)	14.980	14.870	14.280	13.808	13.899
(4)	10.940	10.510	10.540	10.398	11.010
(5)	4.640	4.650	4.550	4.482	4.640
Aroclor-1248	24.460	21.570	22.140	20.950	21.006
(2)	16.680	15.220	15.740	15.052	15.461
(3)	27.120	25.300	26.275	25.255	25.858
(4)	4.260	3.820	4.270	4.178	4.295
(5)	5.400	4.880	5.250	5.010	5.158
Aroclor-1254	28.420	28.110	29.885	25.968	24.429
(2)	35.680	35.860	37.840	32.808	30.622
(3)	20.040	20.680	22.775	20.395	20.211
(4)	4.940	5.580	6.000	5.370	5.051
(5)	22.800	23.770	25.855	22.432	21.384
Aroclor-1260	46.540	42.080	40.490	38.762	38.402
(2)	17.320	16.020	16.070	16.010	17.028
(3)	36.600	33.680	33.500	32.658	33.736
(4)	67.000	62.120	62.635	62.585	65.019
(5)	36.460	33.770	34.235	33.955	36.486
Tetrachloro-m-xylene	555.600	537.200	566.100	639.650	651.725

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_2 Calibration Date(s): 12/14/95 12/15/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1726 0431

LAB FILE ID: RF2: 14DEC951625-IRF4: 14DEC951625-IRF8: 14DEC951625-I
RF16: 14DEC951625-RF32: 14DEC951625-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	844.200	681.000	688.700	668.900	624.775

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_2 Calibration Date(s): 12/14/95 12/15/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1726 0431

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1221	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1232	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1242	LINR	-24.354819	22.3134215	1.000
(2)	LINR	2.80040796	32.8236113	1.000
(3)	LINR	-5.5336911	13.7760249	1.000
(4)	LINR	7.37994130	11.0190977	0.999
(5)	LINR	2.86859810	4.63124249	1.000
Aroclor-1248	LINR	-7.4704343	20.7849276	1.000
(2)	LINR	-0.6837341	15.3815584	1.000
(3)	LINR	0.09518821	25.7685576	1.000
(4)	LINR	6.10100471	4.31459143	1.000
(5)	LINR	1.55226228	5.14706320	1.000
Aroclor-1254	LINR	-24.823584	23.9762083	0.997
(2)	LINR	-26.689103	30.0330480	0.997
(3)	LINR	-8.2223248	20.0815578	0.999
(4)	LINR	-16.790849	5.01482831	0.997
(5)	LINR	-19.614785	21.0961410	0.997
Aroclor-1260	LINR	-11.815959	37.8228601	1.000
(2)	LINR	8.45903711	17.0510830	0.999
(3)	LINR	0.43067151	33.5627565	1.000
(4)	LINR	5.18880864	65.0487927	1.000
(5)	LINR	10.2849949	36.5800838	0.998
Tetrachloro-m-xylene	LINR	1.80692906	665.884039	0.999

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_2 Calibration Date(s): 12/14/95 12/15/95

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1726 0431

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-2.0191135	615.055882	0.999

000053

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-1995 17:26
End Cal Date : 15-DEC-1995 04:31
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/14DEC951625.b/8080_PCB.m
Cal Date : 04-Jan-1996 14:42 amg

Calibration File Names:
Level 1: /chem/2759_2.i/14DEC951625.b/14dec951625-i341.d
Level 2: /chem/2759_2.i/14DEC951625.b/14dec951625-i351.d
Level 3: /chem/2759_2.i/14DEC951625.b/14dec951625-i361.d
Level 4: /chem/2759_2.i/14DEC951625.b/14dec951625-i371.d
Level 5: /chem/2759_2.i/14DEC951625.b/14dec951625-i381.d

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2	
2 Aroclor-1016 (1)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(2)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(3)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(4)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(5)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
3 Aroclor-1221 (1)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(2)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(3)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(4)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(5)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-

000054

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-1995 17:26
End Cal Date : 15-DEC-1995 04:31
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/14DEC951625.b/8080_PCB.m
Cal Date : 04-Jan-1996 14:42 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2	
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(2)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(3)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(4)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(5)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
5 Aroclor-1242(1)	1481	2768	5148	9611	18295	LINR	-24.35482	22.31342		0.99956	
(2)	1699	3269	6376	12774	26299	LINR	2.80041	32.82361		0.99969	
(3)	749	1487	2856	5523	11119	LINR	-5.53369	13.77602		0.99991	
(4)	547	1051	2108	4159	8808	LINR	7.37994	11.01910		0.99910	
(5)	232	465	910	1793	3712	LINR	2.86860	4.63124		0.99963	
6 Aroclor-1248(1)	1223	2157	4428	8380	16805	LINR	-7.47043	20.78493		0.99982	
(2)	834	1522	3148	6021	12369	LINR	-0.68373	15.38156		0.99965	
(3)	1356	2530	5255	10102	20686	LINR	0.09519	25.76856		0.99974	
(4)	213	382	854	1671	3436	LINR	6.10100	4.31459		0.99966	
(5)	270	488	1050	2004	4126	LINR	1.55226	5.14706		0.99959	
7 Aroclor-1254(1)	1421	2811	5977	10387	19543	LINR	-24.82358	23.97621		0.99714	
(2)	1784	3586	7568	13123	24498	LINR	-26.68910	30.03305		0.99673	
(3)	1002	2068	4555	8158	16169	LINR	-8.22232	20.08156		0.99877	
(4)	247	558	1200	2148	4041	LINR	-16.79085	5.01483		0.99705	
(5)	1140	2377	5171	8973	17107	LINR	-19.61479	21.09614		0.99718	

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-1995 17:26
End Cal Date : 15-DEC-1995 04:31
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_2.i/14DEC951625.b/8080_PCB.m
Cal Date : 04-Jan-1996 14:42 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
8 Aroclor-1260(1)	2327	4208	8098	15505	30722	LINR	-11.81596	37.82286		0.99997
(2)	866	1602	3214	6404	13622	LINR	8.45904	17.05108		0.99890
(3)	1830	3368	6700	13063	26989	LINR	0.43067	33.56276		0.99959
(4)	3350	6212	12527	25034	52015	LINR	5.18881	65.04879		0.99954
(5)	1823	3377	6847	13582	29189	LINR	10.28499	36.58008		0.99859
$ 1 Tetrachloro-m-xylene	2778	5372	11322	25586	52138	LINR	1.80693	666		0.99934
$ 9 Decachlorobiphenyl	✓ 4221	6810	13774	26756	49982	LINR	-2.01911	615		0.99897

Curve	Formula	Units
Linear	y = a0 + (1/a1) * x	Response

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_1 Calibration Date(s): 12/14/95 12/15/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1726 0431

LAB FILE ID: RF2: 14DEC951625-IRF4: 14DEC951625-IRF8: 14DEC951625-I
RF16: 14DEC951625-RF32: 14DEC951625-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016					
(2)					
(3)					
(4)					
(5)					
Aroclor-1221					
(2)					
(3)					
(4)					
(5)					
Aroclor-1232					
(2)					
(3)					
(4)					
(5)					
Aroclor-1242	28.460	26.430	24.515	22.472	21.350
(2)	19.120	17.750	17.010	16.120	15.721
(3)	44.160	41.940	41.170	40.630	41.244
(4)	22.180	20.880	20.040	19.430	19.266
(5)	12.440	11.570	11.155	11.145	11.478
Aroclor-1248	24.920	21.340	21.370	19.808	18.829
(2)	26.460	22.880	23.370	22.155	21.779
(3)	18.020	15.860	16.385	15.880	16.029
(4)	25.220	22.260	23.345	23.170	24.368
(5)	14.680	12.720	13.200	12.590	12.756
Aroclor-1254	35.400	35.090	36.730	31.740	29.559
(2)	47.540	47.210	49.700	42.712	39.692
(3)	25.020	25.950	28.095	25.100	24.479
(4)	44.000	44.270	47.950	41.890	39.850
(5)	28.940	29.530	32.370	28.468	28.146
Aroclor-1260	39.500	35.730	34.395	33.328	33.082
(2)	37.460	34.490	33.595	32.800	33.708
(3)	77.140	71.590	70.655	71.040	73.819
(4)	37.620	34.350	34.375	34.280	36.928
(5)	22.960	19.220	18.195	17.480	18.260
Tetrachloro-m-xylene	582.000	565.100	588.650	668.450	672.800

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_1 Calibration Date(s): 12/14/95 12/15/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1726 0431

LAB FILE ID: RF2: 14DEC951625-IRF4: 14DEC951625-IRF8: 14DEC951625-I
RF16: 14DEC951625-RF32: 14DEC951625-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	1002.600	801.800	802.950	777.125	730.750

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_1 Calibration Date(s): 12/14/95 12/15/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1726 0431

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1221	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1232	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1242	LINR	-27.751077	20.7478243	0.999
(2)	LINR	-15.627288	15.4520220	1.000
(3)	LINR	-1.2280938	41.0522066	1.000
(4)	LINR	-9.1620994	19.0436145	1.000
(5)	LINR	1.16584861	11.4300831	1.000
Aroclor-1248	LINR	-22.494260	18.4303933	0.999
(2)	LINR	-11.597919	21.4988954	1.000
(3)	LINR	-2.9987593	15.9355264	1.000
(4)	LINR	7.64392355	24.4202137	0.999
(5)	LINR	-4.3731139	12.6518453	1.000
Aroclor-1254	LINR	-28.587116	28.9249045	0.997
(2)	LINR	-29.267570	38.8348348	0.996
(3)	LINR	-12.261251	24.2585790	0.998
(4)	LINR	-20.262089	39.2736570	0.997
(5)	LINR	-11.394277	27.8648397	0.998
Aroclor-1260	LINR	-9.8506928	32.6552364	1.000
(2)	LINR	-1.5521569	33.4627759	1.000
(3)	LINR	4.74185272	73.7854180	0.999
(4)	LINR	10.3156347	37.0022640	0.998
(5)	LINR	-4.7286867	17.9894628	0.999
Tetrachloro-m-xylene	LINR	1.63082469	687.087730	0.999

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: AQUATEC, INC. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_1 Calibration Date(s): 12/14/95 12/15/95

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1726 0431

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-2.0458363	718.002710	0.999

000060

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-1995 17:26
End Cal Date : 15-DEC-1995 04:31
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/14DEC951625.b/8080_PCB.m
Cal Date : 04-Jan-1996 14:39 amg

Calibration File Names:
Level 1: /chem/2759_1.i/14DEC951625.b/14dec951625-i341.d
Level 2: /chem/2759_1.i/14DEC951625.b/14dec951625-i351.d
Level 3: /chem/2759_1.i/14DEC951625.b/14dec951625-i361.d
Level 4: /chem/2759_1.i/14DEC951625.b/14dec951625-i371.d
Level 5: /chem/2759_1.i/14DEC951625.b/14dec951625-i381.d

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2	
2 Aroclor-1016 (1)	*****	*****	*****	*****	*****	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(2)	*****	*****	*****	*****	*****	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(3)	*****	*****	*****	*****	*****	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(4)	*****	*****	*****	*****	*****	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(5)	*****	*****	*****	*****	*****	LINR	0.000e+00	0.000e+00		0.000e+00	<-
3 Aroclor-1221 (1)	*****	*****	*****	*****	*****	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(2)	*****	*****	*****	*****	*****	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(3)	*****	*****	*****	*****	*****	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(4)	*****	*****	*****	*****	*****	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(5)	*****	*****	*****	*****	*****	LINR	0.000e+00	0.000e+00		0.000e+00	<-

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-1995 17:26
End Cal Date : 15-DEC-1995 04:31
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/14DEC951625.b/8080_PCB.m
Cal Date : 04-Jan-1996 14:39 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2	
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(2)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(3)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(4)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
(5)	+++++	+++++	+++++	+++++	+++++	LINR	0.000e+00	0.000e+00		0.000e+00	<-
5 Aroclor-1242(1)	1423	2643	4903	8989	17080	LINR	-27.75108	20.74782		0.99944	
(2)	956	1775	3402	6448	12577	LINR	-15.62729	15.45202		0.99989	
(3)	2208	4194	8234	16252	32995	LINR	-1.22809	41.05221		0.99989	
(4)	1109	2088	4008	7772	15413	LINR	-9.16210	19.04361		0.99999	
(5)	622	1157	2231	4458	9182	LINR	1.16585	11.43008		0.99960	
6 Aroclor-1248(1)	1246	2134	4274	7923	15063	LINR	-22.49426	18.43039		0.99936	
(2)	1323	2288	4674	8862	17423	LINR	-11.59792	21.49890		0.99983	
(3)	901	1586	3277	6352	12823	LINR	-2.99876	15.93553		0.99986	
(4)	1261	2226	4669	9268	19494	LINR	7.64392	24.42021		0.99922	
(5)	734	1272	2640	5036	10205	LINR	-4.37311	12.65185		0.99975	
7 Aroclor-1254(1)	1770	3509	7346	12696	23647	LINR	-28.58712	28.92490		0.99670	
(2)	2377	4721	9940	17085	31754	LINR	-29.26757	38.83483		0.99638	
(3)	1251	2595	5619	10040	19583	LINR	-12.26125	24.25858		0.99853	
(4)	2200	4427	9590	16756	31880	LINR	-20.26209	39.27366		0.99746	
(5)	1447	2953	6474	11387	22517	LINR	-11.39428	27.86484		0.99845	

000061

Aquatec, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-1995 17:26
End Cal Date : 15-DEC-1995 04:31
Quant Method : ESTD
Target Version : 3.12
Integrator : HP Genie
Method file : /chem/2759_1.i/14DEC951625.b/8080_PCB.m
Cal Date : 04-Jan-1996 14:39 amg

Compound	2 Level 1	4 Level 2	8 Level 3	16 Level 4	32 Level 5	Curve	Coefficients a0	a1	a2	%RSD or R^2
8 Aroclor-1260(1)	1975	3573	6879	13331	26466	LINR	-9.85069	32.65524		0.99999
(2)	1873	3449	6719	13120	26966	LINR	-1.55216	33.46278		0.99965
(3)	3857	7159	14131	28416	59055	LINR	4.74185	73.78542		0.99948
(4)	1881	3435	6875	13712	29542	LINR	10.31563	37.00226		0.99841
(5)	1148	1922	3639	6992	14608	LINR	-4.72869	17.98946		0.99891
$ 1 Tetrachloro-m-xylene	2910	5651	11773	26738	53824	LINR	1.63082	687		0.99930
$ 9 Decachlorobiphenyl	5013	8018	16059	31085	58460	LINR	-2.04584	718		0.99924

Curve	Formula	Units
Linear	y = a0 + (1/a1) * x	Response

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_2 Calibration Date: 12/27/95 Time: 2226

Lab File ID: 27DEC952123-I0 Init. Calib. Date(s): 12/14/95 12/15/95

Heated Purge: (Y/N) N Init. Calib. Times: 1726 0431

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	230.00	200.00	LINR	15.000	15.0
Tetrachloro-m-xylene	21.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_2 Calibration Date: 12/27/95 Time: 2245

Lab File ID: 27DEC952123-I0 Init. Calib. Date(s): 12/14/95 12/15/95

Heated Purge: (Y/N) N Init. Calib. Times: 1726 0431

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	230.00	200.00	LINR	15.000	15.0
Tetrachloro-m-xylene	22.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	20.000	20.000	LINR	0.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_2 Calibration Date: 12/28/95 Time: 0259

Lab File ID: 27DEC952123-I1 Init. Calib. Date(s): 12/14/95 12/15/95

Heated Purge: (Y/N) N Init. Calib. Times: 1726 0431

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	240.00	200.00	LINR	20.000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	21.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_2 Calibration Date: 12/28/95 Time: 0319

Lab File ID: 27DEC952123-I1 Init. Calib. Date(s): 12/14/95 12/15/95

Heated Purge: (Y/N) N Init. Calib. Times: 1726 0431

GC Column:RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	220.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	21.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	22.000	20.000	LINR	10.000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_1 Calibration Date: 12/27/95 Time: 2226

Lab File ID: 27DEC952123-I0 Init. Calib. Date(s): 12/14/95 12/15/95

Heated Purge: (Y/N) N Init. Calib. Times: 1726 0431

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	220.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	21.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	21.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_1 Calibration Date: 12/27/95 Time: 2245

Lab File ID: 27DEC952123-I0 Init. Calib. Date(s): 12/14/95 12/15/95

Heated Purge: (Y/N) N Init. Calib. Times: 1726 0431

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	220.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	22.000	20.000	LINR	10.000	15.0
Decachlorobiphenyl	21.000	20.000	LINR	5.0000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_1 Calibration Date: 12/28/95 Time: 0259

Lab File ID: 27DEC952123-I1 Init. Calib. Date(s): 12/14/95 12/15/95

Heated Purge: (Y/N) N Init. Calib. Times: 1726 0431

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	220.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	20.000	20.000	LINR	0.0000	15.0
Decachlorobiphenyl	22.000	20.000	LINR	10.000	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: Aquatec, Inc. Contract: 91082

Lab Code: AQUAI Case No.: PCB SAS No.: SDG No.: 55702

Instrument ID: 2759_1 Calibration Date: 12/28/95 Time: 0319

Lab File ID: 27DEC952123-I1 Init. Calib. Date(s): 12/14/95 12/15/95

Heated Purge: (Y/N) N Init. Calib. Times: 1726 0431

GC Column:RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	220.00	200.00	LINR	10.000	15.0
Tetrachloro-m-xylene	21.000	20.000	LINR	5.0000	15.0
Decachlorobiphenyl	23.000	20.000	LINR	15.000	15.0

BLASLAND & BOUCK ENGINEERS, P.C.

CHAIN OF CUSTODY RECORD

PROJ. NO.: 645.51.202

PROJECT NAME: Allied

SAMPLERS (Signature): [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PCB	Temp Blank						REMARKS
MW-1	12/14/95	1545		X	A66165	2	X							
MW-12A	12/14/95	1130			A66166	2	X							
MW-12B	↓	0950			A66167	2	X							
MW-17C	↓	1320			A66168	2	X							
					Temperature Blank	1		X						

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	12/14/95 1335				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		Janine A. Banks	12/15/95 1345		

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

000003

AQUATEC SAMPLE LOG-IN SHEET

Lab Name: Aquatec, Inc. Page 1 of 1

Received By (Print Name): Janine L. Banks Log-In Date: 12/18/95

Received By (Signature): Janine L. Banks

Case Number: PCB

Sample Delivery Group No: 55702

ETR Number: 55702

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos.:
3. Chain-of-Custody Records Present/Absent*
4. Sample Information Sheets Present/Absent*
5. Airbill Airbill/Sticker Present/Absent*
6. Airbill No.: 1372320784
7. Sample Tags Present/Absent* Sample Tag Numbers Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking
9. Does information on custody records, sample information sheets, and sample tags agree? Yes/No*
10. Date Received at Lab: 12-15-95
11. Time Received: 1345
12. Cooler Temperature 5°C

	CORRESPONDING		
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A1de1165	NO TAG	281977	Samples Held
A1de1166	|	281978	intact, inside
A1de1167	|	281979	Cooler with ice.
A1de1168	—	281980	Custody seals
MSB	NA	281981	present on
			outside of cooler
			& on each
			bottle.
Note: C-of-C			
does not note			
Grab for all samples, only			
for A1de1165. All bottles			
Say grab.			
		All bottles call	
		sample water.	
	JLB		
	12/18/95		

Sample Transfer

Fraction: All

Area #: July fridge

By: JLB

On: 12-15-95

* Contact Project Director.

Reviewed by: Logbook No:

Date: Logbook Page No:

METHOD: 8080_PCB:EXW MATRIX: WATER LEVEL: LOW BATCH ID: 9JJ

CLIENT(s): ~~ETGAN~~ 12ABOZ

CASE: ~~5X~~, PCB

SDG: ~~55663~~, 55702

DATE: 12/20/95

ANALYST: JD

SPIKED BY: JD

WITNESSED BY: [illegible]

ETR: ~~55663~~, 55702

MTP 12/20/95

Lab sample id (ETR)	Client id	Sample Volume (1000ml)	1. pH between 5 and 9	2.# 100 ul 0.2 ppm TCX/DCB surr. Surr lot# SE 126955	3.# 100 ul 6.0 ppm AR1242/1254 matrix Mix lot# SE 022951	4. Extract 3x with 60 ml CH_2Cl_2 CH_2Cl_2 lot# J32269	5. Hex exchange Hexane lot# J33296	6. Conc to 2-3 ml [illegible]	7. Sulfuric Acid Clean-up H_2SO_4 Lot# J2 [illegible]	8. Conc to 1.0ml	9. 3 gm silica gel clean-up Silica gel Lot# 953570	10.# Conc to 1.0ml
261466	PBLK 1V	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓
~~281774~~	~~MW-01~~											
~~281775~~	~~MW-11~~											
281977	A66165	988	✓	✓		✓	✓	✓	✓	✓	✓	✓
281978	A66166	995	✓	✓		✓	✓	✓	✓	✓	✓	✓
281979	A66167	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓
281980	A66168	1000	✓	✓		✓	✓	✓	✓	✓	✓	✓
281981	~~A66458~~ MBS	1000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

CONFIDENTIAL
AT INCHCAPE TESTING SERVICES
AQUATEC LABORATORIES

LSC 12/21/95

LSC 12/21/95

000460

F-0169A

INTERNAL CHAIN OF CUSTODY
AQUATEC, INC.

ETR Number: 55702

Project Number: 91082

Case No.: PCB

SDG Number: 55702

000004

Memo: 281977-80 Placed in fridge 12/15/95. JLBanks

LABORATORY SAMPLE NUMBER	REMOVED BY	DATE AND TIME REMOVED	REASON	DATE AND TIME RETURNED
281977-981	JD	12/20/95 0930	Extraction	12/20/95 1730

Laboratory Transfer Record

Sample Management	Inchcape Testing Services
ETR: 55702	Date: 12/18/95

Laboratory I. D.	Fraction / Analysis
281977-80	2x1l per

Relinquished @ CP by JLB Time: 1200

Transported by BED

Received @ GMD by FND Time: 1230

Laboratory Transfer Record

Sample Management | Inchcape Testing Services

ETR: 55702 | Date: 12/21/95

Laboratory I. D.	Fraction / Analysis
261466 PB1K1V	
281977-81	8080_PCB

Relinquished @ OMD by VSC Time: 11:30

Transported by BED

Received @ CP by JKZ Time: 13:30

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER
SUPERFUND SITE

SDG# 64153

PCB ANALYSES

ALLIED OU

Analyses performed by:

ITS Environmental Laboratories
Colchester, Vermont

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG# 64153 for sampling at the Allied OU of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB and total organic carbon analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis	
				PCB	TOC
A66169	326783	water	3/4/97	x	x
A66169-F	326784	filtered water	3/4/97	x	x
A66169-FIL	326785	filter	3/4/97	x	x
A66170	326787	water	3/4/97	x	x
A66170-F	326788	filtered water	3/4/97	x	x
A66171	326789	water	3/4/97	x	x
A66171-F	326790	filtered water	3/4/97	x	x
A66171-FIL	326791	filter	3/4/97	x	x
A66172*	326792	water	3/5/97	x	x
A66172-F*	326793	filtered water	3/5/97	x	x
A66172-FIL	326794	filter	3/5/97	x	x
A66173	326795	water	3/5/97	x	x
A66173-F	326796	filtered water	3/5/97	x	x
A66174	326843	water	3/5/97	x	x
A66174-F	326844	filtered water	3/5/97	x	x
A66174-FIL	326845	filter	3/5/97	x	x
A66175	326849	water	3/5/97	x	x
A66175-F	326850	filtered water	3/5/97	x	x
A66175-FIL	326851	filter	3/5/97	x	x
A66176	326852	water	3/6/97	x	x
A66176-F	326853	filtered water	3/6/97	x	x
A66176-FIL	326854	filter	3/6/97	x	x

* MS/MSD performed on sample

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The QAPP-specified holding times for PCB analyses are 10 days from sample receipt to extraction and 40 days from extraction to analysis for soil samples and 5 days from sample receipt to extraction and 40 days from extraction to analysis for water samples. The technical holding times are 7 days from collection to extraction and 40 days to analysis for water samples and 14 days from collection to extraction and 40 days to analysis for soil samples.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No Aroclors were detected in the method or rinse blanks.

3. System Performance

The system performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument's daily performance is satisfactory.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The %RSD was within acceptable limits for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limits with the following exceptions:

Instrument HP2404 3/19/97 18:55 RTX-5

Aroclor 1016	25.0%
Aroclor 1260	20.0%

Since data from this column were used for confirmation of identification only, no data have been qualified based on the %D.

Instrument HP2402 3/19/97 18:55 RTX-35

Aroclor 1016	20.0%
Aroclor 1260	20.0%

Since neither of the listed Aroclors were detected in the associated samples and since the Aroclor responses were increasing, no data have been qualified based on the %D.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recovery for one surrogate was below control limits in sample A66172-F. Since recovery of the remaining surrogate was within control limits, no data have been qualified based on the deviation. All other sample surrogate recoveries were within control limits.

6. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All quantitated peaks fell within the appropriate retention time windows.

7. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All unfiltered matrix spike and matrix spike duplicate recoveries and the relative percent differences (RPDs) between recoveries were within control limits. The filtered matrix spike duplicate recovery was, however, above control limits. No data have been qualified based on matrix spike performance alone.

8. Field Duplicates

No field duplicates were included in this data set.

9. General Comments

All filter samples were air-dried prior to extraction and analysis.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

DATA REVIEW CHECKLIST

PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were recoveries of TCX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits? 1 out of 8			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? 0 out of 4			
Blanks			
Is a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?			X
Is the chromatographic performance acceptable for each instrument?	X		

a64153

PCB Data Review Checklist - Page 2

	YES	NO	NA
Do any method/reagent/instrument blanks have positive results?		X	
Do any field/rinse blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?	X		
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks			X
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?		X	
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?		X	
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			X

PCB Data Review Checklist - Page 3

	YES	NO	NA
PCB Identification			
Is an analytical data summary sheet present for all samples?	X		
Were all positively identified compounds confirmed on a second column?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			X
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Where field duplicates submitted with the samples?		X	

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
A66169			
A66169-F			
A66169-FIL			
A66170			
A66170-F			
A66171			
A66171-F			
A66171-FIL			
A66172			
A66172-MS			
A66172-MSD			
A66172-F		↓	
A66172-FMS			
A66172-FMSD			
A66172-FIL			
A66173			
A66173-F			
A66174			
A66174-F			
A66174-FIL			
A66175			
A66175-F			
A66175-FIL			
A66176			
A66176-F			
A66176-FIL			

Surrogate Standards:
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogates diluted out
↑ Recovery high
↓ Recovery low

* Unless otherwise noted, all parameters are within specified limits.

PCB Calibration Summary

Instrument: HP2404
Column: RTX-35

Date:	3/18/97-	3/19/97	3/19/97	3/19/97	3/19/97	3/19/97	3/19/97
Time:	3/19/97	0648	0706	1251	1319	1827	1855
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	r^2	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok						20.0
Aroclor 1221	--*						
Aroclor 1232	--*						
Aroclor 1242	ok		ok				
Aroclor 1248	ok	ok		ok		ok	
Aroclor 1254	ok				ok		20.0
Aroclor 1260	ok						
Tetrachloro-m-xylene	ok						
Decachlorobiphenyl	ok						
Affected Samples:							66172MS
							66172MS
							66172F
							66172F MS
							66172F MD
							66173
							66173F
							66174
							66175
							66175F
							66176
							66176F

* Multi-point standards analyzed; regression not calculated

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PCB Calibration Summary - Page 2

Instrument: HP2404
Column: RTX-35

Date:		3/20/97	3/20/97	3/20/97	3/20/97	3/21/97	3/21/97
Time:		0058	0126	0909	0937	1541	1609
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	r^2	%D	%D	%D	%D	%D	%D
Aroclor 1016							ok
Aroclor 1221							
Aroclor 1232							
Aroclor 1242			ok				
Aroclor 1248		ok		ok		ok	
Aroclor 1254					ok		
Aroclor 1260							ok
Tetrachloro-m-xylene							
Decachlorobiphenyl							
Affected Samples:							

a64153

PCB Calibration Summary - Page 3

Instrument: HP2404
Column: RTX-35

Date:		3/21/97	3/21/37	3/25/97	3/25/97	3/25/97	3/25/97
Time:		2021	2049	0942	1010	1202	1230
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	r^2	%D	%D	%D	%D	%D	%D
Aroclor 1016							
Aroclor 1221							
Aroclor 1232							
Aroclor 1242			ok		ok		
Aroclor 1248		ok		ok		25.0	
Aroclor 1254							ok
Aroclor 1260							
Tetrachloro-m-xylene							
Decachlorobiphenyl							
Affected Samples:						66174F	

a64153

CORRECTED ANALYSIS SUMMARY FORMS

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66169

KB8000014

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326783

Sample wt/vol: 985.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/06/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.051	U
11104-28-2	Aroclor-1221	0.051	U
11141-16-5	Aroclor-1232	0.051	U
53469-21-9	Aroclor-1242	0.078	
12672-29-6	Aroclor-1248	0.051	U
11097-69-1	Aroclor-1254	0.051	U
11096-82-5	Aroclor-1260	0.051	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66169F

KB80000015

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326784

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/06/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.073	
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66169FIL

KB8000016

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) SOIL Lab Sample ID: 326785

Sample wt/vol: 0.5 (g/mL) G Lab File ID: _____

% Moisture: 0 decanted: (Y/N) N Date Received: 03/06/97

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted: 03/17/97

Concentrated Extract Volume: 10 (mL) Date Analyzed: 03/21/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	1100	U
11104-28-2	Aroclor-1221	1100	U
11141-16-5	Aroclor-1232	1100	U
53469-21-9	Aroclor-1242	1100	U
12672-29-6	Aroclor-1248	1100	U
11097-69-1	Aroclor-1254	1100	U
11096-82-5	Aroclor-1260	1100	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66170

KB8000017

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326787

Sample wt/vol: 710.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/06/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.070	U
11104-28-2	Aroclor-1221	0.070	U
11141-16-5	Aroclor-1232	0.070	U
53469-21-9	Aroclor-1242	0.070	U
12672-29-6	Aroclor-1248	0.070	U
11097-69-1	Aroclor-1254	0.070	U
11096-82-5	Aroclor-1260	0.070	U

FORM 1

OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66170F

KB80000018

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326788

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/06/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66171

KB80000019

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326789

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/06/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.11	
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66171F

KB8000020

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326790

Sample wt/vol: 985.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/06/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.051	U
11104-28-2	Aroclor-1221	0.051	U
11141-16-5	Aroclor-1232	0.051	U
53469-21-9	Aroclor-1242	0.26	
12672-29-6	Aroclor-1248	0.051	U
11097-69-1	Aroclor-1254	0.051	U
11096-82-5	Aroclor-1260	0.051	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66171FIL

(B8000021

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) SOIL Lab Sample ID: 326791

Sample wt/vol: 0.3 (g/mL) G Lab File ID: _____

% Moisture: 0 decanted: (Y/N) N Date Received: 03/06/97

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted: 03/17/97

Concentrated Extract Volume: 10 (mL) Date Analyzed: 03/21/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	1800	U
11104-28-2	Aroclor-1221	1800	U
11141-16-5	Aroclor-1232	1800	U
53469-21-9	Aroclor-1242	1800	U
12672-29-6	Aroclor-1248	1800	U
11097-69-1	Aroclor-1254	1800	U
11096-82-5	Aroclor-1260	1800	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66172

KB80000022

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326792

Sample wt/vol: 980.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/06/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.10	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	1.0	
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Aroclor-1254	0.10	U
11096-82-5	Aroclor-1260	0.10	U

FORM 1

OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66172F

KB80000023

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326793

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/06/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.15	U
11104-28-2------	Aroclor-1221	0.15	U
11141-16-5------	Aroclor-1232	0.15	U
53469-21-9------	Aroclor-1242	1.1	
12672-29-6------	Aroclor-1248	0.15	U
11097-69-1------	Aroclor-1254	0.15	U
11096-82-5------	Aroclor-1260	0.15	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66172FIL

KB80000024

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) SOIL Lab Sample ID: 326794

Sample wt/vol: 0.3 (g/mL) G Lab File ID: _____

% Moisture: 0 decanted: (Y/N) N Date Received: 03/06/97

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted: 03/17/97

Concentrated Extract Volume: 10 (mL) Date Analyzed: 03/21/97

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	1400	U
11104-28-2	Aroclor-1221	1400	U
11141-16-5	Aroclor-1232	1400	U
53469-21-9	Aroclor-1242	1400	U
12672-29-6	Aroclor-1248	1400	U
11097-69-1	Aroclor-1254	1400	U
11096-82-5	Aroclor-1260	1400	U

FORM I

OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66173

KB80000025

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326795

Sample wt/vol: 685.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/06/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.073	U
11104-28-2	Aroclor-1221	0.073	U
11141-16-5	Aroclor-1232	0.073	U
53469-21-9	Aroclor-1242	0.28	
12672-29-6	Aroclor-1248	0.073	U
11097-69-1	Aroclor-1254	0.073	U
11096-82-5	Aroclor-1260	0.073	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66173F

KB80000026

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326796

Sample wt/vol: 985.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/06/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.051	U
11104-28-2	Aroclor-1221	0.051	U
11141-16-5	Aroclor-1232	0.051	U
53469-21-9	Aroclor-1242	0.20	
12672-29-6	Aroclor-1248	0.051	U
11097-69-1	Aroclor-1254	0.051	U
11096-82-5	Aroclor-1260	0.051	U

FORM I

OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66174

KB80000027

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326843

Sample wt/vol: 975.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/07/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.051	U
11104-28-2------	Aroclor-1221	0.051	U
11141-16-5------	Aroclor-1232	0.051	U
53469-21-9------	Aroclor-1242	0.26	
12672-29-6------	Aroclor-1248	0.051	U
11097-69-1------	Aroclor-1254	0.051	U
11096-82-5------	Aroclor-1260	0.051	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66174F

KB80000028

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326844

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/07/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/25/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.19	
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66174FIL

B80000029

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) SOIL Lab Sample ID: 326845

Sample wt/vol: 1.3 (g/mL) G Lab File ID: _____

% Moisture: 0 decanted: (Y/N) N Date Received: 03/07/97

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted: 03/17/97

Concentrated Extract Volume: 10(mL) Date Analyzed: 03/21/97

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	390	U
11104-28-2	Aroclor-1221	390	U
11141-16-5	Aroclor-1232	390	U
53469-21-9	Aroclor-1242	680	
12672-29-6	Aroclor-1248	390	U
11097-69-1	Aroclor-1254	390	U
11096-82-5	Aroclor-1260	390	U

FORM I

OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66175

KB80000030

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326849

Sample wt/vol: 985.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/07/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.051	U
11104-28-2	Aroclor-1221	0.051	U
11141-16-5	Aroclor-1232	0.051	U
53469-21-9	Aroclor-1242	0.28	
12672-29-6	Aroclor-1248	0.051	U
11097-69-1	Aroclor-1254	0.051	U
11096-82-5	Aroclor-1260	0.051	U

FORM I

OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66175F

KB80000031

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326850

Sample wt/vol: 975.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/07/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.051	U
11104-28-2	Aroclor-1221	0.051	U
11141-16-5	Aroclor-1232	0.051	U
53469-21-9	Aroclor-1242	0.20	
12672-29-6	Aroclor-1248	0.051	U
11097-69-1	Aroclor-1254	0.051	U
11096-82-5	Aroclor-1260	0.051	U

FORM I

OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66175FIL

KB8000032

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) SOIL Lab Sample ID: 326851

Sample wt/vol: 1.2 (g/mL) G Lab File ID: _____

% Moisture: 0 decanted: (Y/N) N Date Received: 03/07/97

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted: 03/17/97

Concentrated Extract Volume: 10(mL) Date Analyzed: 03/21/97

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	420	U
11104-28-2	Aroclor-1221	420	U
11141-16-5	Aroclor-1232	420	U
53469-21-9	Aroclor-1242	620	
12672-29-6	Aroclor-1248	420	U
11097-69-1	Aroclor-1254	420	U
11096-82-5	Aroclor-1260	420	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66176

KB80000033

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326852

Sample wt/vol: 980.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/07/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.15	U
11104-28-2	Aroclor-1221	0.15	U
11141-16-5	Aroclor-1232	0.15	U
53469-21-9	Aroclor-1242	0.99	
12672-29-6	Aroclor-1248	0.15	U
11097-69-1	Aroclor-1254	0.15	U
11096-82-5	Aroclor-1260	0.15	U

FORM I

OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66176F

KB80000034

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: 326853

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/07/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.10	U
11104-28-2	Aroclor-1221	0.10	U
11141-16-5	Aroclor-1232	0.10	U
53469-21-9	Aroclor-1242	0.34	
12672-29-6	Aroclor-1248	0.10	U
11097-69-1	Aroclor-1254	0.10	U
11096-82-5	Aroclor-1260	0.10	U

FORM I

OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66176FIL

KB8000035

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) SOIL Lab Sample ID: 326854

Sample wt/vol: 0.5 (g/mL) G Lab File ID: _____

% Moisture: 0 decanted: (Y/N) N Date Received: 03/07/97

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted:03/17/97

Concentrated Extract Volume: 10(mL) Date Analyzed: 03/21/97

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) NG	Q
12674-11-2	Aroclor-1016	960	U
11104-28-2	Aroclor-1221	960	U
11141-16-5	Aroclor-1232	960	U
53469-21-9	Aroclor-1242	2000	
12672-29-6	Aroclor-1248	960	U
11097-69-1	Aroclor-1254	960	U
11096-82-5	Aroclor-1260	960	U

TOTAL ORGANIC CARBON ANALYSES

Introduction

Analyses were performed according to the following methods:

Total Organic Carbon	EPA - Lloyd Kahn (filters) EPA SW-846 9060 (water)

The data review process is intended to evaluate data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate quality review prior to submission for review.

During the review process, laboratory data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, modified or deleted by the data reviewer. Results are qualified with the following codes in accordance with the National Functional Guidelines.

U The material was analyzed for, but was not detected. The associated value is either the sample quantitation limit or the sample detection limit depending on the method.

J The associated value is an estimated quantity.

UJ The material was analyzed for, but was not detected. The associated value is approximate and may or may not represent the actual limit of quantitation/detection.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Times

The QAPP-specified holding time for TOC analysis is 28 days from collection.

Samples A66169, A66169-F, A66170, A66170-F, A66171, and A66171-f were analyzed one day over the specified holding time. TOC data for these samples have been qualified as estimated based on the deviations. All other samples were analyzed within the specified holding time.

2. Calibration

The calibration data was acceptable.

3. Blank Contamination

No method blank contamination was reported. Measurable TOC was detected in both the filtered and unfiltered rinse blanks (see SDG# 64176). Based on the blank content, TOC data for samples A66172, A66173 and A66176 should be considered estimated with a potential high bias and TOC data for all filtered samples should be rejected.

4. Laboratory Duplicates

The laboratory duplicate results were acceptable.

5. Laboratory Control Sample (LCS)

All LCS recoveries were acceptable.

6. Field Duplicate

No field duplicates were included in this data set.

7. Overall Assessment

Other than for those deviations mentioned in this report, the analysis of the samples was in conformance with method specifications.

DATA REVIEW CHECKLIST

Supplemental Data Review Checklist

	YES	NO	NA
Data Completeness			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the methods utilized notated?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?	X		
Laboratory Duplicates			
Were duplicates analyzed and were the relative percent differences between results within acceptable limits?	X		
Laboratory Control Samples			
Were LCS analyzed and were recoveries within acceptable limits?	X		
Blanks			
Has a method blank been analyzed for each set of samples or for each 20 samples?	X		
Do any have results above the reporting limit?		X	
Do any trip/field/rinse blanks have positive results?	X		
Calibration			
Is the calibration acceptable?	X		
Raw Data			
Is raw data present and complete for all samples and QC?	X		
Compound Quantitation and Reported Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		

TOTAL ORGANIC CARBON RESULTS

Total Organic Carbon Results

Sample ID	Lab ID	Matrix	Results*
A66169	326783	water	20.2 mg/l
A66169-F	326784	filtered water	22.0 mg/l
A66169-FIL	326785	filter	<0.5 mg/kg
A66170	326787	water	16.7 mg/l
A66170-F	326788	filtered water	24.9 mg/l
A66171	326789	water	19.7 mg/l
A66171-F	326790	filtered water	27.6 mg/l
A66171-FIL	326791	filter	49.7 mg/kg
A66172*	326792	water	11.0 mg/l
A66172-F*	326793	filtered water	16.3 mg/l
A66172-FIL	326794	filter	33.1 mg/kg
A66173	326795	water	13.6 mg/l
A66173-F	326796	filtered water	17.0 mg/l
A66174	326843	water	20.6 mg/l
A66174-F	326844	filtered water	36.5 mg/l
A66174-FIL	326845	filter	204 mg/kg
A66175	326849	water	20.5 mg/l
A66175-F	326850	filtered water	36.8 mg/l
A66175-FIL	326851	filter	278 mg/kg
A66176	326852	water	14.2 mg/l
A66176-F	326853	filtered water	16.0 mg/l
A66176-FIL	326854	filter	462 mg/kg

All filter samples were air-dried prior to analysis.

ITS Intertek Testing Services
Environmental Laboratories

April 7, 1997

Ms. Laurie Indick
Blasland & Bouck Engineers
6723 Towpath Road
Box 66
Syracuse, NY 13214

Re: Laboratory Project No. 91082
Case No. PCB; SDG 64153

Dear Ms. Indick:

Enclosed are the analytical results of samples received intact by ITS Environmental Laboratories on March 06, and 07, 1997. Laboratory numbers and quality control samples have been assigned and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 03/06/97	ETR No: 64153	
326783	A66169	03/04/97	Liquid
326784	A66169F	03/04/97	Filtrate
326785	A66169FIL	03/04/97	Filters
326786	A66169-06	03/04/97	Filter
326787	A66170	03/04/97	Liquid
326788	A66170F	03/04/97	Filtrate
326789	A66171	03/04/97	Liquid
326790	A66171F	03/04/97	Filtrate
326791	A66171FIL	03/04/97	Filters
326792	A66172	03/05/97	Liquid
326792MS	A66172MS	03/05/97	Liquid
326792MD	A66172MSD	03/05/97	Liquid
326792DP	A66172REP	03/05/97	Liquid
326793	A66172F	03/05/97	Filtrate
326793MS	A66172FMS	03/05/97	Filtrate
326793MD	A66172FMSD	03/05/97	Filtrate
326793DP	A66172FREP	03/05/97	Filtrate
326794	A66172FIL	03/05/97	Filters

Intertek Testing Services NA Inc.
55 South Park Drive Colchester, VT 05446
Telephone (802) 655-1203 Fax (802) 655-1248

Lab ID	Client Sample ID	Sample Date	Sample Matrix
Received: 03/06/97 ETR No: 64153 (Continued)			
326795	A66173	03/05/97	Liquid
326796	A66173F	03/05/97	Filtrate
Received: 03/07/97 ETR No: 64163			
326843	A66174	03/05/97	Liquid
326844	A66174F	03/05/97	Filtrate
326845	A66174FIL	03/05/97	Filters
326846	A66174-28	03/05/97	Filter
326847	A66170-7	03/04/97	Filter
326848	A66173-17	03/05/97	Filter
326849	A66175	03/05/97	Liquid
326850	A66175F	03/05/97	Filtrate
326851	A66175FIL	03/05/97	Filters
326852	A66176	03/06/97	Liquid
326853	A66176F	03/06/97	Filtrate
326854	A66176FIL	03/06/97	Filters

The TOC analysis of samples A66169, A66169F, A66170, A66170F, A66171 and A66171F occurred one day beyond the prescribed holding time due to previous instrument failures.

For the benefit of interested parties, documentation of sample handling and preparation is included at the end of the "Sample Data Package." Colored sheets of paper entitled "Sample Preparation" and "Sample Handling" have been used to explicitly mark the location of these documents.

If there are any questions regarding this submittal, please contact James W. Madison at (802) 655-1203.

Sincerely,

Karen R. Chirgwin

Karen R. Chirgwin
Laboratory Operations director

FORM 2
WATER OTHER SURROGATE RECOVERY

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

GC Column(1): RTX-5 ID: 0.25 (mm) GC Column(2): RTX-35 ID: 0.25 (mm)

	CLIENT SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK7Q	71	67	74	70			0
02	PBLKQ7	69	66	71	67			0
03	Q7MBS	81	81	88	79			0
04	A66169	75	74	100	80			0
05	A66169F	81	79	90	82			0
06	A66170	82	82	90	83			0
07	A66170F	79	79	88	82			0
08	A66171	84	82	94	89			0
09	A66171F	74	74	88	84			0
10	A66172	77	76	90	85			0
11	A66172MS	70	68	76	75			0
12	A66172MSD	69	67	76	76			0
13	A66172F	59D	57D	64	64			0
14	A66172FMS	72	69	70	68			0
15	A66172FMSD	72	66	75	71			0
16	A66173	82	80	86	81			0
17	A66173F	76	75	84	83			0
18	A66174	75	75	78	74			0
19	A66175	88	88	93	92			0
20	A66175F	84	83	94	93			0
21	A66176	74	71	76	73			0
22	A66176F	73	74	82	80			0
23	A66174F	64	68	62	71			0
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (60-140)
S2 (DCB) = Decachlorobiphenyl (60-140)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 2
SOIL OTHER SURROGATE RECOVERY

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

GC Column(1): RTX-5 ID: 0.25 (mm) GC Column(2): RTX-35 ID: 0.25 (mm)

	CLIENT SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKS4	85	86	89	104			0
02	S4LCS	70	60	33D	50D			0
03	A66169FIL	83	84	78	87			0
04	A66171FIL	88	89	80	88			0
05	A66172FIL	86	86	78	86			0
06	A66174FIL	83	83	91	93			0
07	A66175FIL	85	85	95	89			0
08	A66176FIL	91	89	90	91			0
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
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24								
25								
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27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (60-140)
S2 (DCB) = Decachlorobiphenyl (60-140)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
WATER OTHER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix Spike - Sample No.: A66172

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Aroclor-1242	0.51	1.0	1.6	118	60-140
Aroclor-1254	0.51	0.00	0.56	110	60-140

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1242	0.50	1.7	140	17	30	60-140
Aroclor-1254	0.50	0.59	118	7	30	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

COMMENTS: _____

FORM 3
WATER OTHER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix Spike - Sample No.: A66172F

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Aroclor-1242	0.51	1.1	1.8	137	60-140
Aroclor-1254	0.51	0.00	0.57	112	60-140

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1242	0.51	1.9	157*	14	30	60-140
Aroclor-1254	0.51	0.59	116	4	30	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 1 out of 4 outside limits

COMMENTS:

FORM 3
WATER OTHER BLANK SPIKE RECOVERY

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 54153

Matrix Spike - Sample No.: Q7MBS

COMPOUND	SPIKE ADDED (ug/L)	BLANK CONCENTRATION (ug/L)	BS CONCENTRATION (ug/L)	BS % REC #	QC. LIMITS REC.
Aroclor-1242	0.50		0.46	92	60-140
Aroclor-1254	0.50		0.54	108	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

C00109

FORM 3
SOIL OTHER LAB CONTROL SAMPLE

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix Spike - Sample No.: S4LCS

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENTRATION (ug/Kg)	LCS CONCENTRATION (ug/kg)	LCS % REC #	QC. LIMITS REC.
Aroclor-1242	50000		44000	88	60-140
Aroclor-1254	50000		47000	94	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLK7Q

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Lab Sample ID: PBLK7Q Lab File ID: _____

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 03/11/97

Date Analyzed (1): 03/19/97 Date Analyzed (2): 03/19/97

Time Analyzed (1): 0744 Time Analyzed (2): 0744

Instrument ID (1): 2404_2 Instrument ID (2): 2404_1

GC Column (1): RTX-35 ID: 0.25(mm) GC Column (2): RTX-5 ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66171	326789	03/19/97	03/19/97
02	A66171F	326790	03/19/97	03/19/97
03	A66172	326792	03/19/97	03/19/97
04	A66172MS	326792MS	03/19/97	03/19/97
05	A66172MSD	326792MD	03/19/97	03/19/97
06	A66172F	326793	03/19/97	03/19/97
07	A66172FMS	326793MS	03/19/97	03/19/97
08	A66172FMSD	326793MD	03/19/97	03/19/97
09	A66173F	326796	03/19/97	03/19/97
10	A66174	326843	03/19/97	03/19/97
11	A66175	326849	03/19/97	03/19/97
12	A66175F	326850	03/19/97	03/19/97
13	A66176	326852	03/19/97	03/19/97
14	A66176F	326853	03/19/97	03/19/97
15	A66174F	326844	03/25/97	03/25/97
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: _____

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLKQ7

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Lab Sample ID: PBLKQ7 Lab File ID: _____

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 03/11/97

Date Analyzed (1): 03/19/97 Date Analyzed (2): 03/19/97

Time Analyzed (1): 0812 Time Analyzed (2): 0812

Instrument ID (1): 2404_2 Instrument ID (2): 2404_1

GC Column (1): RTX-35 ID: 0.25(mm) GC Column (2): RTX-5 ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	Q7MBS	Q7MSB	03/19/97	03/19/97
02	A66169	326783	03/19/97	03/19/97
03	A66169F	326784	03/19/97	03/19/97
04	A66170	326787	03/19/97	03/19/97
05	A66170F	326788	03/19/97	03/19/97
06	A66173	326795	03/19/97	03/19/97
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: _____

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLKS4

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Lab Sample ID: PBLKS4 Lab File ID: _____

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) OTHER

Sulfur Cleanup (Y/N) N Date Extracted: 03/17/97

Date Analyzed (1): 03/21/97 Date Analyzed (2): 03/21/97

Time Analyzed (1): 1005 Time Analyzed (2): 1005

Instrument ID (1): 2404_2 Instrument ID (2): 2404_1

GC Column (1): RTX-35 ID: 0.25(mm) GC Column (2): RTX-5 ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	S4LCS	S4LCS	03/21/97	03/21/97
02	A66169FIL	326785	03/21/97	03/21/97
03	A66171FIL	326791	03/21/97	03/21/97
04	A66172FIL	326794	03/21/97	03/21/97
05	A66174FIL	326845	03/21/97	03/21/97
06	A66175FIL	326851	03/21/97	03/21/97
07	A66176FIL	326854	03/21/97	03/21/97
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: _____

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLKQ7

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: PBLKQ7

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLK7Q

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) WATER Lab Sample ID: PBLK7Q

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/11/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.050	U
11104-28-2------	Aroclor-1221	0.050	U
11141-16-5------	Aroclor-1232	0.050	U
53469-21-9------	Aroclor-1242	0.050	U
12672-29-6------	Aroclor-1248	0.050	U
11097-69-1------	Aroclor-1254	0.050	U
11096-82-5------	Aroclor-1260	0.050	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLKS4

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Matrix: (soil/water) SOIL Lab Sample ID: PBLKS4

Sample wt/vol: 1.0 (g/mL) G Lab File ID: _____

% Moisture: 0 decanted: (Y/N) N Date Received: _____

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted:03/17/97

Concentrated Extract Volume: 10(mL) Date Analyzed: 03/21/97

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	500	U
11104-28-2------	Aroclor-1221	500	U
11141-16-5------	Aroclor-1232	500	U
53469-21-9------	Aroclor-1242	500	U
12672-29-6------	Aroclor-1248	500	U
11097-69-1------	Aroclor-1254	500	U
11096-82-5------	Aroclor-1260	500	U

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-5 ID: 0.25 (mm) Calibration Time(s): 1210 0140

LAB FILE ID: RF2: 18MAR971045-IRF4: 18MAR971045-IRF8: 18MAR971045-I
RF16: 18MAR971045-RF32: 18MAR971045-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016	434.360	406.090	366.205	338.702	308.559
(2)	336.620	306.830	274.625	249.422	227.634
(3)	215.180	193.800	173.345	158.080	143.792
(4)	261.840	237.920	209.930	190.875	171.712
(5)	261.000	242.460	214.155	195.992	174.914
Aroclor-1221					
(2)					
(3)					
(4)					
(5)					
Aroclor-1232					
(2)					
(3)					
(4)					
(5)					
Aroclor-1242	256.920	235.560	213.605	193.928	176.945
(2)	330.040	295.210	270.170	245.112	223.806
(3)	100.940	88.410	83.275	76.490	71.669
(4)	702.540	638.850	594.185	551.550	512.359
(5)	249.400	226.890	211.500	196.245	182.836
Aroclor-1248	206.200	184.220	166.945	149.708	135.785
(2)	424.100	377.780	341.585	306.612	279.656
(3)	346.180	306.780	274.775	248.365	227.586
(4)	457.340	406.260	368.975	334.710	311.051
(5)	142.920	121.520	108.430	97.285	89.070
Aroclor-1254	284.440	249.220	221.620	200.635	187.329
(2)	230.300	211.960	186.825	168.280	157.248
(3)	409.520	376.930	353.525	324.662	310.272
(4)	751.380	685.170	627.440	573.565	554.961
(5)	169.940	159.080	148.975	136.672	130.169
Aroclor-1260	362.980	348.300	311.745	289.468	264.155
(2)	215.720	205.200	181.005	170.670	153.094
(3)	711.780	679.540	609.880	583.570	546.549
(4)	187.060	178.390	158.995	150.168	134.902
(5)	183.320	176.580	156.805	145.942	133.049
Tetrachloro-m-xylene	13673.200	12781.900	11835.500	11148.475	10599.100

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-5 ID: 0.25 (mm) Calibration Time(s): 1210 0140

LAB FILE ID: RF2: 18MAR971045-IRF4: 18MAR971045-IRF8: 18MAR971045-I
RF16: 18MAR971045-RF32: 18MAR971045-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	6435.400	5665.900	4944.050	4479.250	4125.638

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-5 ID: 0.25 (mm) Calibration Time(s): 1210 0140

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR	-36.773812	298.693836	0.998
(2)	LINR	-40.910000	219.000000	0.998
(3)	LINR	-41.419050	138.338545	0.998
(4)	LINR	-45.137870	164.775444	0.998
(5)	LINR	-44.734654	168.269436	0.997
Aroclor-1221	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1232	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1242	LINR	-39.619296	170.614153	0.998
(2)	LINR	-39.634523	215.737849	0.998
(3)	LINR	-30.768478	69.5334267	0.999
(4)	LINR	-30.680077	498.036755	0.999
(5)	LINR	-29.973833	177.793683	0.999
Aroclor-1248	LINR	-43.867318	130.349421	0.998
(2)	LINR	-42.877700	268.461282	0.998
(3)	LINR	-41.844895	218.480930	0.999
(4)	LINR	-37.018629	299.703218	0.999
(5)	LINR	-45.216530	85.1052738	0.999
Aroclor-1254	LINR	-38.783548	179.816394	0.999
(2)	LINR	-38.469492	151.052535	0.999
(3)	LINR	-25.720293	302.011532	1.000
(4)	LINR	-26.173486	538.394036	1.000
(5)	LINR	-26.138810	126.735737	0.999
Aroclor-1260	LINR	-35.599915	256.041151	0.998
(2)	LINR	-38.093898	148.379504	0.998
(3)	LINR	-25.970375	533.491086	0.999
(4)	LINR	-36.537726	130.998724	0.998
(5)	LINR	-35.984081	128.908243	0.998
Tetrachloro-m-xylene	LINR	-2.3583734	10352.7949	1.000

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-5 ID: 0.25 (mm) Calibration Time(s): 1210 0140

COMPOUND	CURVE	COEFFICENTS A0	COEFFICENTS A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-4.3099068	3947.54936	0.999

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-35 ID: 0.25 (mm) Calibration Time(s): 1210 0140

LAB FILE ID: RF2: 18MAR971045-IRF4: 18MAR971045-IRF8: 18MAR971045-I
RF16: 18MAR971045-RF32: 18MAR971045-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016	97.540	93.020	85.735	79.000	72.662
(2)	124.080	115.550	104.770	95.120	86.012
(3)	143.720	134.510	121.350	110.812	99.629
(4)	115.860	110.370	99.870	91.482	82.244
(5)	132.560	126.320	113.960	104.472	93.000
Aroclor-1221					
(2)					
(3)					
(4)					
(5)					
Aroclor-1232					
(2)					
(3)					
(4)					
(5)					
Aroclor-1242	146.960	134.200	123.440	111.845	101.772
(2)	358.660	333.520	312.210	287.968	267.989
(3)	170.620	152.670	140.420	127.085	116.466
(4)	123.000	111.600	106.005	99.310	93.031
(5)	132.340	117.190	106.490	95.605	86.318
Aroclor-1248	132.320	117.400	107.340	96.258	86.401
(2)	90.500	82.520	76.540	70.498	64.778
(3)	241.420	218.650	204.425	185.208	169.436
(4)	101.060	84.560	78.370	73.250	65.124
(5)	166.660	152.070	143.830	132.515	121.998
Aroclor-1254	114.700	105.840	97.670	89.650	84.340
(2)	190.380	177.970	171.045	161.170	154.935
(3)	385.740	354.310	324.980	302.772	291.454
(4)	278.440	259.620	239.830	222.662	212.842
(5)	276.680	260.750	243.820	226.532	217.512
Aroclor-1260	204.560	198.120	177.175	166.402	150.370
(2)	435.200	429.420	390.125	374.962	345.955
(3)	141.580	137.150	124.035	118.450	108.738
(4)	249.700	247.260	227.565	219.275	202.999
(5)	106.600	106.480	98.500	96.398	88.622
Tetrachloro-m-xylene	7806.600	7415.400	7038.100	6601.700	6293.525

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-35 ID: 0.25 (mm) Calibration Time(s): 1210 0140

LAB FILE ID: RF2: 18MAR971045-IRF4: 18MAR971045-IRF8: 18MAR971045-I
RF16: 18MAR971045-RF32: 18MAR971045-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	5000.400	4548.400	4079.150	3766.175	3492.612

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-35 ID: 0.25 (mm) Calibration Time(s): 1210 0140

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR	-32.946060	70.5976911	0.998
(2)	LINR	-40.878412	82.9751818	0.998
(3)	LINR	-41.363569	96.1596562	0.997
(4)	LINR	-39.975902	79.5437625	0.997
(5)	LINR	-42.050265	89.8968220	0.997
Aroclor-1221	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1232	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1242	LINR	-39.339642	98.2493708	0.998
(2)	LINR	-30.045725	260.732582	0.999
(3)	LINR	-38.821508	112.314749	0.998
(4)	LINR	-26.067621	90.8507636	0.999
(5)	LINR	-44.693107	82.8490867	0.998
Aroclor-1248	LINR	-45.418639	82.9714504	0.997
(2)	LINR	-34.136406	62.8274126	0.998
(3)	LINR	-37.116077	163.895031	0.998
(4)	LINR	-41.372631	62.9428647	0.997
(5)	LINR	-32.039688	118.647050	0.998
Aroclor-1254	LINR	-30.094803	81.8507068	0.999
(2)	LINR	-18.663089	152.095571	1.000
(3)	LINR	-24.050663	283.780907	1.000
(4)	LINR	-24.898190	207.340028	1.000
(5)	LINR	-22.676117	212.396371	1.000
Aroclor-1260	LINR	-35.478594	146.076778	0.998
(2)	LINR	-26.180078	338.792236	0.999
(3)	LINR	-28.984924	106.182303	0.998
(4)	LINR	-24.080478	199.253187	0.999
(5)	LINR	-22.500019	87.2992431	0.998
Tetrachloro-m-xylene	LINR	-2.1323546	6166.17209	1.000

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-35 ID: 0.25 (mm) Calibration Time(s): 1210 0140

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-3.4939402	3375.23053	0.999

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/19/97 Time: 0648

Lab File ID: 18MAR971056-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/19/97 Time: 0716

Lab File ID: 18MAR971056-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1910 2101

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/19/97 Time: 1251

Lab File ID: 18MAR971111-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/19/97 Time: 1319

Lab File ID: 18MAR971111-I1 Init. Calib. Date(s): 03/18/97 03/19/97

Heated Purge: (Y/N) N Init. Calib. Times: 2349 0140

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/19/97 Time: 1827

Lab File ID: 18MAR971111-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/19/97 Time: 1855

Lab File ID: 18MAR971111-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1210 1402

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	250	200	LINR	25.0	15.0
Aroclor-1260	240	200	LINR	20.0	15.0
Tetrachloro-m-xylene	23	20	LINR	15.0	15.0
Decachlorobiphenyl	23	20	LINR	15.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/20/97 Time: 0058

Lab File ID: 19MAR971322-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/20/97 Time: 0126

Lab File ID: 19MAR971322-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1910 2101

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/21/97 Time: 0909

Lab File ID: 21MAR970744-I0 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	17	20	LINR	15.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/21/97 Time: 0937

Lab File ID: 21MAR970744-I0 Init. Calib. Date(s): 03/18/97 03/19/97

Heated Purge: (Y/N) N Init. Calib. Times: 2349 0140

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	170	200	LINR	15.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	17	20	LINR	15.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/21/97 Time: 1541

Lab File ID: 21MAR970944-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/21/97 Time: 1609

Lab File ID: 21MAR970944-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1210 1402

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	220	200	LINR	10.0	15.0
Aroclor-1260	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/21/97 Time: 2021

Lab File ID: 21MAR970944-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/21/97 Time: 2049

Lab File ID: 21MAR970944-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1910 2101

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/25/97 Time: 0942

Lab File ID: 25MAR970838-I0 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	180	200	LINR	10.0	15.0
Tetrachloro-m-xylene	19	20	LINR	5.0	15.0
Decachlorobiphenyl	14	20	LINR	30.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/25/97 Time: 1010

Lab File ID: 25MAR970838-I0 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1910 2101

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	170	200	LINR	15.0	15.0
Tetrachloro-m-xylene	19	20	LINR	5.0	15.0
Decachlorobiphenyl	13	20	LINR	35.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/25/97 Time: 1202

Lab File ID: 25MAR970838-I0 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	190	200	LINR	5.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	17	20	LINR	15.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_1 Calibration Date: 03/25/97 Time: 1230

Lab File ID: 25MAR970838-I0 Init. Calib. Date(s): 03/18/97 03/19/97

Heated Purge: (Y/N) N Init. Calib. Times: 2349 0140

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	140	200	LINR	30.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	17	20	LINR	15.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/19/97 Time: 0648

Lab File ID: 18MAR971056-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/19/97 Time: 0716

Lab File ID: 18MAR971056-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1910 2101

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/19/97 Time: 1251

Lab File ID: 18MAR971111-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/19/97 Time: 1319

Lab File ID: 18MAR971111-I1 Init. Calib. Date(s): 03/18/97 03/19/97

Heated Purge: (Y/N) N Init. Calib. Times: 2349 0140

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/19/97 Time: 1827

Lab File ID: 18MAR971111-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/19/97 Time: 1855

Lab File ID: 18MAR971111-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1210 1402

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	240	200	LINR	20.0	15.0
Aroclor-1260	240	200	LINR	20.0	15.0
Tetrachloro-m-xylene	23	20	LINR	15.0	15.0
Decachlorobiphenyl	23	20	LINR	15.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/20/97 Time: 0058

Lab File ID: 19MAR971322-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/20/97 Time: 0126

Lab File ID: 19MAR971322-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1910 2101

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/21/97 Time: 0909

Lab File ID: 21MAR970744-I0 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/21/97 Time: 0937

Lab File ID: 21MAR970744-I0 Init. Calib. Date(s): 03/18/97 03/19/97

Heated Purge: (Y/N) N Init. Calib. Times: 2349 0140

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/21/97 Time: 1541

Lab File ID: 21MAR970944-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/21/97 Time: 1609

Lab File ID: 21MAR970944-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1210 1402

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	230	200	LINR	15.0	15.0
Aroclor-1260	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/21/97 Time: 2021

Lab File ID: 21MAR970944-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/21/97 Time: 2049

Lab File ID: 21MAR970944-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1910 2101

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/25/97 Time: 0942

Lab File ID: 25MAR970838-I0 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	19	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/25/97 Time: 1010

Lab File ID: 25MAR970838-I0 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1910 2101

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	19	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/25/97 Time: 1202

Lab File ID: 25MAR970838-I0 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	250	200	LINR	25.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64153

Instrument ID: 2404_2 Calibration Date: 03/25/97 Time: 1230

Lab File ID: 25MAR970838-I0 Init. Calib. Date(s): 03/18/97 03/19/97

Heated Purge: (Y/N) N Init. Calib. Times: 2349 0140

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	180	200	LINR	10.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

BBL
MAIN AND BOUCK & LEE, INC.
engineers & scientists
6723 Towpath Road, P.O. Box 66
Syracuse, New York 13214-0066
TEL: (315) 446-9120

CHAIN OF CUSTODY RECORD

000005

PROJ. NO.: 645 51 50
PROJECT NAME: Allied Oil
SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	PCB-Total	PCB-Filtered*	TOC	DOC*	PCB/TOC		REMARKS
MW-25	3/4/97	15:20		x	A66170	8	2	2	2	2			
													Filter Weights
MW-120B	3/4/97	17:45		x	A66171	8	2	2	2	2			
MW-120B	3/4/97	17:45		x	A66171-08	1					1		1.1009 grams
MW-120B	3/4/97	17:45		x	A66171-09	1					1		1.1070 grams
MW-120B	3/4/97	17:45		x	A66171-10	1					1		1.1030 grams
MW-120B	3/4/97	17:45		x	A66171-12	1					1		1.1073 grams
													Composite and analyze for PCB + TOC
													* Please note PCB filtered + DOC samples were filtered in the field

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	3/5/97	18:00					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			[signature]	3/6/97	0930	To: ITS Labs Fed Ex # 3370501201	

10/23/95
5951188L.CDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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engineers & scientists
6723 Towpath Road, P.O. Box 66
Syracuse, New York 13214-0066
TEL: (315) 446-9120

CHAIN OF CUSTODY RECORD

000006

PROJ. NO.: 645.51.520
PROJECT NAME: Allied Oil
SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	PCB-Total	PCB-Filtered*	TOC	DOC*	MS/MSD	PCB/TOC	REMARKS
													Filter Weights
MW-121A	3/5/97	10:30		x	A66176	24	6	6	6	6	x		
MW-121A	3/5/97	10:30		x	A66172-13	1						1	1.0951 grams
MW-121A	3/5/97	10:30		x	A66172-14	1						1	1.1005 grams
MW-121A	3/5/97	10:30		x	A66172-15	1						1	1.0974 grams
MW-121A	3/5/97	10:30		x	A66172-16	1						1	1.0964 grams
MW-121B	3/5/97	13:30		x	A66173	8	2	2	2	2			

Composite [redacted] and analyze for PCB+TOC

* Please note PCB-Filtered + DOC samples were filtered in the field

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	3/5/97	18:00					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks:	
			[signature]	3/6/97	0930	To: ITS Labs Fed. Ex # 33+0501201	

10/23/95

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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6723 Towpath Road, P.O. Box 66
Syracuse, New York 13214-0066
TEL: (315) 446-9120

CHAIN OF CUSTODY RECORD

000007

PROJ. NO.	PROJECT NAME
645.51.500	Allied Oil

SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	PCB Total	PCB Filtered*	TOC	DOC*	PCB/TOC		REMARKS
													Filter Weights
D1	3/5/97	—		X	A66175	8	2	2	2	2			
D1	3/5/97	—		X	A66175-19	1					1		1.0978 grams
D1	3/5/97	—		X	A66175-21	1					1		1.0957 grams
D1	3/5/97	—		X	A66175-23	1					1		1.0995 grams
D1	3/5/97	—		X	A66175-25	1					1		1.0941 grams
D1	3/5/97	—		X	A66175-27	1					1		1.0992 grams
MW-22A	3/6/97	9:00		X	A66176-[redacted]	3	2	2	2	2			Filter Weights
MW-22A	3/6/97	9:00		X	A66176-[redacted]29	1					1		1.1022 grams
MW-22A	3/6/97	9:00		X	A66176-[redacted]30	1					1		1.0981 grams
MW-22A	3/6/97	9:00		X	A66176-[redacted]31	1					1		1.0929 grams
MW-22A	3/6/97	9:00		X	A66176-32	1					1		1.0952 grams
													* Please note PCB Filtered & DOC
													samples were filtered in the field

Composite and analyze for PCB & TOC

Composite and analyze for PCB & TOC

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	3/6/97	10:00					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks: To ITS Labs Fed. Ex # 3370501212	
			[signature]	3/7/97	0915		

10/23/95
5951188L.CDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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engineers & scientists
6723 Towpath Road, P.O. Box 66
Syracuse, New York 13214-0066
TEL: (315) 446-9120

CHAIN OF CUSTODY RECORD

000008

PROJ. NO.	PROJECT NAME
645.51500	Allied Oil

SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	PCB - Total	PCB - Filtered *	TOC	DOC *	PCB/TOC	Microscopic Analysis	REMARKS
													Filter Weights
MW-126A	3/5/97	16 30		x	AL6174	8	2	2	2	2			
MW-126A	3/5/97	16 30		x	AL6174-18	1					1		1.0931 grams
MW-126A	3/5/97	16 30		x	AL6174-20	1					1		1.0961 grams
MW-126A	3/5/97	16 30		x	AL6174-22	1					1		1.0993 grams
MW-126A	3/5/97	16 30		x	AL6174-24	1					1		1.0972 grams
MW-126A	3/5/97	16 30		x	AL6174-26	1					1		1.0993 grams
MW-126A	3/5/97	16 30		x	AL6174-28	1						1	1.1043 grams - Please Archive
MW-25	3/4/97	13 20		x	AL6170-07	1						1	1.1326 grams - Please Archive
MW-121B	3/5/97	13 30		x	AL6173-17	1						1	1.1019 grams - Please Archive
													* Please note PCB, Filtered + DOC
													samples were filtered in the field

Composite + Analyze for PCB + TOC

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	3/6/97	13 00					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks: To ITS Labs Fed Ex # 3370501212	
			[signature]	3/7/97	0915		

10/23/95
50511991.CDR

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

INCHCAPE TESTING SERVICES ENVIRONMENTAL LABORATORIES LOG-IN SHEET

Lab Name: Inchcape Testing Services Environmental Laboratories - Burlington, VT Page 1 of 1

Received By (Print Name): DONALD C. DAWICKI JR. Log-in Date: 3/7/97

Received By (Signature):

Case Number: PCB

Sample Delivery Group No: 64153

ETR Number: 64153

REMARKS:

1. Custody Seal ~~Present~~/~~Absent~~*
   Intact/~~Broken~~
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records ~~Present~~/~~Absent~~*
4. Sample Information Sheets ~~Present~~/~~Absent~~*
5. Airbill ~~Airbill~~/~~Sticker~~
   ~~Present~~/~~Absent~~*
6. Airbill No.: 3370501201
7. Sample Tags ~~Present~~/~~Absent~~*
   Sample Tag Numbers ~~Listed~~/~~Not Listed~~ on Chain-of-Custody
8. Sample Condition: Intact/~~Broken~~*
   ~~Leaking~~
9. Does information on the custody records, sample information sheets, sample tags and labels agree?
   Yes/No*
10. Date Received at Lab: 3/6/97
11. Time Received: 0930
12. Cooler Temperature: 3°C 3°C

Sample Transfer

Fraction: ALL

Area #: LVL 4 FATDUE

By: DCD

On: 3/6/97

CORRESPONDING			
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66169	N/A	326783	Were air bubbles present
A66169F	"	326784	in any VOA vials? N/A
A66169FIL	"	326785	SAMPLES RECVD
A66169-06	"	326786	INTACT IN
A66170	"	326787	COOLERS W/ICE.
A66170F	"	326788	COOLERS WERE
A66171	"	326789	INTACT AS
A66171F	"	326790	WERE CUSTODY
A66171FIL	"	326791	SEALS ON OUTSIDE
A66172	"	326792	OF COOLERS.
A66172F	"	326793	ADDED "FIL" TO
A66172FIL	"	326794	INDICATE FILTERS.
A66173	"	326795	AND "F" TO INDICATE
A66173F	"	326796	FILTRATE.

DD 3/6/97

* Contact Project Director

Reviewed by: _____ Logbook No.: _____

Date: _____ Logbook Page No.: 00097[illegible]

INCHCAPE TESTING SERVICES ENVIRONMENTAL LABORATORIES LOG-IN SHEET

Lab Name: Inchcape Testing Services Environmental Laboratories - Burlington, VT Page 1 of 1

Received By (Print Name): DONALD C. DAWICKI JR. Log-in Date: 3/7/97

Received By (Signature):

Case Number: PCB

Sample Delivery Group No: 64153

ETR Number: 04163

REMARKS:

1. Custody Seal ~~Present/Absent*~~ Intact/Broken
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records ~~Present/Absent*~~
4. Sample Information Sheets ~~Present/Absent*~~
5. Airbill ~~Airbill/Sticker~~ ~~Present/Absent*~~
6. Airbill No.: 3370501212
7. Sample Tags ~~Present/Absent*~~ Sample Tag Numbers ~~Listed/Not Listed~~ on Chain-of-Custody
8. Sample Condition: Intact/Broken* ~~Leaking~~
9. Does information on the custody records, sample information sheets, sample tags and labels agree? Yes/No* SEE REMARKS
10. Date Received at Lab: 3/7/97
11. Time Received: 0915
12. Cooler Temperature: 4°C

Sample Transfer

Fraction: ALL

Area #: LVL 4 FRIDGE

By: DW

On: 3/7/97

CORRESPONDING			
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66174	N/A	326843	Were air bubbles present
A66174F	"	326844	in any VOA vials? N/A
A66174FIL	"	326845	SAMPLES RECVD
A66174-38	"	326846	INTACT IN COOLER
A66170-7	"	326847	W/ICE. COOLER
A66173-17	"	326848	WAS INTACT
A66175	"	326849	AS WERE CUSTODY
A66175F	"	326850	SEALS ON OUTSIDE
A66175FIL	"	326851	OF COOLER.
A66176	"	326852	ADDED "FIL" TO
A66176F	"	326853	INDICATE FILTERS.
A66176FIL	"	326854	ADDED "F" TO INDICATE
		~~326855~~ 3/10/97	FILTRATE.
		326856	* SAMPLE LISTED
		(1)	ON CONTAINER AS
			A66172-17 IS
			ON COC AS A66173-17.
			BASED ON INFO ON
			COC AND BOTTLE SAMPLE
			IS A66173-17. ALSO
			FOR THIS SAMPLE
			TIME ON BOTTLE DOES NOT AGREE
			W/COC.
		(2)	SAMPLE W/ NUMBER
			ON JAR AS A66174-19
			IS ACTUALLY A66175-19.
			3/7/97

* Contact Project Director

Reviewed by: _____ Logbook No.: _____

Date: _____ Logbook Page No.: 0009.3

METHOD: 8080_PCB:EXW MATRIX: WATER LEVEL: LOW BATCH ID: 9WT

CLIENT(s): BLAB02

CASE: PCB

SDG: 64153

DATE: 3/11/97

ANALYST: JD, MSK

SPIKED BY: JD

WITNESSED BY:

ETR: 64153, 64163

325/12

Lab sample id (ETR)	Client id	Sample Volume (1000ml)	pH between 5 and 9 1.	100 ul 0.2 ppm TCX/DCB surr. Surr lot# E0128 9702 2.	100 ul 6.0 ppm AR1242/1254 matrix Mtx lot# E0310 9701 3.	Extract 3x with 60 ml CH2Cl2 CH2Cl2 lot# L05289 4.	Hex exchange Hexane lot# L04312 5.	Conc to 2-3 ml 6.	Sulfuric Acid Clean-up H2SO4 Lot# K2 0323 7.	Conc to 1.0ml 8.	3 gm silica gel clean-up Silica gel Lot# 014589 9.	Conc to 1.0ml 10.	
PBLKQ7		1000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	JD
326783		985		✓									
326784		990		✓									
326787		710		✓									
326788		990		✓									
326789		990		✓									
326790		985		✓									
326792		980		✓									
326792MS		985		✓	✓								
326792MD		990		✓	✓								
326793		990		✓									
326793MS		980		✓	✓								
326793MD		980		✓	✓								
326795		685		✓									
326796		985		✓									
326843		975		✓									
326844		990		✓									
326849		985		✓									
326850		975		✓									
326852		980		✓									
326853		990		✓									
~~MSB~~ Q7MBS		1000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

ETHOD:8080 PCB:EXS MATRIX: SOIL LEVEL: LOW BATCH ID: 9WV

IENT(s): BL 2

SE: PCB

E: 64176, 64153,

TE: 3/17/97

ALYST: MW

KED BY: MW

TNESSED BY:

3/24/97 326/18

sample id ETR	Client id	Sample weight (10gm)	1. 20gms baked granular Na2SO4, mix	2. Transfer to soxhlet extractor	3.# 2.0 ml 0.2 ppm TCX/DCB surr. Surr lot# E03139701	4.# 1.0 ml 50.0 ppm AR1242/1254 matrix Mtx lot# ~~E03109701~~ E03179702 MW 3/17/97	5. Extract 16 hrs w/1:1 hex/acetone Acetone lot# L62265	6. Elute extract through Na2SO4 funnel	7. Concentrate extract to approx 1.0ml	8. Filter through 0.45 um filters	9.# Adjust volume to 10 ml w/CH2Cl2 CH2Cl2 lot# L03287	10. Archive 1.0 ml	11.# 5 ml through GPC	12. Hex exchange Hexane lot# L04312	13.# Concentrate to 5.0 ml	14.# Transfer 1 of 5 ml to a vial	15. Sulfuric Acid Clean-up H2SO4 Lot# K20028 + Sulfur clean-up	16. Conc to 1.0ml	17. 3 gm silica gel clean-up Silica gel Lot# 964589	18.# Conc to 1.0ml	19.# pH
	PBLK54	1.0981 1.0950		MW	✓		MW	MW	MW	MW	MW	MW	✓	MW	MW	MW	MW	MW	MW	MW	
4MBS	~~PLCS54~~	1.0946 1.0907			✓	✓							✓								
26785	A66169FIL				✓								✓								
6791	A66171FIL				✓								✓								
6794	A66172FIL				✓								✓								
.845	A66174FIL				✓								✓								
851	A66175FIL				✓								✓								
.854	A66176FIL				✓								✓								
6932	A66177FIL				✓								✓								
6935	A66178FIL				✓								✓								
938	A66179FIL				✓								✓								

MW EXB

MW 3/20/97

MW 3/17/97

000965

18

Aquatec, Inc. -- Extraction worksheet -- printed by: JKZ on 03-17-97 14:51:57

INTERNAL CHAIN OF CUSTODY

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

ETR Number: 64163 Case: PCB

Project Number: 91082 SDG Number: 64153

Memo: Samples #'s 326843-54

_____ placed in refrigerator

by _____ (Signature) on 3/7/97/1520 (date/time).

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
3-7-97	1710	326845 1 51, 54	Signature	Signature	
3/4/97	1000	326843, 51, 54	Signature	Signature	weighing
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	000003

INTERNAL CHAIN OF CUSTODY

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

IF-00001

ETR Number: 64153 Case: PCB

Project Number: 91082 SDG Number: 64153

Memo: Samples #'s 326783 - 96

_____ placed in refrigerator

by _____ on 3/7/97/1200 (date/time).

Signature

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
3-7-97	12-15	326785, ~~326791~~ JWH 3-7	Signature	Signature	
3-7-97	12-15	326791 + 326794	Signature	Signature	
3/11/97	1000	326791, 794 785	Signature	Signature	weighing
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

000010

INTERNAL CHAIN OF CUSTODY

IF-00001

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

64163

Number: 91082

Case: PCB

SDG Number: 64153

Memo: Samples #'s 326843-54 placed in refrigerator

by _____ (Signature) on 3/7/97/1520 (date/time).

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
3/17/97	1520	326845 326851 326854	Signature	Michael Vellen Signature	Extracting
3/20/97	1515	326845 326851 326854	Michael Vellen Signature	Tamara Signature	GC analysis
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

000011

INTERNAL CHAIN OF CUSTODY

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

IF-00001

ETR Number: 64153 Case: PCB

Project Number: 91082 SDG Number: 64153

Memo: Samples #'s 326783 - 96

_____ placed in refrigerator

by _____ on 3/7/97/1200 (date/time).

Signature

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
3/17/97	1500	326785 326791 326794	Signature	Michael Valley Signature	Extracting
3/20/97	1515	326785 326791 326794	Michael Valley Signature	Thomas [illegible] Signature	GC analysis
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

IF-00001

INTERNAL CHAIN OF CUSTODY

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

ETR Number: 64163 Case: PCB

Project Number: 91082 SDG Number: 64153

Memo: Samples #'s 326843-54

_____ placed in refrigerator

by _____ on 3/7/97/1520 (date/time).

Signature

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
3/11/97	11:00AM	326843,44, 49,50,52, 53	Signature	Signature	EXT
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

000013

INTERNAL CHAIN OF CUSTODY

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

ETR Number: 64153 Case: PCB

Project Number: 91082 SDG Number: 64153

Memo: Samples #'s 326783 - 96

_____ placed in refrigerator

by _____ on 3/7/97/1200 (date/time).

Signature

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
3/11/97	11:00AM	326783,84,87, 88,89,90,92,93, 95,96	Signature	Signature	EXT
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

INTERNAL CHAIN OF CUSTODY

IF-00001

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

ETR Number: 64163 Case: PCB

Project Number: 91082 SDG Number: 64153

Memo: Samples #'s 326843-54

_____ placed in refrigerator

by _____ on 3/7/97/1520 (date/time).

Signature

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
3/7	1400	326845, 51, 54	— Signature	[illegible] Signature	analysis
3/7	1700		[illegible] Signature	— Signature	Storage
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

000015

INTERNAL CHAIN OF CUSTODY

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

IF-00001

ETR Number: 64153 Case: PCB

Project Number: 91082 SDG Number: 64153

Memo: Samples #'s 326783 - 96

_____ placed in refrigerator

by _____ (Signature) on 3/7/97/1200 (date/time).

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
3/17	1400	326785 91,94	— (Signature)	[signature] (Signature)	Analysis
3/17	1700	326785 91,94	[signature] (Signature)	— (Signature)	Storage
			(Signature)	(Signature)	
			(Signature)	(Signature)	
			(Signature)	(Signature)	
			(Signature)	(Signature)	
			(Signature)	(Signature)	
			(Signature)	(Signature)	
			(Signature)	(Signature)	
			(Signature)	(Signature)	
			(Signature)	(Signature)	
			(Signature)	(Signature)	

IF-00001

INTERNAL CHAIN OF CUSTODY

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

ETR Number: 64163 Case: PCB

Project Number: 91082 SDG Number: 64153

Memo: Samples #'s 326843-54

_____ placed in refrigerator

by _____ (Signature) on 3/7/97/1520 (date/time).

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
4/2	1000	326843-853	Signature	Signature	analysis
4/2	2000	326843-853	Signature	Signature	Storage
4/3	1200	326843-853	Signature	Signature	analysis
4/3	1600	326843-853	Signature	Signature	Storage
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

INTERNAL CHAIN OF CUSTODY

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

IF-00001

ETR Number: 64153 Case: PCB

Project Number: 91082 SDG Number: 64153

Memo: Samples #'s 326783 - 96

_____ placed in refrigerator

by _____ (Signature) on 3/27/97/1200 (date/time).

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
3/28	1000	326783-96	Kristin Queary (Signature)	Kristin Queary (Signature)	analysis
3/28	1600	326783-96	Kristin Queary (Signature)	Kristin Queary (Signature)	Storage
4/2	0900	326783-96	Kristin Queary (Signature)	Kristin Queary (Signature)	analysis
4/2	1600	326783-96	Kristin Queary (Signature)	Kristin Queary (Signature)	Storage
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER
SUPERFUND SITE

SDG# 64176

PCB ANALYSES

ALLIED OU

Analyses performed by:

ITS Environmental Laboratories
Colchester, Vermont

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG# 64176 for sampling at the Allied OU of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB and total organic carbon analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis	
				PCB	TOC
A66177	326930	water	3/6/97	x	x
A66177-F	326931	filtered water	3/6/97	x	x
A66177-FIL	326932	filter	3/6/97	x	x
A66178	326933	water	3/6/97	x	x
A66178-F	326934	filtered water	3/6/97	x	x
A66178-FIL	326935	filter	3/6/97	x	x
A66179	326936	water	3/6/97	x	x
A66179-F	326937	filtered water	3/6/97	x	x
A66179-FIL	326938	filter	3/6/97	x	x
A66180	326939	water	3/6/97	x	x
A66180-F	326940	filtered water	3/6/97	x	x

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The QAPP-specified holding times for PCB analyses are 10 days from sample receipt to extraction and 40 days from extraction to analysis for soil samples and 5 days from sample receipt to extraction and 40 days from extraction to analysis for water samples. The technical holding times are 7 days from collection to extraction and 40 days to analysis for water samples and 14 days from collection to extraction and 40 days to analysis for soil samples.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No Aroclors were detected in the method or rinse blanks.

3. System Performance

The system performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument's daily performance is satisfactory.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The %RSD was within acceptable limits for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limits with the following exceptions:

Instrument HP2404 3/19/97 18:55 RTX-5

Aroclor 1016	25.0%
Aroclor 1260	20.0%

Since data from this column were used for confirmation of identification only, no data have been qualified based on the %D.

Instrument HP2402 3/19/97 18:55 RTX-35

Aroclor 1016	20.0%
Aroclor 1260	20.0%

Since neither of the listed Aroclors were detected in the associated samples and since the Aroclor responses were increasing, no data have been qualified based on the %D.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recoveries for both surrogates were above control limits in samples A66177, A66178, A66179, and A66179-F. All positive data for these samples have been qualified as estimated based on the recoveries. Recovery for one surrogate was outside control limits in samples A66180, A66177-F and A66178-F. Since recovery of the remaining surrogate was within control limits, no data have been qualified based on the deviations. All other sample surrogate recoveries were within control limits.

6. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All quantitated peaks fell within the appropriate retention time windows.

7. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

No matrix spike was included in this data set. A site-specific matrix spike was, however, included in SDG# 64153. Data from SDG# 64153 showed all unfiltered matrix spike and matrix spike duplicate recoveries and the relative percent differences (RPDs) between recoveries to be within control limits. The filtered matrix spike duplicate recovery was, however, above control limits.

Laboratory control samples (LCS) were extracted with the samples. Recoveries for the filtered LCS were within control limits. Recovery for Aroclor 1260 was, however, above control limits in the unfiltered LCS. Since recovery for Aroclor 1242 was within control limits, no data have been qualified based on the deviation.

8. Field Duplicates

No field duplicates were included in this data set.

9. General Comments

All filter samples were air-dried prior to extraction and analysis.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

DATA REVIEW CHECKLIST

PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were recoveries of TCX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?		X	
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits? 1 out of 8			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? 0 out of 4			
Blanks			
Is a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?			X
Is the chromatographic performance acceptable for each instrument?	X		
Do any method/reagent/instrument blanks have positive results?		X	

a64176

PCB Data Review Checklist - Page 2

	YES	NO	NA
Do any field/rinse blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?	X		
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks			X
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?		X	
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?		X	
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			X

PCB Data Review Checklist - Page 3

	YES	NO	NA
PCB Identification			
Is an analytical data summary sheet present for all samples?	X		
Were all positively identified compounds confirmed on a second column?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			X
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Where field duplicates submitted with the samples?		X	

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
A66177		↑	↑
A66177-F			
A66177-FIL			↓
A66178		↑	↓
A66178-F			↑
A66178-FIL			
A66179		↑	↑
A66179-F		↑	↓
A66179-FIL			
A66180		↓	
A66180-F			

Surrogate Standards:
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogates diluted out
↑ Recovery high
↓ Recovery low

* Unless otherwise noted, all parameters are within specified limits.

a64176

PCB Calibration Summary

Instrument: HP2404
Column: RTX-35

Date:	3/18/97-	3/19/97	3/19/97	3/19/97	3/19/97	3/20/97	3/20/97
Time:	3/19/97	0648	0716	1827	1855	0058	0126
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	r^2	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok				20.0		
Aroclor 1221	--*						
Aroclor 1232	--*						
Aroclor 1242	ok		ok				ok
Aroclor 1248	ok	ok		ok		ok	
Aroclor 1254	ok				20.0		
Aroclor 1260	ok						
Tetrachloro-m-xylene	ok						
Decachlorobiphenyl	ok						
Affected Samples:					66177		
					66177F		
					66178		
					66178F		
					66179		
					66179F		

* Multi-point standards analyzed; regression not calculated

a64176

PCB Calibration Summary - Page 2

Instrument: HP2404
Column: RTX-35

Date:		3/20/97	3/20/97	3/21/97	3/21/97	3/21/97	3/21/97
Time:		0442	0510	0909	0937	1541	1609
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	r^2	%D	%D	%D	%D	%D	%D
Aroclor 1016							ok
Aroclor 1221							
Aroclor 1232							
Aroclor 1242							
Aroclor 1248		ok		ok		ok	
Aroclor 1254			ok		ok		
Aroclor 1260							ok
Tetrachloro-m-xylene							
Decachlorobiphenyl							

Affected Samples:

a64176

PCB Calibration Summary - Page 3

Instrument: HP2404
Column: RTX-35

Date:		3/21/97	3/21/37	3/25/97	3/25/97	3/25/97	3/25/97
Time:		2021	2049	0942	1010	1202	1230
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	r^2	%D	%D	%D	%D	%D	%D
Aroclor 1016							
Aroclor 1221							
Aroclor 1232							
Aroclor 1242			ok		ok		
Aroclor 1248		ok		ok		25.0	
Aroclor 1254							ok
Aroclor 1260							
Tetrachloro-m-xylene							
Decachlorobiphenyl							
Affected Samples:						66174F	

CORRECTED ANALYSIS SUMMARY FORMS

a64176

FORM I

OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66177

KB80000057

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) WATER Lab Sample ID: 326930

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/08/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/10/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.11	J
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66177F

KB80000058

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) WATER Lab Sample ID: 326931

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/08/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/10/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.050	U
11104-28-2------	Aroclor-1221	0.050	U
11141-16-5------	Aroclor-1232	0.050	U
53469-21-9------	Aroclor-1242	0.072	
12672-29-6------	Aroclor-1248	0.050	U
11097-69-1------	Aroclor-1254	0.050	U
11096-82-5------	Aroclor-1260	0.050	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66177FIL

KB80000059

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) SOIL Lab Sample ID: 326932

Sample wt/vol: 0.7 (g/mL) G Lab File ID: _____

% Moisture: 0 decanted: (Y/N) N Date Received: 03/08/97

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted:03/17/97

Concentrated Extract Volume: 10(mL) Date Analyzed: 03/21/97

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	670	U
11104-28-2	Aroclor-1221	670	U
11141-16-5	Aroclor-1232	670	U
53469-21-9	Aroclor-1242	2200	
12672-29-6	Aroclor-1248	670	U
11097-69-1	Aroclor-1254	670	U
11096-82-5	Aroclor-1260	670	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66178

KB8000060

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) WATER Lab Sample ID: 326933

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/08/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/10/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.050	U
11104-28-2------	Aroclor-1221	0.050	U
11141-16-5------	Aroclor-1232	0.050	U
53469-21-9------	Aroclor-1242	0.29	J
12672-29-6------	Aroclor-1248	0.050	U
11097-69-1------	Aroclor-1254	0.050	U
11096-82-5------	Aroclor-1260	0.050	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66178F

KB8000061

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) WATER Lab Sample ID: 326934

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/08/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/10/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.31	
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66178FIL

KB80000062

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) SOIL Lab Sample ID: 326935

Sample wt/vol: 0.6 (g/mL) G Lab File ID: _____

% Moisture: 0 decanted: (Y/N) N Date Received: 03/08/97

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted:03/17/97

Concentrated Extract Volume: 10(mL) Date Analyzed: 03/21/97

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	800	U
11104-28-2	Aroclor-1221	800	U
11141-16-5	Aroclor-1232	800	U
53469-21-9	Aroclor-1242	800	U
12672-29-6	Aroclor-1248	800	U
11097-69-1	Aroclor-1254	800	U
11096-82-5	Aroclor-1260	800	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66179

KB800000063

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) WATER Lab Sample ID: 326936

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/08/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/10/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.15	U
11104-28-2	Aroclor-1221	0.15	U
11141-16-5	Aroclor-1232	0.15	U
53469-21-9	Aroclor-1242	0.71	4
12672-29-6	Aroclor-1248	0.15	U
11097-69-1	Aroclor-1254	0.15	U
11096-82-5	Aroclor-1260	0.15	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66179F

KB80000064

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) WATER Lab Sample ID: 326937

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/08/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/10/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/19/97

Injection Volume: _____(uL) Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.15	U
11104-28-2	Aroclor-1221	0.15	U
11141-16-5	Aroclor-1232	0.15	U
53469-21-9	Aroclor-1242	0.42	J
12672-29-6	Aroclor-1248	0.15	U
11097-69-1	Aroclor-1254	0.15	U
11096-82-5	Aroclor-1260	0.15	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66179r1L

KB80000065

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) SOIL Lab Sample ID: 326938

Sample wt/vol: 0.2 (g/mL) G Lab File ID: _____

% Moisture: 0 decanted: (Y/N) N Date Received: 03/08/97

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted:03/17/97

Concentrated Extract Volume: 10(mL) Date Analyzed: 03/21/97

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	2300	U
11104-28-2	Aroclor-1221	2300	U
11141-16-5	Aroclor-1232	2300	U
53469-21-9	Aroclor-1242	2300	U
12672-29-6	Aroclor-1248	2300	U
11097-69-1	Aroclor-1254	2300	U
11096-82-5	Aroclor-1260	2300	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66180

KB80000066

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) WATER Lab Sample ID: 326939

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/08/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/10/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/20/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2------	Aroclor-1016	0.050	U
11104-28-2------	Aroclor-1221	0.050	U
11141-16-5------	Aroclor-1232	0.050	U
53469-21-9------	Aroclor-1242	0.050	U
12672-29-6------	Aroclor-1248	0.050	U
11097-69-1------	Aroclor-1254	0.050	U
11096-82-5------	Aroclor-1260	0.050	U

OTHER ORGANICS ANALYSIS DATA SHEET

AC66180F
~~PBLK6Q~~

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) WATER Lab Sample ID: ~~PBLK6Q~~ 326940

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 326940

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/08/97

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/10/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/20/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM I OTHER

TOTAL ORGANIC CARBON ANALYSES

Introduction

Analyses were performed according to the following methods:

Total Organic Carbon	EPA - Lloyd Kahn (filters) EPA SW-846 9060 (water)

The data review process is intended to evaluate data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate quality review prior to submission for review.

During the review process, laboratory data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, modified or deleted by the data reviewer. Results are qualified with the following codes in accordance with the National Functional Guidelines.

U The material was analyzed for, but was not detected. The associated value is either the sample quantitation limit or the sample detection limit depending on the method.

J The associated value is an estimated quantity.

UJ The material was analyzed for, but was not detected. The associated value is approximate and may or may not represent the actual limit of quantitation/detection.

R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Times

   The QAPP-specified holding time for TOC analysis is 28 days from collection.

   All samples were analyzed within the specified holding time.

2. Calibration

   The calibration data was acceptable.

3. Blank Contamination

   No method blank contamination was reported. Measurable TOC was detected in both the filtered and unfiltered rinse blanks. Based on the blank content, TOC data for all samples should be rejected.

4. Laboratory Duplicates

   No laboratory duplicates were included in this data set.

5. Laboratory Control Sample (LCS)

   All LCS recoveries were acceptable.

6. Field Duplicate

   No field duplicates were included in this data set.

7. Overall Assessment

   Other than for those deviations mentioned in this report, the analysis of the samples was in conformance with method specifications.

DATA REVIEW CHECKLIST

Supplemental Data Review Checklist

	YES	NO	NA
Data Completeness			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the methods utilized notated?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Laboratory Duplicates			
Were duplicates analyzed and were the relative percent differences between results within acceptable limits?		X	
Laboratory Control Samples			
Were LCS analyzed and were recoveries within acceptable limits?	X		
Blanks			
Has a method blank been analyzed for each set of samples or for each 20 samples?	X		
Do any have results above the reporting limit?		X	
Do any trip/field/rinse blanks have positive results?	X		
Calibration			
Is the calibration acceptable?	X		
Raw Data			
Is raw data present and complete for all samples and QC?	X		
Compound Quantitation and Reported Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		

TOTAL ORGANIC CARBON RESULTS

Total Organic Carbon Results

Sample ID	Lab ID	Matrix	Results*
A66177	326930	water	6.5 mg/l
A66177-F	326931	filtered water	26.0 mg/l
A66177-FIL	326932	filter	141 mg/kg
A66178	326933	water	8.3 mg/l
A66178-F	326934	filtered water	9.0 mg/l
A66178-FIL	326935	filter	46.3 mg/kg
A66179	326936	water	4.0 mg/l
A66179-F	326937	filtered water	10.1 mg/l
A66179-FIL	326938	filter	<1.0 mg/kg
A66180	326939	water	3.3 mg/l
A66180-F	326940	filtered water	19.0 mg/l

All filter samples were air-dried prior to analysis.

ITS Intertek Testing Services
Environmental Laboratories

April 7, 1997

Ms. Laurie Indick
Blasland & Bouck Engineers
6723 Towpath Road
Box 66
Syracuse, NY 13214

Re: Laboratory Project No. 91082
Case No. PCB; SDG 64176

Dear Ms. Indick:

Enclosed are the analytical results of samples received intact by ITS Environmental Laboratories on March 28, 1997. Laboratory numbers and quality control samples have been assigned and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 03/28/97	ETR No: 64176	
326930	A66177	03/06/97	Liquid
326931	A66177F	03/06/97	Filtrate
326932	A66177FIL	03/06/97	Filter
326933	A66178	03/06/97	Liquid
326934	A66178F	03/06/97	Filtrate
326935	A66178FIL	03/06/97	Filter
326936	A66179	03/06/97	Liquid
326937	A66179F	03/06/97	Filtrate
326938	A66179FIL	03/06/97	Filter
326939	A66180	03/06/97	Liquid
326940	A66180F	03/06/97	Filtrate

The PCB analysis of most samples in this delivery group exhibited elevated recovery of surrogate compounds tetrachloro-m-xylene and decachlorobiphenyl. The laboratory was unable to re-extract these samples, as the additional volume provided had already been used to correct a procedural error. An assay of the surrogate spike solution, Lot # E01289702, exhibited normal concentrations. The laboratory investigated the condition of the sample extract vials, and determined that the level of sample remaining in each

Intertek Testing Services NA Inc.
55 South Park Drive Colchester, VT 05446
Telephone (802) 655-1203 Fax (802) 655-1248

container was consistent with the number of analyses performed, and with an extraction procedure resulting in 1.0 ml of final extract concentration.

Two extraction batches were initiated for the samples in this delivery group, each with a blank spike sample. Sample S4LCS was fortified with Aroclors' 1242 and 1254, and exhibited acceptable recoveries. Sample Q6LCS was fortified with Aroclors 1242 and 1260. Although the spike recovery of Aroclor 1242 was acceptable, Aroclor 1260 exhibited high recovery. The laboratory assayed the matrix spike solution, lot # E01279701, which exhibited normal concentrations. Both Aroclor groups are present in this spike solution at the same concentration. A possible explanation for this anomaly would be that lab contamination of Aroclor 1260 in this blank spike sample contributed to the elevated recovery. This Aroclor was not detected in any other samples in this delivery group.

For the benefit of interested parties, documentation of sample handling and preparation is included at the end of the "Sample Data Package." Colored sheets of paper entitled "Sample Preparation" and "Sample Handling" have been used to explicitly mark the location of these documents.

If there are any questions regarding this submittal, please contact James W. Madison at (802) 655-1203.

Sincerely,

Karen R. Chirgwin

Karen R. Chirgwin
Laboratory Operations director

KRC/cga
Enclosure

FORM 2
SOIL OTHER SURROGATE RECOVERY

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

GC Column(1): RTX-35 ID: 0.25 (mm) GC Column(2): RTX-5 ID: 0.25 (mm)

	CLIENT SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKS4	86	85	104	89			0
02	S4LCS	60	70	50D	33D			0
03	A66177FIL	84	83	84	73			0
04	A66178FIL	85	85	83	72			0
05	A66179FIL	80	80	82	74			0
06								
07								
08								
09								
10								
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27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (60-140)
S2 (DCB) = Decachlorobiphenyl (60-140)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 2
WATER OTHER SURROGATE RECOVERY

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

GC Column(1): RTX-35 ID: 0.25 (mm) GC Column(2): RTX-5 ID: 0.25 (mm)

	CLIENT SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	A66177	146*	148*	166*	169*			4
02	A66177F	130	131	179*	186*			2
03	A66178	144*	178*	151*	153*			4
04	A66178F	134	145*	149*	151*			3
05	A66179	160D	162D	204D	209D			0
06	A66179F	171D	172D	196D	196D			0
07	PBLKQ6	134	134	153*	157*			2
08	PBLK6Q	129	130	150*	154*			2
09	Q6LCS	127	129	188D	197D			0
10	A66180	150*	142*	119	126			2
11	A66180F	128	119	90	94			0
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (60-140)
S2 (DCB) = Decachlorobiphenyl (60-140)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
SOIL OTHER LAB CONTROL SAMPLE

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix Spike - Sample No.: S4LCS

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENTRATION (ug/Kg)	LCS CONCENTRATION (ug/kg)	LCS % REC #	QC. LIMITS REC.
Aroclor-1242	50000		44000	88	60-140
Aroclor-1254	50000		47000	94	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

FORM 3
WATER OTHER LAB CONTROL SAMPLE

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix Spike - Sample No.: Q6LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Aroclor-1242	0.60		0.62	103	60-140
Aroclor-1260	0.60		2.1	350*	60-140

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 1 out of 2 outside limits

COMMENTS:

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLK6Q

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Lab Sample ID: PBLK6Q Lab File ID: _____

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 03/10/97

Date Analyzed (1): 03/20/97 Date Analyzed (2): 03/20/97

Time Analyzed (1): 0222 Time Analyzed (2): 0222

Instrument ID (1): 2404_2 Instrument ID (2): 2404_1

GC Column (1): RTX-35 ID: 0.25(mm) GC Column (2): RTX-5 ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66177F	326931	03/19/97	03/19/97
02	A66178	326933	03/19/97	03/19/97
03	A66178F	326934	03/19/97	03/19/97
04	A66179	326936	03/19/97	03/19/97
05	A66179F	326937	03/19/97	03/19/97
06				
07				
08				
09				
10				
11				
12				
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16				
17				
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21				
22				
23				
24				
25				
26				

COMMENTS: _____

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLKQ6

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Lab Sample ID: PBLKQ6 Lab File ID: _____

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 03/10/97

Date Analyzed (1): 03/20/97 Date Analyzed (2): 03/20/97

Time Analyzed (1): 0154 Time Analyzed (2): 0154

Instrument ID (1): 2404_2 Instrument ID (2): 2404_1

GC Column (1): RTX-35 ID: 0.25(mm) GC Column (2): RTX-5 ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	A66177	326930	03/19/97	03/19/97
02	Q6LCS	Q6LCS	03/20/97	03/20/97
03	A66180	326939	03/20/97	03/20/97
04	A66180F	326940	03/20/97	03/20/97
05				
06				
07				
08				
09				
10				
11				
12				
13				
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16				
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21				
22				
23				
24				
25				
26				

COMMENTS: _____

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLKS4

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Lab Sample ID: PBLKS4 Lab File ID: _____

Matrix (soil/water) SOIL Extraction:(SepF/Cont/Sonc) OTHER

Sulfur Cleanup (Y/N) N Date Extracted: 03/17/97

Date Analyzed (1): 03/21/97 Date Analyzed (2): 03/21/97

Time Analyzed (1): 1005 Time Analyzed (2): 1005

Instrument ID (1): 2404_2 Instrument ID (2): 2404_1

GC Column (1): RTX-35 ID: 0.25(mm) GC Column (2): RTX-5 ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	S4LCS	S4LCS	03/21/97	03/21/97
02	A66177FIL	326932	03/21/97	03/21/97
03	A66178FIL	326935	03/21/97	03/21/97
04	A66179FIL	326938	03/21/97	03/21/97
05				
06				
07				
08				
09				
10				
11				
12				
13				
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15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: _____

FORM IV OTHER

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLKQ6

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) WATER Lab Sample ID: PBLKQ6

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/10/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/20/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLK6Q

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) WATER Lab Sample ID: PBLK6Q

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/10/97

Concentrated Extract Volume: 1(mL) Date Analyzed: 03/20/97

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLKS4

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PBC SAS No.: SDG No.: 64176

Matrix: (soil/water) SOIL Lab Sample ID: PBLKS4

Sample wt/vol: 1.0 (g/mL) G Lab File ID: _____

% Moisture: 0 decanted: (Y/N) N Date Received: _____

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted:03/17/97

Concentrated Extract Volume: 10(mL) Date Analyzed: 03/21/97

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	500	U
11104-28-2	Aroclor-1221	500	U
11141-16-5	Aroclor-1232	500	U
53469-21-9	Aroclor-1242	500	U
12672-29-6	Aroclor-1248	500	U
11097-69-1	Aroclor-1254	500	U
11096-82-5	Aroclor-1260	500	U

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-35 ID: 0.25 (mm) Calibration Time(s): 1210 0140

LAB FILE ID: RF2: 18MAR971045-IRF4: 18MAR971045-IRF8: 18MAR971045-I
RF16: 18MAR971045-RF32: 18MAR971045-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016	97.540	93.020	85.735	79.000	72.662
(2)	124.080	115.550	104.770	95.120	86.012
(3)	143.720	134.510	121.350	110.812	99.629
(4)	115.860	110.370	99.870	91.482	82.244
(5)	132.560	126.320	113.960	104.472	93.000
Aroclor-1221					
(2)					
(3)					
(4)					
(5)					
Aroclor-1232					
(2)					
(3)					
(4)					
(5)					
Aroclor-1242	146.960	134.200	123.440	111.845	101.772
(2)	358.660	333.520	312.210	287.968	267.989
(3)	170.620	152.670	140.420	127.085	116.466
(4)	123.000	111.600	106.005	99.310	93.031
(5)	132.340	117.190	106.490	95.605	86.318
Aroclor-1248	132.320	117.400	107.340	96.258	86.401
(2)	90.500	82.520	76.540	70.498	64.778
(3)	241.420	218.650	204.425	185.208	169.436
(4)	101.060	84.560	78.370	73.250	65.124
(5)	166.660	152.070	143.830	132.515	121.998
Aroclor-1254	114.700	105.840	97.670	89.650	84.340
(2)	190.380	177.970	171.045	161.170	154.935
(3)	385.740	354.310	324.980	302.772	291.454
(4)	278.440	259.620	239.830	222.662	212.842
(5)	276.680	260.750	243.820	226.532	217.512
Aroclor-1260	204.560	198.120	177.175	166.402	150.370
(2)	435.200	429.420	390.125	374.962	345.955
(3)	141.580	137.150	124.035	118.450	108.738
(4)	249.700	247.260	227.565	219.275	202.999
(5)	106.600	106.480	98.500	96.398	88.622
Tetrachloro-m-xylene	7806.600	7415.400	7038.100	6601.700	6293.525

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-35 ID: 0.25 (mm) Calibration Time(s): 1210 0140

LAB FILE ID: RF2: 18MAR971045-IRF4: 18MAR971045-IRF8: 18MAR971045-I
RF16: 18MAR971045-RF32: 18MAR971045-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	5000.400	4548.400	4079.150	3766.175	3492.612

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-35 ID: 0.25 (mm) Calibration Time(s): 1210 0140

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR	-32.946060	70.5976911	0.998
(2)	LINR	-40.878412	82.9751818	0.998
(3)	LINR	-41.363569	96.1596562	0.997
(4)	LINR	-39.975902	79.5437625	0.997
(5)	LINR	-42.050265	89.8968220	0.997
Aroclor-1221	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1232	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1242	LINR	-39.339642	98.2493708	0.998
(2)	LINR	-30.045725	260.732582	0.999
(3)	LINR	-38.821508	112.314749	0.998
(4)	LINR	-26.067621	90.8507636	0.999
(5)	LINR	-44.693107	82.8490867	0.998
Aroclor-1248	LINR	-45.418639	82.9714504	0.997
(2)	LINR	-34.136406	62.8274126	0.998
(3)	LINR	-37.116077	163.895031	0.998
(4)	LINR	-41.372631	62.9428647	0.997
(5)	LINR	-32.039688	118.647050	0.998
Aroclor-1254	LINR	-30.094803	81.8507068	0.999
(2)	LINR	-18.663089	152.095571	1.000
(3)	LINR	-24.050663	283.780907	1.000
(4)	LINR	-24.898190	207.340028	1.000
(5)	LINR	-22.676117	212.396371	1.000
Aroclor-1260	LINR	-35.478594	146.076778	0.998
(2)	LINR	-26.180078	338.792236	0.999
(3)	LINR	-28.984924	106.182303	0.998
(4)	LINR	-24.080478	199.253187	0.999
(5)	LINR	-22.500019	87.2992431	0.998
Tetrachloro-m-xylene	LINR	-2.1323546	6166.17209	1.000

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-35 ID: 0.25 (mm) Calibration Time(s): 1210 0140

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-3.4939402	3375.23053	0.999

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-5 ID: 0.25 (mm) Calibration Time(s): 1210 0140

LAB FILE ID: RF2: 18MAR971045-IRF4: 18MAR971045-IRF8: 18MAR971045-I
RF16: 18MAR971045-RF32: 18MAR971045-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Aroclor-1016	434.360	406.090	366.205	338.702	308.559
(2)	336.620	306.830	274.625	249.422	227.634
(3)	215.180	193.800	173.345	158.080	143.792
(4)	261.840	237.920	209.930	190.875	171.712
(5)	261.000	242.460	214.155	195.992	174.914
Aroclor-1221					
(2)					
(3)					
(4)					
(5)					
Aroclor-1232					
(2)					
(3)					
(4)					
(5)					
Aroclor-1242	256.920	235.560	213.605	193.928	176.945
(2)	330.040	295.210	270.170	245.112	223.806
(3)	100.940	88.410	83.275	76.490	71.669
(4)	702.540	638.850	594.185	551.550	512.359
(5)	249.400	226.890	211.500	196.245	182.836
Aroclor-1248	206.200	184.220	166.945	149.708	135.785
(2)	424.100	377.780	341.585	306.612	279.656
(3)	346.180	306.780	274.775	248.365	227.586
(4)	457.340	406.260	368.975	334.710	311.051
(5)	142.920	121.520	108.430	97.285	89.070
Aroclor-1254	284.440	249.220	221.620	200.635	187.329
(2)	230.300	211.960	186.825	168.280	157.248
(3)	409.520	376.930	353.525	324.662	310.272
(4)	751.380	685.170	627.440	573.565	554.961
(5)	169.940	159.080	148.975	136.672	130.169
Aroclor-1260	362.980	348.300	311.745	289.468	264.155
(2)	215.720	205.200	181.005	170.670	153.094
(3)	711.780	679.540	609.880	583.570	546.549
(4)	187.060	178.390	158.995	150.168	134.902
(5)	183.320	176.580	156.805	145.942	133.049
Tetrachloro-m-xylene	13673.200	12781.900	11835.500	11148.475	10599.100

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-5 ID: 0.25 (mm) Calibration Time(s): 1210 0140

LAB FILE ID: RF2: 18MAR971045-IRF4: 18MAR971045-IRF8: 18MAR971045-I
RF16: 18MAR971045-RF32: 18MAR971045-

COMPOUND	RF2	RF4	RF8	RF16	RF32
Decachlorobiphenyl	6435.400	5665.900	4944.050	4479.250	4125.638

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-5 ID: 0.25 (mm) Calibration Time(s): 1210 0140

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR	-36.773812	298.693836	0.998
(2)	LINR	-40.910000	219.000000	0.998
(3)	LINR	-41.419050	138.338545	0.998
(4)	LINR	-45.137870	164.775444	0.998
(5)	LINR	-44.734654	168.269436	0.997
Aroclor-1221	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1232	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1242	LINR	-39.619296	170.614153	0.998
(2)	LINR	-39.634523	215.737849	0.998
(3)	LINR	-30.768478	69.5334267	0.999
(4)	LINR	-30.680077	498.036755	0.999
(5)	LINR	-29.973833	177.793683	0.999
Aroclor-1248	LINR	-43.867318	130.349421	0.998
(2)	LINR	-42.877700	268.461282	0.998
(3)	LINR	-41.844895	218.480930	0.999
(4)	LINR	-37.018629	299.703218	0.999
(5)	LINR	-45.216530	85.1052738	0.999
Aroclor-1254	LINR	-38.783548	179.816394	0.999
(2)	LINR	-38.469492	151.052535	0.999
(3)	LINR	-25.720293	302.011532	1.000
(4)	LINR	-26.173486	538.394036	1.000
(5)	LINR	-26.138810	126.735737	0.999
Aroclor-1260	LINR	-35.599915	256.041151	0.998
(2)	LINR	-38.093898	148.379504	0.998
(3)	LINR	-25.970375	533.491086	0.999
(4)	LINR	-36.537726	130.998724	0.998
(5)	LINR	-35.984081	128.908243	0.998
Tetrachloro-m-xylene	LINR	-2.3583734	10352.7949	1.000

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date(s): 03/18/97 03/19/97

Column: RTX-5 ID: 0.25 (mm) Calibration Time(s): 1210 0140

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-4.3099068	3947.54936	0.999

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date: 03/19/97 Time: 0648

Lab File ID: 18MAR971056-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date: 03/19/97 Time: 0716

Lab File ID: 18MAR971056-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1910 2101

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date: 03/19/97 Time: 1827

Lab File ID: 18MAR971111-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7

OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date: 03/19/97 Time: 1855

Lab File ID: 18MAR971111-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1210 1402

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	240	200	LINR	20.0	15.0
Aroclor-1260	240	200	LINR	20.0	15.0
Tetrachloro-m-xylene	23	20	LINR	15.0	15.0
Decachlorobiphenyl	23	20	LINR	15.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date: 03/20/97 Time: 0058

Lab File ID: 19MAR971322-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date: 03/20/97 Time: 0126

Lab File ID: 19MAR971322-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1910 2101

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date: 03/20/97 Time: 0442

Lab File ID: 19MAR971322-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date: 03/20/97 Time: 0510

Lab File ID: 19MAR971322-I2 Init. Calib. Date(s): 03/18/97 03/19/97

Heated Purge: (Y/N) N Init. Calib. Times: 2349 0140

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date: 03/21/97 Time: 0909

Lab File ID: 21MAR970744-I0 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date: 03/21/97 Time: 0937

Lab File ID: 21MAR970744-I0 Init. Calib. Date(s): 03/18/97 03/19/97

Heated Purge: (Y/N) N Init. Calib. Times: 2349 0140

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	20	20	LINR	0.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date: 03/21/97 Time: 1541

Lab File ID: 21MAR970944-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_2 Calibration Date: 03/21/97 Time: 1600

Lab File ID: 21MAR970944-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1210 1402

GC Column: RTX-35 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	230	200	LINR	15.0	15.0
Aroclor-1260	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date: 03/19/97 Time: 0648

Lab File ID: 18MAR971056-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date: 03/19/97 Time: 0716

Lab File ID: 18MAR971056-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1910 2101

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date: 03/19/97 Time: 1827

Lab File ID: 18MAR971111-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date: 03/19/97 Time: 1853

Lab File ID: 18MAR971111-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1210 1402

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	250	200	LINR	25.0	15.0
Aroclor-1260	240	200	LINR	20.0	15.0
Tetrachloro-m-xylene	23	20	LINR	15.0	15.0
Decachlorobiphenyl	23	20	LINR	15.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date: 03/20/97 Time: 0058

Lab File ID: 19MAR971322-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date: 03/20/97 Time: 0126

Lab File ID: 19MAR971322-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1910 2101

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1242	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date: 03/20/97 Time: 0442

Lab File ID: 19MAR971322-I2 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

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FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date: 03/20/97 Time: 0510

Lab File ID: 19MAR971322-I2 Init. Calib. Date(s): 03/18/97 03/19/97

Heated Purge: (Y/N) N Init. Calib. Times: 2349 0140

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date: 03/21/97 Time: 0909

Lab File ID: 21MAR970744-I0 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	17	20	LINR	15.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date: 03/21/97 Time: 0937

Lab File ID: 21MAR970744-I0 Init. Calib. Date(s): 03/18/97 03/19/97

Heated Purge: (Y/N) N Init. Calib. Times: 2349 0140

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1254	170	200	LINR	15.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	17	20	LINR	15.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date: 03/21/97 Time: 1541

Lab File ID: 21MAR970944-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 2129 2321

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1248	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: ITS ENVIRONMENTAL Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: 64176

Instrument ID: 2404_1 Calibration Date: 03/21/97 Time: 1609

Lab File ID: 21MAR970944-I1 Init. Calib. Date(s): 03/18/97 03/18/97

Heated Purge: (Y/N) N Init. Calib. Times: 1210 1402

GC Column: RTX-5 ID: 0.25 (mm)

COMPOUND	SAMPLE AMOUNT	CAL8 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	220	200	LINR	10.0	15.0
Aroclor-1260	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists
6723 Towpath Road, P.O. Box 66
Syracuse, New York 13214-0066
TEL: (315) 446-9120

CHAIN OF CUSTODY RECORD

C00004

PROJ. NO.: 615 21 500
PROJECT NAME: Allied Oil
SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	PCB Total	PCB Filtered*	TOC	DOC*	PCB/TOC		REMARKS
													Filter Weights
MW-2S	3/6/97	14:00		X	A66177	8	2	2	2	2			
MW-2S	3/6/97	14:00		X	A66177-33	1					1		1.1317 grams
MW-2S	3/6/97	14:00		X	A66177-34	1					1		1.1312 grams
MW-2S	3/6/97	14:00		X	A66177-35	1					1		1.1273 grams
MW-2S	3/6/97	14:00		X	A66177-36	1					1		1.1290 grams
MW-2S	3/6/97	14:00		X	A66177-37	1					1		1.1253 grams
MW-5	3/6/97	17:45		X	A66178	8	2	2	2	2			Filter Weights
MW-5	3/6/97	17:45		X	A66178-38	1					1		1.0966 grams
MW-5	3/6/97	17:45		X	A66178-39	1					1		1.0901 grams
MW-5	3/6/97	17:45		X	A66178-40	1					1		1.1018 grams
MW-5	3/6/97	17:45		X	A66178-41	1					1		1.0979 grams
													* Please note PCB Filtered & DOC
													samples were filtered in the field

Composite and analyze for PCB + TOC

Composite and analyze for PCB + TOC

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	3/7/97	13:30					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature)	DATE	TIME	Remarks: To ITS Labs Fed Ex # 3370501245	
			[signature]	3/8/97	1030		

10/23/95

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists
6723 Towpath Road, P.O. Box 66
Syracuse, New York 13214-0066
TEL: (315) 446-9120

CHAIN OF CUSTODY RECORD

C88005

PROJ. NO.: 4.95.31500
PROJECT NAME: Allied Oil
SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers	PCB Total	PCB Filtered *	TOC	DOC *	PCB/TOC	REMARKS
												Filter Weights
MW-8	3/6/97	22:00		x	A66179	8	2	2	2	2		
MW-8	3/6/97	22:00		x	A66179-42	1					1	1.0938
MW-8	3/6/97	22:00		x	A66179-43	1					1	1.1013
MW-8	3/6/97	22:00		x	A66179-44	1					1	1.0805
MW-8	3/6/97	22:00		x	A66179-45	1					1	1.0763
												Composite and analyze for PCB + TOC
RB 1	3/6/97	1 30		x	A66180	8	2	2	2	2		
												* Please note PCB Filtered + DOC samples were filtered in the field

Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
[signature]	3/7/97	13 30					
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	Relinquished by: (Signature)	DATE	TIME	Relinquished by: (Signature)
Relinquished by: (Signature)	DATE	TIME	Received for Laboratory by: (Signature) [signature]	DATE 3/8/97	TIME 1030	Remarks: To ITS Labs Fed Ex # 3370501245	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

10/23/95
50511881.CDR

INCHCAPE TESTING SERVICES ENVIRONMENTAL LABORATORIES LOG-IN SHEET

Lab Name: Inchcape Testing Services Environmental Laboratories - Burlington, VT Page 1 of 1

Received By (Print Name): Maureen K. Leary Log-in Date: 3/10/97

Received By (Signature): Maureen K. Leary

Case Number: ACB 64176

Sample Delivery Group No: ~~64155~~

ETR Number: 64176

REMARKS:

1. Custody Seal *Present/Absent** *Intact/Broken*
2. Custody Seal Nos.: N/A
3. Chain-of-Custody Records *Present/Absent**
4. Sample Information Sheets *Present/Absent**
5. Airbill *Airbill/Sticker Present/Absent**
6. Airbill No.: 3370501245
7. Sample Tags *Present/Absent**
   Sample Tag Numbers *Listed/Not Listed on Chain-of-Custody* N/A
8. Sample Condition: *Intact/Broken** *Leaking*
9. Does information on the custody records, sample information sheets, sample tags and labels agree? *Yes/No** See *
10. Date Received at Lab: 3-8-97
11. Time Received: 1030
12. Cooler Temperature: 2°C

Sample Transfer

Fraction: All

Area #: Vol. of Tage

By: MLH

On: 3/8/97

CORRESPONDING			
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66177	N/A	326930	Were air bubbles present
A66177F	"	326931	in any VOA vials? N/A.
A66177FIL	"	326932	
A66178	"	326933	All received
A66178F	"	326934	intact in cooler
A66178FIL	"	326935	(w/ice.
A66179	"	326936	
A66179F	"	326937	
A66179FIL	"	326938	
A66180	"	326939	
A66180F	"	326940	
			* A66180: Time
			on chain 7:30,
			all containers
			labeled 7:30
			with the
			exception of
			one VOA bottle
			which is
			labeled "07:30".

* Contact Project Director

Reviewed by: _____

Date: _____

Logbook No.: 000645

Logbook Page No.: ~~000644~~

ETHOD: 8080_PCB:EXS

CLIENT(s): BK 2

ASE: PCB

G: 64176, 64153,

ATE: 3/17/97

ALYST: MW

IKED BY: MW

TNESSED BY:

MATRIX: SOIL

LEVEL: LOW

BATC D: 9WV

326/18

ab sample id BTR	Client id	Sample weight (10gm)	1. 20gms baked granular Na_2SO_4, mix	2. Transfer to soxhlet extractor	3.# 2.0 ml 0.2 ppm TCX/DCB surr. Surr lot# E03139701	4.# 1.0 ml 50.0 ppm AR1242/1254 matrix Mtx lot# ~~E03109701~~ E03179702 MW 3/17/	5. Extract 16 hrs w/1:1 hex/acetone Acetone lot# L62265	6. Elute extract through Na_2SO_4 funnel	7. Concentrate extract to approx 1.0ml	8. Filter through 0.45 um filters	9.# Adjust volume to 10 ml w/CH_2Cl_2 CH_2Cl_2 lot# L03287	10. Archive 1.0 ml	11.# 5 ml through GPC	12. Hex exchange Hexane lot# L04312	13.# Concentrate to 5.0 ml	14.# Transfer 1 of 5 ml to a vial	15. Sulfuric Acid Clean-up H_2SO_4 Lot# K20028 + Sulfur clean up	16. Conc to 1.0ml	17. 3 gm silica gel clean-up Silica gel Lot# 964589	18.# Conc to 1.0ml	19.# pH
	PBLKS4	1.0981 1.0950		MW	✓		MW	MW	MW	MW	MW	MW	✓	MW	MW	MW	MW	MW	MW	MW	
	PLCSS4	1.0946 1.0907			✓	✓							✓								
26785	A66169FIL				✓								✓								
6791	A66171FIL				✓								✓								
6794	A66172FIL				✓								✓								
6845	A66174FIL				✓								✓								
851	A66175FIL				✓								✓								
854	A66176FIL				✓								✓								
6932	A66177FIL				✓								✓								
6935	A66178FIL				✓								✓								
938	A66179FIL				✓								✓								

MW EXB

MW 3/20/97

MW 3/17/97

18

G00640

METHOD 080_PCB:EXW MATRIX: WATER LEVEL: LOW BATCH ID: 9WS

CLIENT(s): BLABOL
CASE: PCB
SDG: 64176
DATE: 3/10/97
ANALYST: MSK
SPIKED BY: JD
WITNESSED BY: MSK
ETR 64176

Lab sample id (ETR)	Client id	Sample Volume (1000ml)	1. pH between 5 and 9	2.# 100 ul 0.2 ppm TCX/DCB surr. Surr lot# E012897302	3.# 100 ul 6.0 ppm AR1242/1260 matrix Mtx lot# E012797101	4. Extract 3x with 60 ml CH2Cl2 CH2Cl2 lot# L032981	5. Hex exchange Hexane lot# L043312	6. Conc to 2-3 ml	7. Sulfuric Acid Clean-up H2SO4 Lot# X020028	8. Conc to 1.0ml	9. 3 gm silica gel clean-up Silica gel Lot#	10.# Conc to 10ml
PBLK Q6		1000	✓	✓		✓	✓	✓	✓	✓	✓	✓
326930				✓								
326931				✓								
326933				✓								
326934				✓								
326936				✓								
326937				✓								
326939				✓								
326940				✓								
MSB				✓	✓							

MSK 3-13-97

MSK 3/7/97

006641

Aquatec, Inc. -- Extraction worksheet -- printed by: JKZ on 03.10.97 16:52:44

IF-00001

INTERNAL CHAIN OF CUSTODY

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

ETR Number: 64176 Case: PCB

Project Number: 91082 SDG Number: 64176

Memo: Samples #'s 326930 - 40 place placed in refrigerator

by Maureen [signature] on 3/10/97 @ 1300 (date/time).

Signature

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
3/10/97	1600	326932, 35, 38	Signature	Chris [signature] Signature	re-equilibration
3/13/97	0730	326932, 35, 38	Signature	Chris [signature] Signature	weighing
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

000005

INTERNAL CHAIN OF CUSTODY

IF-00001

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

ETR Number: 64176 Case: PCB

Project Number: 91082 SDG Number:

Memo: Samples #'s 326930 - 40 placed in refrigerator

by Maureen on 3/10/97 @ 1300 (date/time).

Signature

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
3/17/97	1500	326932 326935 326938	Signature	Signature	Extracting
3/20/97	1515	326932 326935 326938	Signature	Signature	GC and
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

CC0007

INTERNAL CHAIN OF CUSTODY

IF-00001

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

ETR Number: 64176 Case: PCB

Project Number: 91082 SDG Number: _____

Memo: Samples #'s 326930 - 40 place placed in refrigerator

by Maureen [signature] on 3/10/97 @ 1300 (date/time).

Signature

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

000008

IF-00001

INTERNAL CHAIN OF CUSTODY

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

ETR Number: [redacted]

Case: PCB

Project Number: 91082

SDG Number:

Memo: Samples #'s 326930 - 40 placed in refrigerator

by Maureen [signature] on 3/10/97 @ 1300 (date/time).

Signature

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
3/17	1400	326932 35,38	Signature	Kristin [signature] Signature	analysis
3/17	1800	326932 35,38	Kristin [signature] Signature	Signature	storage
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

000009

INTERNAL CHAIN OF CUSTODY

IF-00001

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

ETR Number: [illegible]

Case: PCB

Project Number: 91082

SDG Number:

Memo: Samples #'s 326930 - 40 place placed in refrigerator

by Maureen [illegible] on 3/10/97 @ 1300 (date/time).

Signature

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
4/3/97	1000	326930-40	Kristin Cheney Signature	Kristin Cheney Signature	analysis
4/3/97	1800	326930-40	Kristin Cheney Signature	Kristin Cheney Signature	Storage
4/4	0900	326920-40	Brian E. Fan Signature	Kristin Cheney Signature	analysis
4/4	1600	326920-40	Kristin Cheney Signature	Brian E. Fan Signature	stage
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER
SUPERFUND SITE

SDG# 66002

PCB ANALYSES

ALLIED OU

Analyses performed by:

ITS Environmental, Inc.
Colchester, Vermont

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG# 66002 for the Allied OU sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analyses				
				VOA	BNA	PCB	TAL	MISC
A66182	338376	groundwater	7/29/97			x		
A66183	338377	groundwater	7/29/97			x		
A66184*	338378	groundwater	7/29/97			x		
A66185	338379	groundwater	7/29/97			x		
A66186	338380	groundwater	7/29/97			x		
A66187	338381	groundwater	7/29/97			x		
A66188	3338382	groundwater	7/29/97			x		
A66189	338383	groundwater	7/29/97			x		

* MS/MSD performed on this sample

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

The data presented in the package has been derived using a procedure developed by Aquatec, Inc. in an attempt to improve the analytical process of calibration, identification, and quantitation of PCBs as Aroclors. Key components of this procedure include:

Calibration

The response function of the electron capture detector is inherently non-linear, and while significant linearization is achieved for this detector by electronic means, some non-linearity remains. Power function linearization is used to "straighten the curve" and allow the use of response factors for calibration purposes.

During the initial calibration a response factor is calculated for each peak in the individual Aroclors.

A weighted response factor calculation has been used to adjust for non-linearity at the low end of the calibration curve.

Identification

Peak retention times are relative. Retention times are in set windows relative to the time markers DCB and TCMX. Time markers adjust for minor variations in column flow or instrument condition and allow the use of very tight windows which minimizes the number of both false positive and false negative peak identifications.

The determination of "which Aroclor or mixture of Aroclors will produce a chromatogram most similar to that of the residue" is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The "most similar" Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors. This is similar to the procedure presented by L.E. Slivon, P.M. Schumacher and A. Alford-Stevens for the determination of Aroclor composition from GC/MS level of chlorination results.

Identification/quantitation of Aroclors in samples is based on the combined response of two columns, typically RTX-5 and RTX-35. The pooling of response combines the unique qualities of both columns to derive a more defined Aroclor pattern which less likely to be affected by interferents. Identification/quantitation data for the individual columns is provided in the package and can be used as a check on the combined column results.

Data Assessment

1. Holding Time

The QAPP-specified holding times for PCB analyses of water samples are 5 days from date of sample receipt to extraction and 40 days from extraction to analysis. All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method or instrument blanks. No field blanks were submitted with the samples.

3. System Performance

The system performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The intial calibration was within this limit for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limit.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recovery for one surrogate was below control limits in sample A66189. Since recvoery for the remaining surrogate was within control limits, no data have been qualified based on the deviation. All other sample surrogate recoveries were within control limits.

6. Compound Identification

The determination of Aroclor presence is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The most similar Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors.

Identification/quantitation of Aroclors is based on the combined response of the RTX-5 and RTX-35 columns. Identification/quantitation data for the individual columns is provided in the package and has been used as a check on the combined column results.

A review of the sample chromatograms indicate that the Aroclors have been correctly identified/quantitated. It should be noted that although Aroclor 1016 was indicated as present in samples A66186, A66187 and A66188, the true source was most likely Aroclor 1242.

7. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits. All matrix s[ike blank recoveries were also within control limits.

8. Field Duplicates

No field duplicates were inlcuded in this data set.

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

DATA REVIEW CHECKLIST

PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were recoveries of TCMX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits? 0 out of 4			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? 0 out of 2			
Blanks			
Is a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Do any field/rinse blanks have positive results?			X
Are there field/rinse/equipment blanks associated with every sample?		X	

A66002

PCB Data Review Checklist - Page 2

	YES	NO	NA
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks		X	
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?	X		
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?			X
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			X
PCB Identification			
Is both a combined and single column Aroclor Identification Report present for every sample?	X		
Do the combined column and individual column Aroclor identifications agree?	X		

A66002

PCB Data Review Checklist - Page 3

	YES	NO	NA
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			X
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Were field duplicates submitted with the samples?		X	

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding Time	Surrogates	
		TCX	DCB
A66182			
A66183			
A66184			
A66184 MS			
A66184 MSD			
A66185			
A66186			
A66187			
A66188			
A66189			↓

Surrogate Standards
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogates diluted out
↑ Recovery high
↓ Recovery low

Unless otherwise noted, all parameters are within specified limits.

PCB Calibration Summary

Instrument: HP2404
Column: RTX-35 / RTX-5

Date:	8/5/97-8/6/97	8/7/97	8/7/97	8/8/97	8/8/97	8/8/97	8/8/97
Time:		2311	2341	0541	0611	1141	1211
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok						
Aroclor 1221	ok						
Aroclor 1232	ok						
Aroclor 1242	ok			ok			
Aroclor 1248	ok		ok		ok		ok
Aroclor 1254	ok					ok	
Aroclor 1260	ok	ok					
Tetrachloro-m-xylene	ok						
Decachlorobiphenyl	ok						
Affected Samples:							

A66002

PCB Calibration Summary - Page 2

Instrument: HP2404
Column: RTX-35 / RTX-5

Date:		8/15/97	8/15/97	8/15/97	8/15/97		
Time:		2025	2055	2325	2355		
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	%D	%D	%D	%D	%D
Aroclor 1016							
Aroclor 1221							
Aroclor 1232							
Aroclor 1242		ok					
Aroclor 1248			ok		ok		
Aroclor 1254				ok			
Aroclor 1260							
Tetrachloro-m-xylene							
Decachlorobiphenyl							
Affected Samples:							

A66002

CORRECTED ANALYSIS SUMMARY FORMS

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66182

Lab Name: ITS Environmental Lab Code: INCHVT

Contract: 91082 Case: PCB SDG: 66002

Phase Type: Water

Phase Volume: 1000 (ml)

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

Lab Sample ID: 338376

Date Received: 07/31/97

Date Extracted: 08/04/97

Date Analyzed: 08/08/97

Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.41	
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66183

Lab Name: ITS Environmental Lab Code: INCHVT

Contract: 91082 Case: PCB SDG: 66002

Phase Type: Water

Phase Volume: 1000 (ml)

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

Lab Sample ID: 338377

Date Received: 07/31/97

Date Extracted: 08/04/97

Date Analyzed: 08/08/97

Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.42	
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66184

Lab Name: ITS Environmental Lab Code: INCHVT

Contract: 91082 Case: PCB SDG: 66002

Phase Type: Water

Phase Volume: 1000 (ml)

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

Lab Sample ID: 338378

Date Received: 07/31/97

Date Extracted: 08/04/97

Date Analyzed: 08/08/97

Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.39	
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66185

Lab Name: ITS Environmental Lab Code: INCHVT

Contract: 91082 Case: PCB SDG: 66002

Phase Type: Water

Phase Volume: 1000 (ml)

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

Lab Sample ID: 338379

Date Received: 07/31/97

Date Extracted: 08/04/97

Date Analyzed: 08/08/97

Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.39	
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66186

Lab Name: ITS Environmental Lab Code: INCHVT

Contract: 91082 Case: PCB SDG: 66002

Phase Type: Water

Phase Volume: 1000 (ml)

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

Lab Sample ID: 338380

Date Received: 07/31/97

Date Extracted: 08/04/97

Date Analyzed: 08/08/97

Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
12674-11-2	Aroclor-1016	0.30	
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66187

Lab Name: ITS Environmental Lab Code: INCHVT

Contract: 91082 Case: PCB SDG: 66002

Phase Type: Water

Phase Volume: 1000 (ml)

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

Lab Sample ID: 338381

Date Received: 07/31/97

Date Extracted: 08/04/97

Date Analyzed: 08/08/97

Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
12674-11-2	Aroclor-1016	0.29	
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66188

Lab Name: ITS Environmental Lab Code: INCHVT

Contract: 91082 Case: PCB SDG: 66002

Phase Type: Water Lab Sample ID: 338382

Phase Volume: 1000 (ml) Date Received: 07/31/97

Injection Volume: 1.0 (uL) Date Extracted: 08/04/97

Dilution Factor: 1.0 Date Analyzed: 08/08/97

Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
12674-11-2	Aroclor-1016	0.25	
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66189

Lab Name: ITS Environmental Lab Code: INCHVT

Contract: 91082 Case: PCB SDG: 66002

Phase Type: Water
Phase Volume: 1000 (ml)
Injection Volume: 1.0 (uL)
Dilution Factor: 1.0

Lab Sample ID: 338383
Date Received: 07/31/97
Date Extracted: 08/04/97
Date Analyzed: 08/15/97
Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

ITS Intertek Testing Services
Environmental Laboratories

August 4, 1997

Ms. Laurie Indick
Blasland & Bouck Engineers
6723 Towpath Road
Box 66
Syracuse, NY 13214

Re: Laboratory Project No. 91082
Case No. PCB; SDG 66002

Dear Ms. Indick:

Enclosed are the analytical results of samples received intact by ITS Environmental on July 31, 1997. Laboratory numbers have been assigned and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 07/31/97	ETR No: 66002	
338376	A66182	07/29/97	Water
338377	A66183	07/29/97	Water
338378	A66184	07/29/97	Water
338378MS	A66184MS	07/29/97	Water
338378MD	A66184MSD	07/29/97	Water
338379	A66185	07/29/97	Water
338380	A66186	07/29/97	Water
338381	A66187	07/29/97	Water
338382	A66188	07/29/97	Water
338383	A66189	07/29/97	Water

Samples in this delivery group were reported as the best match to combinations of the seven Aroclor standards by use of the ITS processing software. In general, the standard Aroclors are sufficiently unique to provide precise identifications and quantitations of complex mixtures with minimal weathering. For highly altered samples, certain subtle identification distinctions, such as the difference between 1016 and 1242 become less precise. In all cases, quantitation remains highly reliable.

Intertek Testing Services NA Inc.
55 South Park Drive Colchester, VT 05446
Telephone (802) 655-1203 Fax (802) 655-1248

Documentation of sample handling and preparation is included at the end of the "Sample Data Package." Colored sheets of paper entitled "Sample Preparation" and "Sample Handling" have been used to explicitly mark the location of these documents.

If there are any questions regarding this submittal, please contact James W. Madison at (802) 655-1203.

Sincerely,

for Martha Roy

Deborah A. Loring
Laboratory Manager

DAL/cga

FORM 2
AROCLOR SURROGATE RECOVERY

Lab Name: ITS Environmental
Lab Code: INCHVT
SAS No:

Contract: 91082
Case: PCB
SDG No: 66002

	EPA SAMPLE NO.	S1 (TCX)	#	S2 (DEC)	#
1	PBLKC2	57	*	86	
2	PLCSC2	64		64	
3	A66182	66		71	
4	A66183	64		79	
5	A66184	68		94	
6	A66184MS	81		89	
7	A66184MSD	79		89	
8	A66185	75		96	
9	A66186	70		90	
10	A66187	68		79	
11	A66188	71		80	
12	A66189	75		50	*
13					
14					
15					
16					
17					
18					
19					
20					

Project Specific
QC Limits
(60 - 150)
(60 - 150)

S1 (TCX) = Tetrachloro-meta-Xylene
S2 (DEC) = Decachlorobiphenyl

- Column to be used to flag recovery values
* - Values outside of QC limits
D - Surrogates calculated using diluted analysis
A - Extracted surrogates diluted out, surrogates added to diluted extract as retention time markers.

SOIL AROCLOR MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ITS Environmental
Lab Code: INCHVT
SAS No.:

Contract: 91082
Case No.: PCB
SDG No.: 66002

EPA Sample No.: A66184

Compound	SPIKE ADDED (UG/KG)	SAMPLE CONCENTRATION (UG/KG)	MS CONCENTRATION (UG/KG)	MS % REC #	QC LIMITS REC.
Aroclor 1242	0.6000	0.3929	0.9384	91	39-150
Aroclor 1254	0.6000	0	0.5906	98	29-131

Compound	SPIKE ADDED (UG/KG)	MSD CONCENTRATION (UG/KG)	MSD % REC #	RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor 1242	0.6000	0.9918	100	9	30	39-150
Aroclor 1254	0.6000	0.6170	103	5	30	29-131

Column used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 4 outside limits

Comments:

3E
AROCLOR
MATRIX SPIKE BLANK RECOVERY

Lab Name: ITS Environmental
Lab Code: INCHVT
SAS No.:

Contract: 91082
Case No.: PCB
SDG No.: 66002

EPA Sample No.: PLCSC2

Compound	SPIKE ADDED (UG/KG)	MSB CONCENTRATION (UG/KG)	MSB % REC #	QC LIMITS REC.
Aroclor 1242	0.6000	0.4132	69	39-150
Aroclor 1254	0.6000	0.5353	89	29-131

Column used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

Comments:

FORM 4
AROCLOR METHOD BLANK SUMMARY

Lab Name:	ITS Environmental	Contract:	91082
Lab Code:	INCHVT	Case:	PCB
Lab Sample ID:	PBLKC2	SDG No.:	66002
Matrix: (soil/water)	WATER	Level (L/M):	LOW
Date Extracted:	08/04/97	Date Analyzed(2):	08/08/97
Date Anlayzed(1):	08/08/97	Time Analyzed(2):	0941
Time Analyzed(1):	0941	GC ID(2):	HP2404
GC ID(1):	HP2404	GC Column(2):	RTX-35
GC Column(1):	RTX-5		

	LAB ID	CLIENT ID	DATE ANALYZED 1	DATE ANALYZED 2
1	PLCSC2	PLCSC2	08/08/97	08/08/97
2	338376	A66182	08/08/97	08/08/97
3	338377	A66183	08/08/97	08/08/97
4	338378	A66184	08/08/97	08/08/97
5	338378MS	A66184MS	08/15/97	08/15/97
6	338378MSD	A66184MSD	08/15/97	08/15/97
7	338379	A66185	08/08/97	08/08/97
8	338380	A66186	08/08/97	08/08/97
9	338381	A66187	08/08/97	08/08/97
0	338382	A66188	08/08/97	08/08/97
11	338383	A66189	08/15/97	08/15/97
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKC2

Lab Name: ITS Environmental Lab Code: INCHVT

Contract: 91082 Case: PCB SDG: 66002

Phase Type: Water

Phase Volume: 1000 (ml)

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

Lab Sample ID: PBLKC2

Date Received:

Date Extracted: 08/04/97

Date Analyzed: 08/08/97

Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	Q
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.20	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

CALIBRATION SUMMARY
BACK CALCULATIONS

Lab ID: ITS Environmental
GC: HP2404
Col. 1: RTX-5
Col. 2: RTX-35

Calib date(s): 05-AUG-97 18:50 to 06-AUG-97 11:50

File: 07, 08 05AUG971719

Standards	50 ppb	100 ppb	200 ppb	400 ppb	800 ppb	%RSD
Aroclor 1016	50.4	103	204	399	793	
Cal Fact	1.008	1.030	1.020	0.998	0.991	1.6
% Diff	-1	-3	-2	0	1	
Aroclor 1221	54.6	108	208	401	777	
Cal Fact	1.092	1.080	1.040	1.003	0.971	4.9
% Diff	-9	-8	-4	0	3	
Aroclor 1232	50.2	101	200	399	794	
Cal Fact	1.004	1.010	1.000	0.998	0.993	0.7
% Diff	0	-1	0	0	1	
Aroclor 1242	52.2	97.3	206	406	789	
Cal Fact	1.044	0.973	1.030	1.015	0.986	2.9
% Diff	-4	3	-3	-2	1	
Aroclor 1248	51.4	97.3	199	391	812	
Cal Fact	1.028	0.973	0.995	0.978	1.015	2.4
% Diff	-3	3	1	2	-2	
Aroclor 1254	50.3	97.8	189	396	817	
Cal Fact	1.006	0.978	0.945	0.990	1.021	2.9
% Diff	-1	2	6	1	-2	
Aroclor 1260	50.4	97.7	191	380	831	
Cal Fact	1.008	0.977	0.955	0.950	1.039	3.8
% Diff	-1	2	5	5	-4	

Cal Fact = Calc. Conc. / Nominal Conc.

%RSD = STD Dev / Mean of Cal Fact

% Diff = (Nominal Amt-Calc Amt) / Nominal Amt*100

F7_1.XLS

AROCLOR CHECK STANDARD SUMMARY

Lab ID: ITS Environmental
GC: HP2404
Col. 1: RTX-5
Col. 2: RTX-35

Initial Calib.
date/time: 8/5/97 18:50 to 8/6/97 11:50

Check Standard File: 7,8 07AUG971001,27
Date: 08/07/97
Time: 23:11

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1260	200	196	2.0

Check Standard File: 7,8 07AUG971001,28
Date: 08/07/97
Time: 23:41

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	180	10.0

Check Standard File: 7,8 07AUG971859,12
Date: 08/08/97
Time: 05:41

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1242	200	201	0.5

Check Standard File: 7,8 07AUG971859,13
Date: 08/08/97
Time: 06:11

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	189	5.5

Check Standard File: 7,8 07AUG971859,24
Date: 08/08/97
Time: 11:41

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1254	200	198	1.0

Aroclor Calibration Summary

Calibration of 5-Aug-1997 18:50 through 6-Aug-1997 11:50.
MCD1:[8080] 07,08 05AUG971719
METHOD: 8080_PCB:AN

RTX-5

TAM - HP2404

000133

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
1	4.065	60.198	4.0%	31.417	2.5%	1.112		1.233	49.					0.453	
2	4.592	384.175	3.2%	256.211	3.0%	110.035	1.6%	101.649	2.5%	4.699	17.	0.515		0.556	
3	4.703									40.253	8.2%	37.735	8.3%	37.482	9.2%
4	4.720	262.354	3.2%	200.279	2.0%	137.256	2.8%	124.708	2.1%						
5	4.798	827.229	4.9%	693.018	5.1%	581.239	3.6%	508.912	5.3%	50.100	5.7%	7.378	21.	4.794	9.8%
6	4.993	4.601	12.9%	4.477	6.9%	4.584	8.1%	4.834	28.	5.290	9.7%	5.019	9.6%	5.088	5.5%
7	5.067	3.626	12.0%	36.437	3.5%	81.456	1.6%	58.327	2.0%	16.485	4.5%	0.907		0.587	
8	5.327	51.248	4.8%									0.730		0.489	
9	5.372			339.673	5.0%	804.499	4.8%	602.659	6.7%	348.428	2.9%	12.225	17.	6.375	4.6%
10	5.401	116.789	2.1%	360.051	3.3%										
11	5.530	15.072	8.9%	55.066	4.3%	125.782	1.4%	88.924	2.8%	22.128	36.	1.379		0.958	
12	5.659	45.458	5.8%	331.652	2.9%	767.802	3.3%	579.144	4.2%	259.355	1.3%	10.910	25.	6.704	29.
13	5.803	14.390	10.5%	15.975	4.4%	23.374	33.	17.401	9.7%	11.516	11.7%	11.088	8.4%	10.954	5.8%
14	5.859	5.051		9.196	5.5%	21.935	31.	12.053	13.3%						
15	5.935	12.069		78.882	3.2%	189.504	3.3%	137.642	3.2%	45.396	6.1%	2.226			
16	5.973	14.074	8.5%	63.733	2.9%	146.740	3.9%	105.399	4.2%			2.556		2.143	
17	6.090	72.217	12.0%	732.122	0.9%	1740.289	0.8%	1321.189	2.0%	852.942	2.3%	28.834	21.	12.590	13.3%
18	6.267	41.683	10.2%	365.129	0.5%	858.014	1.3%	647.570	2.6%	362.318	2.0%	19.319	12.4%	6.014	10.1%
19	6.398	23.283	12.5%	238.458	2.9%	575.384	2.1%	439.015	2.1%	228.247	4.2%	6.782	20.	3.600	
20	6.491	3.669	39.	74.567	1.6%	213.835	2.9%	139.714	3.6%	171.597	1.3%	4.573	19.	1.060	
21	6.638	1.709		26.227	3.9%	81.736	6.8%	50.585	3.6%	57.403	2.4%	1.778	35.	0.424	
22	6.703	9.437	30.	184.703	1.2%	499.184	3.0%	394.184	3.9%	739.973	2.1%	551.001	2.8%	32.366	8.6%
23	6.786	5.344	42.	177.247	1.8%	479.568	2.8%	354.824	3.3%	598.196	1.8%	164.910	3.2%	5.439	31.
24	6.855	3.482	46.	133.657	1.5%	375.137	2.7%	259.259	3.3%	416.678	1.4%			3.178	
25	7.105	7.130	49.	231.829	1.0%	603.148	3.1%	490.953	2.9%	868.681	1.9%	314.999	3.6%	6.476	27.
26	7.174	5.661	33.	156.339	3.8%	360.522	2.7%	312.189	2.5%	406.702	1.6%			2.779	
27	7.353	5.809	62.	244.497	1.1%	565.055	2.0%	497.760	2.3%	844.910	1.9%	120.948	6.4%	4.849	16.
28	7.526	1.449		62.429	2.7%	130.047	3.2%	131.857	2.2%	206.582	1.7%	23.348	11.3%	1.442	51.
29	7.632			9.244	6.1%	22.894	18.	18.186	4.5%	20.828	6.4%	1.741		0.160	
30	7.837	2.308	65.	98.835	5.3%	50.363	6.1%	209.190	5.5%	408.065	12.4%	86.401	6.5%	1.790	
31	7.919	4.736	50.	181.923	4.5%	73.385	5.3%	402.507	4.0%	805.319	4.4%	362.093	5.1%	5.032	30.
32	8.008	17.444	18.	214.398	3.0%	92.899	6.7%	465.282	3.2%	926.300	3.5%	952.557	2.7%	373.492	3.1%
33	8.158	1.151		23.646	5.3%	15.097	3.2%	51.177	5.9%	141.432	4.0%	159.105	2.4%		
34	8.393	3.454		154.513	8.4%	12.302		342.291	7.8%	623.221	6.5%	232.385	3.8%	52.069	9.5%
35	8.531	13.675	31.	57.435	2.0%	11.522	53.	135.483	3.8%	383.065	1.9%	1093.605	2.7%	414.761	3.7%
36	8.657	2.558	72.	28.758	3.0%	3.237	85.	69.168	3.9%	215.087	2.8%	433.034	2.3%		
37	8.808			1.911				4.191		5.196	26.	33.741	5.1%		
38	8.927	0.161		3.253	7.0%	0.286		8.338	6.6%	29.481	10.7%	64.687	8.0%	0.840	
39	9.055	2.267		18.849	7.2%	4.379		46.840	4.5%	143.589	3.5%	322.719	3.6%	13.911	30.
40	9.181	3.965	81.	33.103	6.3%	3.594		82.650	4.4%	254.210	4.0%	704.860	4.7%	76.865	9.5%
41	9.287	0.918		19.493	6.7%	1.567		48.932	5.8%	161.945	5.2%	246.655	5.1%		
42	9.351	3.731	41.									138.370	4.2%	192.781	3.7%
43	9.430	7.977	56.	51.424	4.6%	6.798		133.782	4.4%	403.618	3.4%	1266.445	3.8%	222.284	6.4%
44	9.728	7.033	5.3%	15.069	5.4%	1.057		36.079	5.3%	115.152	3.9%	245.075	3.8%	494.863	4.0%
45	9.858	4.434	17.	2.235		1.157		4.587	14.5%	17.942	5.5%	157.426	6.1%	293.450	3.2%

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 4.3231 and decachlorobiphenyl at 18.5293.
2) Peaks chosen within window of +/- 0.01377 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.11454.

Aroclor Calibration Summary

Calibration of 5-Aug-1997 18:50 through 6-Aug-1997 11:50.
MCD1:[8080] 07,08 05AUG971719
METHOD: 8080_PCB:AN

RTX-5

TAM - HP2404

000134

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
46	9.967			1.587		5.621		4.462	24.	19.290	8.7%	75.803	11.8%		
47	10.048	15.728										484.772		1047.697	4.0%
48	10.100	23.469		24.095	9.1%	4.939		58.652	6.1%	196.435	4.6%	739.495	4.1%		
49	10.331	2.061		0.728		2.195		0.883		10.517		91.717	10.5%	61.605	4.2%
50	10.393			1.502		2.717		3.837		18.135	15.0%				
51	10.541	2.002	69.	0.960	51.	1.493		1.708	30.	7.397	9.5%	101.213	10.2%	148.740	5.9%
52	10.705	10.925	16.	6.336	24.	2.537		8.453	11.9%	24.465	3.3%	468.118	3.3%	1059.840	5.1%
53	10.777	7.635	24.											519.424	3.3%
54	10.814			18.997	8.4%	2.744		47.227	9.4%	163.678	6.0%	524.954	4.8%		
55	11.057	3.768		3.240	12.6%	1.454		4.997	7.6%	17.560	6.1%	194.209	9.5%	481.734	7.1%
56	11.307	1.222	41.	1.064		1.341		1.892				70.403		112.991	4.2%
57	11.476	11.124	37.	9.949	34.	4.782		17.024	15.	52.501	5.7%	877.969	3.8%	1152.654	6.6%
58	11.719	1.054		0.647				1.200		5.333		96.893	18.	168.001	4.3%
59	11.873									0.174		17.169	30.	39.853	6.8%
60	11.959	8.537	74.	7.501	55.	11.894		6.327		8.387		49.266	23.	721.648	4.6%
61	12.105	3.070		2.011				1.147		2.232		29.638	2.5%	404.646	4.2%
62	12.268	1.547	92.	2.046	59.	1.437		4.461	22.	15.174	4.3%	223.604	4.0%	94.563	5.8%
63	12.413	0.852		0.358										124.501	6.2%
64	12.646	3.943	9.0%	2.202	11.6%	1.508		0.882	11.8%	3.175	6.8%	46.910	4.1%	722.009	3.9%
65	12.807	1.858	10.1%	1.048		0.391		0.464		1.528		26.751	5.0%	396.541	3.5%
66	12.938	0.887												231.376	4.1%
67	12.974			0.776		0.952		1.163	9.6%	5.199	3.2%	99.614	7.1%		
68	13.137	0.267		0.245				0.307		1.446		24.946	7.7%	65.376	2.9%
69	13.285	0.308		0.303						0.536		12.083	8.8%	116.886	6.8%
70	13.482	4.949	12.6%	3.918	16.	0.899		1.632	19.	6.919	8.0%	92.777	4.3%	1423.224	6.6%
71	13.834	0.281								0.131				73.101	2.1%
72	14.381	1.698		1.657		1.225		0.864		3.794		76.046	4.5%	610.308	5.7%
73	14.647	0.876		0.751				0.274		1.515	14.5%	4.586		346.072	2.6%
74	14.812	0.847		0.736		0.591		0.261		1.552		3.686	6.4%	365.062	3.2%
75	15.280									0.142		2.117	10.9%	17.047	12.2%
76	15.741													146.299	5.1%
77	15.949	0.277		0.257		0.172		0.201		0.204		0.226		14.593	8.0%
78	16.388	0.747		0.500						1.444		2.407		290.902	4.4%
79	16.550													32.387	4.8%
80	17.571	7.033	2.8%	7.192	6.8%	6.890	5.6%	7.491	10.2%	8.385	11.2%	8.168	14.2%	107.148	2.6%
81	19.909	1.555	5.5%	1.537	7.6%	1.474		1.506		1.619		1.545		1.610	
======	======	==========		==========		==========		==========		==========		==========		==========	
	Total:	2191.5	5.0%	6119.5	3.0%	9835.0	2.8%	9618.0	3.7%	11791.2	3.4%	12277.1	3.9%	13396.9	4.9%

Retention Time Marker/Surrogate Standard Summary

Compound	Mean RT	RT Dev. Range	RT Crit.	Mean RF	Recovery Range	Surr Crit
tetrachloro-meta-xylene	4.3231	-.0098 to .0080	Passes...	42023.480	92.8 to 106.2%	Passes...
decachlorobiphenyl	18.5293	-.0093 to .0107	Passes...	12454.059	89.4 to 128.3%	** Fails *

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 4.3231 and decachlorobiphenyl at 18.5293.
2) Peaks chosen within window of +/- 0.01377 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.11454.

Aroclor Calibration Summary

Calibration of 5-Aug-1997 18:50 through 6-Aug-1997 11:50.
MCD1:[8080] 07,08 05AUG971719
METHOD: 8080_PCB:AN

RTX-35

TAM - HP2404

000135

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
1	4.321	307.999	7.2%	172.067	6.4%	6.166	12.6%	9.103	9.8%						
2	5.242	100.020	4.6%	80.092	3.8%	63.750	4.6%	55.683	5.9%	6.026	67.	3.114		0.913	
3	5.443	452.525	2.1%	315.821	1.2%	158.065	0.6%	144.589	2.8%	45.882	4.9%	38.687	6.1%	38.907	6.7%
4	5.683	268.104	3.1%	200.488	2.4%	130.379	1.4%	114.639	2.4%	7.243	8.8%	1.509		1.020	
5	5.794	865.746	4.7%	736.141	4.8%	636.688	3.9%	551.944	5.2%	58.607	6.1%	11.470	15.	9.238	13.6%
6	5.870	173.970	1.7%	123.357											
7	6.354	6.812	21.	35.833	6.0%	85.402	2.0%	60.564	2.2%	17.740	7.0%	0.994		0.641	55.
8	6.454	55.324	4.9%	31.863	8.8%	10.377	10.5%	9.499	14.5%			0.699			
9	6.592	159.019	5.1%	570.292	5.2%	1206.521	5.8%	912.833	6.8%	469.355	4.2%	19.163	16.	10.549	8.3%
10	6.808	9.457		43.674	7.3%	101.071	3.1%	73.749	3.2%	20.610	10.7%	0.917		0.618	
11	7.017	18.741	9.3%	164.503	1.6%	392.612	0.8%	291.239	1.9%	150.034	2.3%	4.937	20.	2.717	10.5%
12	7.080	19.410	8.1%									17.115	6.6%	17.011	11.3%
13	7.136	30.822	9.5%	214.486	2.1%	487.444	3.2%	371.896	4.6%	145.585	2.9%	9.154	28.	5.682	
14	7.250	13.065	8.8%	65.550	5.9%	150.884	4.8%	110.656	4.1%	22.881		2.115		1.368	
15	7.434	76.287	14.8%	801.675	1.3%	1928.287	0.9%	1454.436	1.6%	927.918	2.0%	31.403		14.027	
16	7.760	34.420	11.8%	326.112	0.8%	765.531	1.4%	579.781	2.2%	290.581	2.4%	9.298	20.	4.786	11.4%
17	7.859			68.405	4.0%	181.477	2.6%	129.946	2.1%	148.552	1.4%	11.816	12.2%	0.932	
18	7.964			24.782	8.1%	71.358	7.3%	46.821	6.5%	54.100	4.7%	1.267		0.226	
19	8.042	21.898	11.9%	241.785	4.5%	584.809	2.8%	449.956	3.2%	233.207	6.1%	6.460	26.	3.232	7.2%
20	8.202	10.820	35.	207.544	2.5%	539.982	4.3%	435.086	4.6%	807.737	3.3%	604.436	3.3%	37.290	6.5%
21	8.310	8.120	63.	215.824	2.4%	565.380	3.3%	424.265	3.7%	703.083	2.4%	181.431	4.6%	6.793	
22	8.368			114.070	2.8%	310.562	2.0%	225.438	2.2%	378.897	1.1%				
23	8.440	2.396	72.	95.849	2.2%	265.575	1.8%	182.423	2.3%	286.784	1.3%	20.451	12.7%	1.951	
24	8.533	0.726		32.986	6.7%	95.276	7.3%	65.498	6.0%	95.182	3.6%	6.617	22.	0.582	
25	8.931	9.283	41.	279.947	0.8%	680.110	1.4%	583.072	2.1%	965.926	1.5%	322.367	6.1%	5.659	
26	9.028	3.173	60.	122.310	2.8%	298.579	1.9%	246.459	1.5%	369.701	1.3%	32.510		2.564	
27	9.197	1.582		87.494	4.1%	207.740	2.0%	182.420	2.0%	302.145	2.0%	24.227	18.	1.629	
28	9.262	4.366	68.	185.263	3.1%	410.123	1.7%	382.761	1.8%	683.249	2.1%	116.217	8.1%	3.692	9.3%
29	9.344	1.245	99.	77.385	5.6%	184.935	3.8%	153.569	3.2%	225.686	4.2%			1.265	12.8%
30	9.509			14.690	18.	20.171	18.	31.396	11.7%	55.921	7.8%	6.340	36.	0.166	
31	9.604	2.812	59.	123.011	6.1%	68.851	24.	255.023	3.8%	478.874	4.1%	103.787	6.9%	2.815	39.
32	9.701					128.267	2.8%								
33	9.751	5.364	38.	226.859	4.5%	111.552	3.6%	497.881	3.2%	951.902	2.9%	418.663	4.5%	6.816	31.
34	9.898	3.787	27.	213.592	6.1%	66.316	3.7%	455.156	3.8%	822.266	4.1%	152.469	6.6%	4.414	19.
35	10.045	16.250	12.6%	63.131	2.1%	59.187	5.7%	144.208	4.1%	369.352	2.6%	917.603	2.3%	403.994	2.1%
36	10.187	2.079	13.4%	17.297	7.3%	7.569	11.0%	39.968	5.9%	101.959	2.4%	250.036	2.6%	67.343	6.7%
37	10.261	1.012		27.012	9.1%	15.471	8.4%	60.623	4.2%	144.048	1.9%	194.560	2.9%		
38	10.366	14.673	19.	49.616	2.6%	12.411	39.	117.617	1.5%	326.150	1.9%	1080.314	2.0%	468.616	3.1%
39	10.550	2.367										479.674	1.8%	17.374	12.5%
40	10.608	3.218	28.	195.508	8.5%	17.955	8.3%	430.191	6.6%	773.296	5.2%				
41	10.900	2.258	37.	31.259	6.1%	9.498	10.8%	75.625	2.1%	209.761	1.5%	373.719	2.0%	23.428	10.8%
42	11.088	0.186		7.314	19.	0.702		18.076	11.6%	51.610	5.5%	84.641	6.7%	2.698	31.
43	11.273	2.061	65.	26.889	5.8%	3.946		65.340	3.2%	196.608	2.1%	385.824	2.2%	16.695	13.7%
44	11.469	2.935		33.849	9.1%	1.720		84.924	6.8%	270.029		726.361	8.6%	70.783	21.
45	11.647	0.990		23.487	9.8%	2.532		57.293	7.2%	192.757	19.	260.812	6.2%	3.205	42.
46	11.795	9.774	55.	64.843	4.2%	8.539		161.941	2.3%	484.536	2.7%	1458.946	3.0%	243.884	5.9%
47	11.863	9.640												604.032	2.7%

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 4.8392 and decachlorobiphenyl at 21.2411.
2) Peaks chosen within window of +/- 0.01377 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.09734.

Aroclor Calibration Summary

Calibration of 5-Aug-1997 18:50 through 6-Aug-1997 11:50.
MCD1:[8080] 07,08 05AUG971719
METHOD: 8080_PCB:AN

RTX-35

TAM - HP2404

000136

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
48	12.020											113.149	6.8%	170.226	
49	12.078	2.991	25.	3.530		0.473		5.402		22.603		151.858	4.0%	245.874	2.2%
50	12.139			4.085	28.			10.161	17.	35.591	6.2%	112.735	7.1%		
51	12.211											69.657	8.7%		
52	12.308			31.999	5.9%	3.811		78.947	5.7%	256.984	2.3%	830.567	3.3%		
53	12.372	20.785	17.			7.076						798.154	2.3%	1229.608	3.3%
54	12.401			29.302	5.5%			63.738	1.7%	198.613	1.6%				
55	12.597	2.241	30.	3.302		1.360		6.526		22.852	8.8%	162.363	4.4%	215.999	3.0%
56	12.812	14.356	18.	10.213	19.	3.355		15.525	5.9%	51.270	2.8%	607.617	1.3%	1311.467	3.9%
57	13.002											68.091	9.7%		
58	13.391	4.491	18.	2.864	19.	0.725		3.664	10.7%	13.094	9.9%	213.279	7.0%	571.516	7.9%
59	13.532			22.835	6.6%	1.706		55.670	7.1%	200.409	5.9%	435.563			
60	13.584	7.188	34.			2.723						551.997	3.7%	473.062	3.0%
61	13.671	3.873												366.163	2.4%
62	13.712					3.261						150.259	7.4%		
63	13.868			1.185				2.725		11.199	12.9%	108.806	7.6%		
64	13.949	5.765	11.4%	4.355	9.2%	1.094		5.622	8.3%	20.360	5.9%	310.527	4.4%	763.692	4.6%
65	14.076	12.021	39.	11.630	32.	5.343		20.288	16.	65.469	2.6%	1040.744	3.2%	1178.478	5.5%
66	14.289	5.754	3.4%	3.315	3.7%	0.777		1.499		7.624		90.188	7.3%	913.718	2.4%
67	14.472	2.568		2.076				1.928		9.718		140.123	7.3%	533.837	4.1%
68	14.622			0.393				0.618		3.143		58.056	10.2%	66.855	4.5%
69	14.905	0.617		0.356				0.171		0.461		13.086	33.	153.806	8.5%
70	15.370	7.329	14.3%	5.517	26.	1.775		6.184		23.571	6.6%	347.003	4.6%	1037.685	3.8%
71	15.635	2.794		1.818										485.168	2.8%
72	15.704			1.819		0.949		1.943	36.	8.300	21.	146.444	7.7%	304.702	4.9%
73	15.812	1.197		0.909				0.200		2.118		51.597	11.1%	281.144	4.5%
74	16.002	6.902	9.3%	5.657	12.9%	1.082		2.776	29.	11.381	6.1%	158.039	6.0%	1957.965	6.0%
75	16.196											12.003		111.295	3.3%
76	16.725	0.261		0.140						0.202				68.972	9.9%
77	17.266									2.961		19.348		588.398	4.3%
78	17.423	4.087	32.	3.316	38.	5.264		2.127		6.718		100.696	3.5%	1105.123	5.7%
79	17.510									1.834				380.601	4.4%
80	18.401	2.542		2.468		2.457	8.7%	2.394	4.3%	2.774		2.558	9.9%	37.202	11.5%
81	18.761	0.352				0.343		0.346		0.477		0.328		14.432	11.9%
82	18.894	0.775		1.251				0.900		1.937		2.458	26.	190.858	5.7%
83	19.215	0.580		0.793				0.197		1.605		3.346		438.708	6.5%
84	20.405	10.652	7.9%	10.822	6.6%	10.200	6.9%	10.235	6.2%	11.789	8.7%	11.068	6.8%	167.392	4.7%
85	22.380	2.548		2.465	12.8%	2.480	13.0%	2.296		2.478		2.434		2.448	
======	======	==========		==========		==========		==========		==========		==========		==========	
	Total:	2857.4	4.6%	6922.4	3.6%	11110.0	2.9%	11045.7	3.5%	13843.3	2.8%	15256.3	3.9%	17475.9	4.4%

Retention Time Marker/Surrogate Standard Summary

Compound	Mean RT	RT Dev. Range	RT Crit.	Mean RF	Recovery Range	Surr Crit
tetrachloro-meta-xylene	4.8392	-.0147 to .0097	Passes...	43384.051	93.4 to 105.5%	Passes...
decachlorobiphenyl	21.2411	-.0167 to .0100	Passes...	25865.797	95.0 to 117.7%	** Fails *

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 4.8392 and decachlorobiphenyl at 21.2411.
2) Peaks chosen within window of +/- 0.01377 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.09734.

F7_2.XLS

AROCLOR CHECK STANDARD SUMMARY

Lab ID: ITS Environmental
GC: HP2404
Col. 1: RTX-5
Col. 2: RTX-35

Initial Calib. date/time: 8/5/97 18:50 to 8/6/97 11:50

Check Standard File: 7,8 07AUG971859,25
Date: 08/08/97
Time: 12:11

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	187	6.5

Check Standard File: 7,8 15AUG971845,4
Date: 08/15/97
Time: 20:25

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1242	200	196	2.0

Check Standard File: 7,8 15AUG971845,5
Date: 08/15/97
Time: 20:55

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	180	10.0

Check Standard File: 7,8 15AUG971845,10
Date: 08/15/97
Time: 23:25

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1254	200	198	1.0

Check Standard File: 7,8 15AUG971845,11
Date: 08/15/97
Time: 23:55

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	187	6.5

Intertek Testing Services
Environmental Laboratories 55 South Park Drive Colchester, VT 05446 (802) 655-1203

CHAIN OF CUSTODY RECORD

000004

Report to:
Company: BLASLAND, BOUCK & LEE
Address: 6723 TOWPATH RD. SYRACUSE, NY 13214
Contact: DAVID LAY
Phone: (315) 446-9120
Fax:
Contract/ Quote #:

Invoice to
Company: SAME
Address:
Contact:
Phone:
PO/SO #: 64551

Lab use only
Due Date:

Temp. of coolers when received (C°): 1 2 3 4 5

Custody Seal N / Y
Intact N / Y

Screened For Radioactivity ☐

Sampler's Name: DAVID LAY
Sampler's Signature: [signature]

Proj. No.: 64551
Project Name: KRSG - ALLIED ON
No./Type of Containers[2]: ~~DW~~ 19

ANALYSIS REQUESTED: PCB's USEPA METHOD 8081

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	PCB's USEPA METHOD 8081	Lab Sample ID (Lab Use Only)
W	7/29	1246		X	A66182		2			X	
		1300			A66183		2			X	
		1438			A66184		2			X	
		1438			A66184 MS/MSD		2			X	
		1534			A66185		2			X	
		1615			A66186		2			X	
		1840			A66187		2			X	
	7/30	0710			A66188		2			X	
					TEMP BLANK	2					
W	7/30	0850		X	A66189		2			X	

Turn around time: ☒ Priority 1 or Standard ☐ Priority 2 or 50% * ☐ Priority 3 or 100% * ☐ Priority 4 ERS (Dallas Only) * Must Coordinate with Project Manager

Shipment For Case Complete ☐ Yes ☐ No

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	7/31/97	0924	[signature]	7-31-97	0940

Remarks

Client's delivery of samples constitutes acceptance of ITS Environmental Laboratories terms and conditions contained in the Price Schedule.

[1] Matrix WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - Sludge O - Oil

[2] Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

ITS cannot accept verbal changes. Please Fax written changes to

INTERTEK TESTING SERVICES ENVIRONMENTAL LABORATORIES LOG-IN SHEET

Lab Name: Intertek Testing Services Environmental Laboratories - Burlington, VT Page 1 of 1

Received By (Print Name): FRANK Bessette Log-in Date: 7-31-97

Received By (Signature): Frank Bessette

Case Number: PCB

Sample Delivery Group No: 66002

ETR Number: 66002

REMARKS: 1 cooler 2nd cooler

1. **Custody Seal** Present/Absent* Intact/Broken
2. **Custody Seal Nos.:** /
3. **Chain-of-Custody Records** ~~Present/Absent*~~
4. **Sample Information Sheets** ~~Present/Absent*~~
5. **Airbill** ~~Airbill/Sticker~~ ~~Present/Absent*~~
6. **Airbill No.:** 6053799640
7. **Sample Tags** ~~Present/Absent*~~ **Sample Tag Numbers** ~~Listed/Not Listed~~ on Chain-of-Custody
8. **Sample Condition:** Intact/~~Broken*~~ ~~Leaking~~
9. **Does information on the custody records, sample information sheets, sample tags and labels agree?** Yes/~~No*~~
10. **Date Received at Lab:** 7-31-97
11. **Time Received:** 0940
12. **Cooler Temperature:** 3°C 6°C

Sample Transfer

Fraction: All

Area #: LVL 4 Fridge

By: FMB

On: 7-31-97

CORRESPONDING			
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66182	NA	338376	Were air bubbles present
A66183	"	338377	in any VOA vials? NA
A66184	"	338378	Samples Recv'd
A66185	"	338379	intact on ice
A66186	"	338380	at 3°C & 6°C.
A66187	"	338381	Coolers Recv'd
A66188	"	338382	intact with
A66189	"	338383	one cooler with
			no custody
			seals and the
			2nd cooler
			there was
			custody seals
			present.
			FMB
			7-31-97

* Contact Project Director

Reviewed by: _____ Logbook No.: 000658

Date: _____ Logbook Page No.: _____

IF-00001

INTERNAL CHAIN OF CUSTODY

ITS ENVIRONMENTAL - BURLINGTON, VERMONT

ETR Number: 66002 Case: 91082

Project Number: 91082 SDG Number: 66002

Memo: Samples #'s 338376-83

placed in refrigerator

by Frank Besatto on 7-31-97 1200 (date/time).

Signature

Date	Time	Sample #	Relinquished By	Received By	Purpose of Change of Custody
8/4/97	1700	376-383	Frank Besatto Signature	Signature	Extraction
08/05/97	0800	↓	Signature	William Schmidt Signature	Concentration
8/5	1440	↓	William Schmidt Signature	Pamara A. Hall Signature	GC Analysis
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	
			Signature	Signature	

ITS ENV.

8080_PCB: EXW For BLABO2 Kalamazoo

CLIENT: BLABO2
ETR NO: 66002
CASE: PCB
SDG: 66002
DATE: 08/14/97

ANALYST:
SPIKER: JD
WITNESS: SPH

SURR LOT # E07109702
MTX LOT # E08049701
$CH2Cl_2$ LOT#: L27272
HEXANE LOT # L19280
SILICA GEL LOT # 974275
H_2SO_4 LOT # K20028

345/25

000654

ITS Sample ID	Client ID	Sample Volume (1000ml)	Rinse 1.0 L bottles w/$MeCl_2$	pH between 5 and 9	100 uL Pest TCX/DCB Surr.	100 uL 1242/1254 matrix 6.0ppm	Extract 3X w/60ml $CH2Cl_2$	Hexane Exchange	Conc. to 2.0-3.0 ml	Sulfuric Acid cleanup	Conc. to 1.0ml	Conc. to approx. 1.0mL	Sulfur clean-up w/~~Hg~~ Cu	3% deactivated 3 gram silica gel clean-up Flute w/60mL Hex	Conc. to 1.0 mL
PBLK C2	PBLK	1000	✓	JD	✓	XXX	SPH SB	SB	SB	SB	SB	SB	SB	WAP	WAP
C2:LCS	LCS	1000			✓	✓									
338376					✓	XX									
338377					✓	XX									
338378					✓	XX									
338378 MS					✓	✓									
338378 MD					✓	✓									
338379					✓	XX									
338380					✓	XX									
338381					✓	XX									
338382					✓	XX									
338383					✓	XX									

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER
SUPERFUND SITE

SDG# KAL073

PCB ANALYSES

ALLIED OU

Analyses performed by:

ITS Environmental, Inc.
Colchester, Vermont

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG# KAL073 for the Allied OU sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analyses				
				VOA	BNA	PCB	TAL	MISC
A66198*	357322	groundwater	5/6/98			x		
A66190	357323	groundwater	5/6/98			x		
A66191	357324	groundwater	5/6/98			x		
A66192	357325	groundwater	5/6/98			x		
A66193	357326	groundwater	5/6/98			x		
A66194	357327	groundwater	5/7/98			x		
A66195	357328	groundwater	5/7/98			x		
A66196	357329	groundwater	5/7/98			x		
A66197	357330	groundwater	5/7/98			x		

* MS/MSD performed on this sample

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

The data presented in the package has been derived using a procedure developed by Aquatec, Inc. in an attempt to improve the analytical process of calibration, identification, and quantitation of PCBs as Aroclors. Key components of this procedure include:

Calibration

The response function of the electron capture detector is inherently non-linear, and while significant linearization is achieved for this detector by electronic means, some non-linearity remains. Power function linearization is used to "straighten the curve" and allow the use of response factors for calibration purposes.

During the initial calibration a response factor is calculated for each peak in the individual Aroclors.

A weighted response factor calculation has been used to adjust for non-linearity at the low end of the calibration curve.

Identification

Peak retention times are relative. Retention times are in set windows relative to the time markers DCB and TCMX. Time markers adjust for minor variations in column flow or instrument condition and allow the use of very tight windows which minimizes the number of both false positive and false negative peak identifications.

The determination of "which Aroclor or mixture of Aroclors will produce a chromatogram most similar to that of the residue" is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The "most similar" Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors. This is similar to the procedure presented by L.E. Slivon, P.M. Schumacher and A. Alford-Stevens for the determination of Aroclor composition from GC/MS level of chlorination results.

Identification/quantitation of Aroclors in samples is based on the combined response of two columns, typically RTX-5 and RTX-35. The pooling of response combines the unique qualities of both columns to derive a more defined Aroclor pattern which less likely to be affected by interferents. Identification/quantitation data for the individual columns is provided in the package and can be used as a check on the combined column results.

Data Assessment

1. Holding Time

The QAPP-specified holding times for PCB analyses of water samples are 5 days from date of sample receipt to extraction and 40 days from extraction to analysis. The technical holding times are 7 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method or instrument blanks. No field blanks were submitted with the samples.

3. System Performance

The system performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The initial calibration was within this limit for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limit.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recovery for one surrogate was below control limits in samples A66192, A66193, A66197 and A66198. Since recoveries for the remaining surrogate were within control limits, no data have been qualified based on the deviations. All other surrogate recoveries were within control limits.

6. Compound Identification

The determination of Aroclor presence is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The most similar Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors.

Identification/quantitation of Aroclors is based on the combined response of the RTX-5 and RTX-35 columns. Identification/quantitation data for the individual columns is provided in the package and has been used as a check on the combined column results.

Aroclor 1242 was reported as present in sample A66198. However, a review of the sample chromatograms showed a very poor Aroclor pattern match and a high similarity to the method blank. Based on the evaluation, data for Aroclor 1242 has been qualified as undetected in the sample. All other Aroclors have been correctly identified/quantitated.

7. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits. All matrix spike blank recoveries were also within control limits.

8. Field Duplicates

No field duplicates were included in this data set.

9. General Comments

Sample A66198 was originally designated A66189. However, since this sample designation had already been used during a previous investigation, the number was changed post-sampling to A66198.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

DATA REVIEW CHECKLIST

PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were surrogate recoveries outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits? 0 out of 4			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? 0 out of 2			
Blanks			
Is a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Do any field/rinse blanks have positive results?			X
Are there field/rinse/equipment blanks associated with every sample?		X	

aokal072

PCB Data Review Checklist - Page 2

	YES	NO	NA
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks		X	
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?	X		
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?			X
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			X
PCB Identification			
Is both a combined and single column Aroclor Identification Report present for every sample?	X		
Do the combined column and individual column Aroclor identifications agree?	X		

PCB Data Review Checklist - Page 3

	YES	NO	NA
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			X
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Were field duplicates submitted with the samples?		X	

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding Time	Surrogates	
		TCX	DCB
A66198		↓	
A66198 MS			
A66198 MSD			
A66190			
A66191			
A66192			↓
A66193			.
A66194			
A66195			
A66196			
A66197			↓

Surrogate Standards
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogates diluted out
↑ Recovery high
. Recovery low

Unless otherwise noted, all parameters are within specified limits.

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PCB Calibration Summary

Instrument: HP0850
Column: RTX-35 / RTX-5

Date:	5/21/98-5/22/98	5/22/98	5/22/98	5/23/98	5/23/98	5/23/98	5/23/98
Time:		2027	2054	0059	0126	0653	0720
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok						
Aroclor 1221	ok						
Aroclor 1232	ok						
Aroclor 1242	ok						ok
Aroclor 1248	ok	ok		ok		ok	
Aroclor 1254	ok		ok				
Aroclor 1260	ok				ok		
Tetrachloro-m-xylene	ok						
Decachlorobiphenyl	ok						

Affected Samples:

aokal072

CORRECTED ANALYSIS SUMMARY FORMS

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66198
~~A66189~~

Lab Name:	ITS Environmental	Lab Code:	INCHVT		
Contract:	91082	Case:	PCB	SDG:	KAL073
Phase Type:	WATER	Lab Sample ID:	357322		
Phase Weight:	990. (g)	Date Received:	05/08/98		
Injection Volume:	1.0 (uL)	Date Extracted:	05/08/98		
Dilution Factor:	1.0	Date Analyzed:	05/23/98		
% Solids:	100	Sulfur Clean-up:	Y (Y/N)		

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	QUALIFIER
12674-11-2	Aroclor-1016	0.051	U
11104-28-2	Aroclor-1221	0.051	U
11141-16-5	Aroclor-1232	0.051	U
53469-21-9	Aroclor-1242	~~0.041~~ 0.051	~~J~~ U
12672-29-6	Aroclor-1248	0.051	U
11097-69-1	Aroclor-1254	0.051	U
11096-82-5	Aroclor-1260	0.051	U

ITS Environmental 55 South Park Drive Colchester, Vermont 05446
Telephone (802) 655-1203
Fax (802) 655-1248

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66190

Lab Name:	ITS Environmental	Lab Code:	INCHVT
Contract:	91082	Case:	PCB
		SDG:	KAL073

Phase Type:	WATER		Lab Sample ID:	357323
Phase Weight:	930.	(g)	Date Received:	05/08/98
Injection Volume:	1.0	(uL)	Date Extracted:	05/08/98
Dilution Factor:	1.0		Date Analyzed:	05/23/98
% Solids:	100		Sulfur Clean-up:	Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	QUALIFIER
12674-11-2	Aroclor-1016	0.054	U
11104-28-2	Aroclor-1221	0.054	U
11141-16-5	Aroclor-1232	0.054	U
53469-21-9	Aroclor-1242	0.054	U
12672-29-6	Aroclor-1248	0.054	U
11097-69-1	Aroclor-1254	0.054	U
11096-82-5	Aroclor-1260	0.054	U

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FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66191

Lab Name:	ITS Environmental	Lab Code:	INCHVT
Contract:	91082	Case:	PCB
		SDG:	KAL073

Phase Type:	WATER		Lab Sample ID:	357324
Phase Weight:	980.	(g)	Date Received:	05/08/98
Injection Volume:	1.0	(uL)	Date Extracted:	05/08/98
Dilution Factor:	1.0		Date Analyzed:	05/23/98
% Solids:	100		Sulfur Clean-up:	Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	QUALIFIER
12674-11-2	Aroclor-1016	0.051	U
11104-28-2	Aroclor-1221	0.051	U
11141-16-5	Aroclor-1232	0.051	U
53469-21-9	Aroclor-1242	0.051	U
12672-29-6	Aroclor-1248	0.051	U
11097-69-1	Aroclor-1254	0.051	U
11096-82-5	Aroclor-1260	0.051	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66192

Lab Name:	ITS Environmental	Lab Code:	INCHVT		
Contract:	91082	Case:	PCB	SDG:	KAL073
Phase Type:	WATER	Lab Sample ID:	357325		
Phase Weight:	960. (g)	Date Received:	05/08/98		
Injection Volume:	1.0 (uL)	Date Extracted:	05/08/98		
Dilution Factor:	1.0	Date Analyzed:	05/23/98		
% Solids:	100	Sulfur Clean-up:	Y (Y/N)		

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	QUALIFIER
12674-11-2	Aroclor-1016	0.052	U
11104-28-2	Aroclor-1221	0.052	U
11141-16-5	Aroclor-1232	0.052	U
53469-21-9	Aroclor-1242	0.052	U
12672-29-6	Aroclor-1248	0.052	U
11097-69-1	Aroclor-1254	0.052	U
11096-82-5	Aroclor-1260	0.052	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66193

Lab Name:	ITS Environmental	Lab Code:	INCHVT
Contract:	91082	Case:	PCB
		SDG:	KAL073

Phase Type:	WATER	Lab Sample ID:	357326
Phase Weight:	940. (g)	Date Received:	05/08/98
Injection Volume:	1.0 (uL)	Date Extracted:	05/08/98
Dilution Factor:	2.0	Date Analyzed:	05/23/98
% Solids:	100	Sulfur Clean-up:	Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	QUALIFIER
12674-11-2	Aroclor-1016	0.11	U
11104-28-2	Aroclor-1221	0.11	U
11141-16-5	Aroclor-1232	0.11	U
53469-21-9	Aroclor-1242	0.60	
12672-29-6	Aroclor-1248	0.11	U
11097-69-1	Aroclor-1254	0.11	U
11096-82-5	Aroclor-1260	0.11	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66194

Lab Name:	ITS Environmental	Lab Code:	INCHVT		
Contract:	91082	Case:	PCB	SDG:	KAL073
Phase Type:	WATER	Lab Sample ID:	357327		
Phase Weight:	990. (g)	Date Received:	05/08/98		
Injection Volume:	1.0 (uL)	Date Extracted:	05/08/98		
Dilution Factor:	1.0	Date Analyzed:	05/23/98		
% Solids:	100	Sulfur Clean-up:	Y (Y/N)		

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	QUALIFIER
12674-11-2	Aroclor-1016	0.051	U
11104-28-2	Aroclor-1221	0.051	U
11141-16-5	Aroclor-1232	0.051	U
53469-21-9	Aroclor-1242	0.051	U
12672-29-6	Aroclor-1248	0.051	U
11097-69-1	Aroclor-1254	0.051	U
11096-82-5	Aroclor-1260	0.051	U

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FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66195

Lab Name:	ITS Environmental	Lab Code:	INCHVT		
Contract:	91082	Case:	PCB	SDG:	KAL073

Phase Type:	WATER		Lab Sample ID:	357328	
Phase Weight:	970.	(g)	Date Received:	05/08/98	
Injection Volume:	1.0	(uL)	Date Extracted:	05/08/98	
Dilution Factor:	1.0		Date Analyzed:	05/23/98	
% Solids:	100		Sulfur Clean-up:	Y	(Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	QUALIFIER
12674-11-2	Aroclor-1016	0.052	U
11104-28-2	Aroclor-1221	0.052	U
11141-16-5	Aroclor-1232	0.052	U
53469-21-9	Aroclor-1242	0.052	U
12672-29-6	Aroclor-1248	0.052	U
11097-69-1	Aroclor-1254	0.052	U
11096-82-5	Aroclor-1260	0.052	U

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FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66196

Lab Name:	ITS Environmental	Lab Code:	INCHVT		
Contract:	91082	Case:	PCB	SDG:	KAL073

Phase Type:	WATER		Lab Sample ID:	357329	
Phase Weight:	990.	(g)	Date Received:	05/08/98	
Injection Volume:	1.0	(uL)	Date Extracted:	05/08/98	
Dilution Factor:	1.0		Date Analyzed:	05/23/98	
% Solids:	100		Sulfur Clean-up:	Y	(Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	QUALIFIER
12674-11-2	Aroclor-1016	0.051	U
11104-28-2	Aroclor-1221	0.051	U
11141-16-5	Aroclor-1232	0.051	U
53469-21-9	Aroclor-1242	0.051	U
12672-29-6	Aroclor-1248	0.051	U
11097-69-1	Aroclor-1254	0.051	U
11096-82-5	Aroclor-1260	0.051	U

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FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66197

Lab Name:	ITS Environmental	Lab Code:	INCHVT		
Contract:	91082	Case:	PCB	SDG:	KAL073
Phase Type:	WATER	Lab Sample ID:	357330		
Phase Weight:	980. (g)	Date Received:	05/08/98		
Injection Volume:	1.0 (uL)	Date Extracted:	05/08/98		
Dilution Factor:	1.0	Date Analyzed:	05/23/98		
% Solids:	100	Sulfur Clean-up:	Y (Y/N)		

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	QUALIFIER
12674-11-2	Aroclor-1016	0.051	U
11104-28-2	Aroclor-1221	0.051	U
11141-16-5	Aroclor-1232	0.051	U
53469-21-9	Aroclor-1242	0.051	U
12672-29-6	Aroclor-1248	0.051	U
11097-69-1	Aroclor-1254	0.051	U
11096-82-5	Aroclor-1260	0.051	U

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ITS Intertek Testing Services
Environmental Laboratories

June 3, 1998

Ms. Laurie Indick
Blasland & Bouck Engineers
6723 Towpath Road
Box 66
Syracuse, NY 13214

Re: Laboratory Project No. 91082
Case No. PCB; SDG KAL073

Dear Ms. Indick:

Enclosed are the analytical results of samples received intact by ITS Environmental Laboratories on May 08, 1998. Laboratory numbers have been assigned and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 05/08/98	ETR No: 69188	
357322	~~A66189~~ A66188	05/06/98	Water
357322MS	~~A66189~~ A66188MS	05/06/98	Water
357322MD	~~A66189~~ A66188MSD	05/06/98	Water
357323	A66190	05/06/98	Water
357324	A66191	05/06/98	Water
357325	A66192	05/06/98	Water
357326	A66193	05/06/98	Water
357327	A66194	05/07/98	Water
357328	A66195	05/07/98	Water
357329	A66196	05/07/98	Water
357330	A66197	05/07/98	Water

The PCB analyses of samples A66197, A66192 and A66189 exhibited surrogate recoveries slightly below quality control criteria. Please note that the analysis of sample A66193 was accomplished at a dilution based on screen analysis results which indicated that target analytes would be above calibration range in a full strength acquisition.

Intertek Testing Services NA Inc.
55 South Park Drive Colchester, VT 05446
Telephone (802) 655-1203 Fax (802) 655-1248

Samples in this delivery group were reported as the best match to combinations of the seven Aroclor standards by use of the ITS processing software. In general, the standard Aroclors are sufficiently unique to provide precise identifications and quantitations of complex mixtures with minimal weathering. For highly altered samples, certain subtle identification distinctions, such as the difference between 1016 and 1242 become less precise. In all cases, quantitation remains highly reliable.

If there are any questions regarding this submittal, please contact James W. Madison at (802) 655-1203.

Sincerely,

Kym B. Watson for

Deborah A. Loring
Laboratory Director

DAL/cga
Enclosure

MEMORANDUM

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

To: William T. McCune

Date: 5/18/98

From: David W. Lay DWL

cc: MPB, DKC, AEG, BTL & file

Re: KRSG - Allied OU Sampling

Anne Greco notified me this morning that the sample ID # for the ground-water sample collected from monitoring well P-1R has been changed from A66189 to A66198. This change was made because # A66189 had previously been used for a rinse blank sample collected in July 1997.

FORM 2
AROCLOR SURROGATE RECOVERY

Lab Name: ITS Environmental
Lab Code: INCHVT
SAS No:

Contract: 91082
Case: PCB
SDG: KAL073

EPA SAMPLE NO.	TCX 1 % REC	#	TCX 2 % REC	#	DCB 1 % REC	#	DCB 2 % REC	#
PBLKM1	93		83		95		90	
PLCSM1	69		62		115		108	
A66197	76		70		44	*	43	*
~~A66189~~ ALLIGE	79		59	*	79		78	
~~A66189MS~~ ALLIGE MS	88		79		75		96	
A66189MSD ALLIGE MSD	102		95		108		100	
A66190	100		94		98		92	
A66191	113		84		80		83	
A66192	110		86		58	*	62	
A66193	105	D	78	D	58	*D	56	*D
A66194	107		97		109		100	
A66195	88		86		92		89	
A66196	107		98		106		95	

Project Specific QC Limits
(60 - 150)
(60 - 150)

TCX = Tetrachloro-meta-Xylene
DCB = Decachlorobiphenyl

- Column to be used to flag recovery values
* - Values outside of QC limits
D - Surrogates calculated using diluted analysis
A - Extracted surrogates diluted out, surrogates added to diluted extract as retention time markers.

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FORM 3
WATER AROCLOR MATRIX SPIKE RECOVERY

Lab Name: ITS Environmental

Contract: 91082

Lab Code: INCHVT

Case: PCB

SAS No:

SDG: KAL073

EPA SAMPLE NO.: ~~A66189~~ AL198

Compound	SPIKE ADDED (UG/L)	SAMPLE CONCENTRATION (UG/L)	MS CONCENTRATION (UG/L)	MS % REC #	QC LIMITS REC.
Aroclor 1242	0.50	0	0.42	84	39-150
Aroclor 1254	0.50	0	0.46	92	29-131

- Column used to flag recovery and RPD values with an asterisk
* - Values outside of QC limits.

Spike Recovery: 0 out of 2 outside limits.

Comments:

FORM 3
WATER AROCLOR MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ITS Environmental

Contract: 91082

Lab Code: INCHVT

Case: PCB

SAS No:

SDG: KAL073

EPA SAMPLE NO.: ~~A66189~~ A66198

Compound	SPIKE ADDED (UG/L)	MSD CONCENTRATION (UG/L)	MSD % REC #	RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor 1242	0.50	0.45	90	7	30	39-150
Aroclor 1254	0.50	0.47	94	2	30	29-131

- Column used to flag recovery and RPD values with an asterisk
* - Values outside of QC limits.

RPD: 0 out of 2 outside limits.
Spike Recovery: 0 out of 2 outside limits.

Comments:

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FORM 3E
AROCLOR
MATRIX SPIKE BLANK RECOVERY

Lab Name: ITS Environmental

Contract: 91082

Lab Code: INCHVT

Case: PCB

SAS No:

SDG: KAL073

EPA SAMPLE NO.: PLCSM1

Compound	SPIKE ADDED (UG/L)	MSB CONCENTRATION (UG/L)	MSB % REC #	QC LIMITS REC.
Aroclor 1242	0.50	0.28	56	39-150
Aroclor 1254	0.50	0.38	76	29-131

- Column used to flag recovery and RPD values with an asterisk
* - Values outside of QC limits.

Spike Recovery: 0 out of 2 outside limits.

Comments:

FORM 4
AROCLOR METHOD BLANK SUMMARY

Lab Name:	ITS Environmental	Contract:	91082
Lab Code:	INCHVT	Case:	PCB
Lab Sample ID:	PBLKM1	SDG:	KAL073
Matrix:	WATER	Level:	LOW
Date Extracted:	05/08/98	Date Analyzed(2):	05/22/98
Date Analyzed(1):	05/22/98	Time Analyzed(2):	21:22
Time Analyzed(1):	21:22	GC ID(2):	HP0850
GC ID(1):	HP0850	GC Column(2):	RTX-35
GC Column(1):	RTX-5		

LAB ID	CLIENT ID	DATE ANALYZED 1	DATE ANALYZED 2
PLCSM1	PLCSM1	05/22/98	05/22/98
357330	A66197	05/23/98	05/23/98
357322	A66198 ~~A66189~~	05/23/98	05/23/98
357322MS	A66198MS ~~A66189MS~~	05/23/98	05/23/98
357322MD	A66198MSD ~~A66189MSD~~	05/23/98	05/23/98
357323	A66190	05/23/98	05/23/98
357324	A66191	05/23/98	05/23/98
357325	A66192	05/23/98	05/23/98
357326	A66193	05/23/98	05/23/98
357327	A66194	05/23/98	05/23/98
357328	A66195	05/23/98	05/23/98
357329	A66196	05/23/98	05/23/98

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FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKM1

Lab Name: ITS Environmental Lab Code: INCHVT

Contract: 91082 Case: PCB SDG: KAL073

Phase Type: WATER Lab Sample ID: PBLKM1

Phase Weight: 1000. (g) Date Received:

Injection Volume: 1.0 (uL) Date Extracted: 05/08/98

Dilution Factor: 1.0 Date Analyzed: 05/22/98

% Solids: 100.0 Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION (ug/L)	QUALIFIER
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

BACCALC1.XLS

CALIBRATION SUMMARY
BACK CALCULATIONS

Lab ID: ITS Environmental
GC: HP0850
Col. 1: RTX-5
Col. 2: RTX-35

Calib date(s): 21-MAY-98 17:43 to 22-MAY-98 09:07

File: 13,14 21MAY981614

Standards	50 ppb	100 ppb	200 ppb	400 ppb	800 ppb	%RSD
Aroclor 1016	49.7	102	206	409	783	
Cal Fact	0.994	1.022	1.030	1.023	0.979	2.2
% Diff	1	-2	-3	-2	2	
Aroclor 1221	60.2	107	214	404	790	
Cal Fact	1.204	1.071	1.070	1.010	0.988	7.9
% Diff	-20	-7	-7	-1	1	
Aroclor 1232	53.0	102	200	388	807	
Cal Fact	1.060	1.020	1.000	0.970	1.009	3.2
% Diff	-6	-2	0	3	-1	
Aroclor 1242	52.0	99.0	209	410	781	
Cal Fact	1.040	0.990	1.045	1.025	0.976	3.0
% Diff	-4	1	-5	-3	2	
Aroclor 1248	50.0	100.0	201	404	794	
Cal Fact	1.000	1.000	1.005	1.010	0.993	0.7
% Diff	0	0	-1	-1	1	
Aroclor 1254	50.0	105	215	414	765	
Cal Fact	1.000	1.050	1.075	1.035	0.956	4.5
% Diff	0	-5	-8	-4	4	
Aroclor 1260	49.0	99	189	389	825	
Cal Fact	0.980	0.990	0.945	0.973	1.031	3.2
% Diff	2	1	6	3	-3	

Cal Fact = Calc. Conc. / Nominal Conc.

%RSD = STD Dev / Mean of Cal Fact

% Diff = (Nominal Amt-Calc Amt) / Nominal Amt*100

KAL072.XLS

AROCLOR CHECK STANDARD SUMMARY

Lab ID: ITS Environmental
GC: HP0850
Col. 1: RTX-5
Col. 2: RTX-35

Initial Calib.
date/time: 5/21/98 17:43 to 5/22/98 9:07

Check Standard File: 13,14 21MAY981622,25
Date: 5/22/98
Time: 20:27

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	189	5.5

Check Standard File: 13,14 21MAY981622,26
Date: 5/22/98
Time: 20:54

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1254	200	183	8.5

Check Standard File: 13,14 22MAY981153,09
Date: 5/23/98
Time: 00:59

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	198	1.0

Check Standard File: 13,14 22MAY981153,10
Date: 5/23/98
Time: 1:26

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1260	200	204	2.0

Check Standard File: 13,14 22MAY981153,22
Date: 5/23/98
Time: 6:53

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	212	6.0

KAL073.XLS

AROCLOR CHECK STANDARD SUMMARY

Lab ID: ITS Environmental
GC: HP0850
Col. 1: RTX-5
Col. 2: RTX-35

Initial Calib.
date/time: 5/21/98 17:43 to 5/22/98 9:07

Date: 5/23/98
Time: 7:20

Check Standard File: 13,14 22MAY981153,23

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1242	200	206	3.0

Aroclor Calibration Summary

Calibration of 21-May-1998 17:43 through 22-May-1998 09:07.
MCD1:[8080] 13,14 21MAY981614
METHOD: 8080_PCB:AN

RTX-5

TAM - HP0850

006115

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
1	3.954	171.595	5.5%	94.600	2.9%	2.782		4.237							
2	5.097	449.162	1.5%	298.322	3.0%	128.982	1.4%	118.110	13.4%	7.950		4.389		5.339	
3	5.248	377.147	2.3%	292.337	3.0%	181.259	4.1%	198.418	4.0%	53.417	5.8%	47.763	4.7%	23.860	6.9%
4	5.351	1056.094	4.4%	883.602	2.6%	730.229	3.1%	673.091	3.8%	55.729	7.8%	7.938		11.413	19.
5	5.606	5.704	31.	5.151		6.014		14.317	73.	9.883	18.	8.631	12.8%	7.014	68.
6	5.674	5.518		55.608	10.6%	111.835	4.1%	94.266	6.2%	28.045	6.8%	6.024		4.188	
7	6.046	103.942	4.0%	550.748	2.3%	1116.353	6.3%	955.928	6.2%	532.279	4.3%	17.668	6.4%	18.985	29.
8	6.090	93.065										12.299	9.0%	15.754	
9	6.242	27.174		90.633	1.5%	176.100	3.2%	148.266	4.8%	34.730	10.5%	1.701		1.655	
10	6.407	66.835	1.5%	532.930	2.2%	1109.744	5.7%	971.504	4.7%	423.125	2.3%	16.676	20.	17.572	12.3%
11	6.592	6.757	14.7%	5.944	15.	4.535		6.640	8.8%	6.586	10.6%	6.795	11.3%	2.667	12.8%
12	6.746	14.456		124.182	6.8%	281.760	4.9%	240.709	3.6%	78.692					
13	6.801	15.175		93.861	9.3%	204.309	6.0%	170.244	5.3%						
14	6.946	90.807	10.0%	1074.531	4.6%	2410.462	2.0%	2037.503	3.0%	1193.801	3.3%	32.090	5.9%	23.234	
15	7.151	168.246	88.	702.832	22.	1398.794	6.3%	1235.844	14.8%	701.034	8.0%	126.912	59.	136.140	
16	7.253	28.146		54.037		151.228		108.047		105.627	9.9%	9.306	65.	11.060	
17	7.323	29.060	10.1%	363.397	7.9%	839.473	4.2%	724.138	5.3%	344.131	7.9%	8.506		7.213	
18	7.417			126.748	2.5%	298.321	6.3%	245.740	6.1%	315.075	3.5%	8.960	12.7%	3.748	18.
19	7.593	0.406		32.834	10.8%	87.772	6.1%	73.267	7.0%	105.121	4.7%			0.657	
20	7.660	9.947		301.442	3.7%	749.823	3.3%	675.712	5.1%	1203.598	5.6%	909.724	8.2%	24.186	28.
21	7.763	8.568		305.629	2.1%	741.727	4.0%	632.817	5.0%	1016.584	5.0%	276.396	6.9%	11.210	
22	7.849	5.830	52.	227.111	1.9%	552.961	4.4%	455.929	4.2%	702.764	5.6%			7.486	10.8%
23	8.151	11.369	19.	417.550	1.8%	1013.688	3.0%	926.195	4.3%	1510.157	4.3%	552.109	5.5%	13.304	8.5%
24	8.234	3.940		212.681	5.0%	508.741	2.6%	443.226	2.2%	634.961	3.0%			5.476	
25	8.454	8.599	12.6%	438.198	3.8%	1032.008	2.4%	918.964	2.8%	1445.903	2.2%	208.957	4.8%	11.272	18.
26	8.660	1.841		116.998	7.1%	259.484	3.4%	262.090	2.9%	386.164	1.5%	37.759	9.0%	2.928	7.3%
27	8.788	0.177		14.786	17.	22.564	10.0%	32.264	13.5%	31.001	11.7%	3.500		0.472	
28	8.934	0.848		14.665	18.	14.620	16.	35.716	16.	65.866	15.	6.637	14.8%	0.581	
29	9.035			202.082	11.9%	90.907	9.0%	456.373	7.1%	806.222	5.8%	167.178	9.7%	4.527	
30	9.126	7.020	27.	366.449	6.5%	141.929	5.6%	848.334	4.1%	1527.085	1.9%	671.480	3.7%	11.392	
31	9.225	30.635	6.8%	432.050	4.9%	206.307	3.0%	987.888	3.4%	1787.598	1.2%	1701.889	9.5%	517.671	3.2%
32	9.392	2.321		48.809	12.9%	31.387	14.8%	103.087	11.2%	252.402	12.6%	312.757	9.0%		
33	9.679	7.669	20.	312.989	10.3%	12.881	25.	745.822	7.6%	1252.266	7.6%	499.850	4.7%	72.030	5.2%
34	9.818	25.001	7.2%	134.100	2.0%	17.139	8.8%	322.509	4.0%	811.604	4.3%	2145.598	8.4%	593.396	2.4%
35	9.971	13.664		59.400	9.7%	3.136	61.	154.397	11.8%	419.575	2.6%	832.834	8.5%	52.304	
36	10.285	0.452		7.738	17.			22.392		63.330	10.4%	147.815	9.0%	2.329	
37	10.435	2.324		40.713	7.9%	4.946		115.571	11.3%	313.595	3.0%	684.077	6.3%	10.704	14.4%
38	10.581	8.182		69.283	7.1%			192.698	7.9%	525.712	2.4%	1408.575	4.9%	74.819	13.0%
39	10.706	1.855		42.864	8.8%			116.256	7.1%	342.374	4.3%	510.143	6.6%		
40	10.776	6.862										277.265	13.0%	351.172	2.8%
41	10.867	10.420		98.040	7.7%			285.504	7.1%	801.176	2.3%	2463.815	4.9%	256.591	7.6%
42	11.203	13.902	9.0%	33.070	11.8%			83.652	10.7%	250.855	8.7%	557.917	7.7%	978.002	3.2%
43	11.335	6.910	4.5%	3.362				6.313		18.590		319.651	9.0%	537.381	2.1%

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 4.7693 and decachlorobiphenyl at 18.2904.
2) Peaks chosen within window of +/- 0.01871 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.14562.

Aroclo Calibration Summary

Calibration of 21-May-1998 17:43 through 22-May-1998 09:07.
MCD1:[8080] 13,14 21MAY981614
METHOD: 8080_PCB:AN

RTX-5

TAM - HP0850

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
44	11.556	28.411	8.0%	12.586	19.	9.559		25.251	25.	82.800	19.	1005.239	7.9%	1845.451	3.3%
45	11.637	3.068		42.342	14.8%	0.262		130.797		402.996	9.7%	1401.681	4.3%		
46	11.883	1.149						4.615		2.164		208.734	15.	118.727	8.8%
47	12.088	2.933		1.008				2.569		16.337	75.	263.057	11.3%	331.970	7.4%
48	12.261	23.314	7.1%	11.800	13.6%			22.197	42.	60.436	13.1%	1079.049	7.0%	2150.055	2.6%
49	12.352	12.534	25.			0.365						927.910		851.759	6.5%
50	12.411			35.332				104.513		340.246	14.1%	901.255	7.1%		
51	12.622			8.965				17.256		50.586	12.6%	476.961	7.7%	1049.696	
52	12.821							6.384		16.060		216.343	11.2%		
53	12.883	10.295		3.798		9.639		8.776		17.633	55.	232.260	11.5%	318.179	5.6%
54	13.042	26.540	65.	21.449	47.	8.898		48.768	41.	125.694	8.7%	2006.987	3.7%	2219.117	6.4%
55	13.260	6.772		4.789				9.959		18.031	41.	257.723	12.2%	506.391	3.3%
56	13.403	3.011		2.259		13.288		18.278						138.390	13.3%
57	13.480	13.275	42.	6.052		0.235		22.680		7.691		114.939	16.	2011.383	2.3%
58	13.613	8.896		4.394		0.476		4.931		4.823		98.062	15.	1162.589	3.0%
59	13.787	4.402		3.993				13.591		36.938	11.2%	602.597	4.8%	189.764	16.
60	13.896	4.548	58.	1.705		0.304		30.318						456.119	8.2%
61	14.094	13.535	24.	5.547	22.	0.266		12.360		8.799	34.	139.954	10.3%	1973.761	3.3%
62	14.235	7.767	42.	3.128		0.645		9.363		4.444		84.751	13.9%	1107.828	3.7%
63	14.346	5.273		1.402										601.577	5.9%
64	14.401			1.705				9.956		11.046	42.	274.826	4.3%		
65	14.500	2.924		2.350		2.846								258.332	10.1%
66	14.620	3.233		1.383								53.337		419.617	12.0%
67	14.781	18.391	18.	12.675	15.	0.663		21.609		22.270	21.	285.566	5.8%	4492.033	6.4%
68	15.072	12.709		13.015	39.	12.629	60.	13.674		20.168	92.	17.589	67.	237.381	13.6%
69	15.498	7.831	26.	7.786	38.	2.601		8.643		15.199	31.	248.025	5.1%	1944.961	5.0%
70	15.672	5.212	28.	5.355		0.739		12.579		8.565	54.	22.552	49.	1368.573	2.0%
71	15.797	5.564		6.719	38.	2.933		14.632		9.160	43.	25.462	43.	1605.664	1.8%
72	16.155			3.667								18.537		72.152	6.8%
73	16.430	45.371	10.5%	50.498	38.	39.797	26.	48.824	17.	57.674	34.	55.199	31.		
74	16.477													661.301	3.1%
75	16.607	56.049	12.2%	62.142	44.	35.435	27.	57.687	13.4%	65.847	16.	67.773	30.	110.906	9.2%
76	16.901	7.027		10.188				10.645		14.247		19.086	79.	1412.777	3.7%
77	17.679	68.817	9.5%	75.055	38.	44.477	21.	80.443	32.	80.363	22.	78.380	21.	378.271	3.0%
======	======	==========		==========		==========		==========		==========		==========		==========	
	Total:	3306.5	5.6%	9705.4	4.3%	14830.3	4.1%	17615.3	5.6%	21664.8	4.4%	26195.4	6.3%	33824.5	4.5%

Retention Time Marker/Surrogate Standard Summary

Compound	Mean RT	RT Dev. Range	RT Crit.	Mean RF	Recovery Range	Surr Crit
tetrachloro-meta-xylene	4.7693	-.0115 to .0107	Passes...	37817.367	55.6 to 159.0%	** Fails *
decachlorobiphenyl	18.2904	-.0126 to .0140	Passes...	43714.652	55.9 to 288.5%	** Fails *

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 4.7693 and decachlorobiphenyl at 18.2904.
2) Peaks chosen within window of +/- 0.01871 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.14562.

Aroclor Calibration Summary

Calibration of 21-May-1998 17:43 through 22-May-1998 09:07.
MCD1:[8080] 13,14 21MAY981614
METHOD: 8080_PCB:AN

RTX-35

TAM - HP0850

006117

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
1	4.871	129.556	10.4%	73.872	7.7%	3.581		5.674							
2	6.080	62.186	3.9%	50.815	3.2%	37.065	3.9%	35.572	4.3%	1.997	17.	0.320		0.661	
3	6.353	253.846	1.7%	171.984	2.3%	75.139	4.4%	79.555	3.6%	24.123	4.9%	21.008	2.1%	11.031	6.6%
4	6.656	176.411	1.9%	132.875	2.0%	86.102	3.6%	81.757	3.9%	4.456	7.6%	1.061	38.	1.263	28.
5	6.806	548.713	4.9%	471.852	3.8%	404.968	4.7%	370.720	3.8%	37.189	5.3%	7.723	12.1%	7.879	4.0%
6	6.905	86.983	5.0%	58.667	5.7%	26.594									
7	7.529	2.714		22.622	7.0%	51.139	4.0%	41.950	5.3%	11.607	4.2%	0.585		0.980	
8	7.668	34.322	8.3%	19.986	9.1%	6.291		6.893	31.	1.232		1.298		1.989	
9	7.821			354.443	3.5%	707.469	7.1%	594.907	7.3%	307.800	4.7%	12.838	11.5%	13.054	9.2%
10	7.844	91.741	6.9%												
11	8.096	4.876		28.291	5.8%	61.352	4.3%	52.536	4.3%	15.164	11.1%	1.159		1.015	
12	8.368	115.283		176.559	57.	294.559	14.3%	310.274	55.	183.878	59.	95.182		58.048	
13	8.520	23.288	21.	164.600	2.4%	344.992	3.8%	297.828	5.1%	112.855	5.3%	7.627		6.354	
14	8.655	8.471	24.	41.555	5.3%	86.207	5.1%	73.469	2.3%	14.253	19.	2.054		1.342	
15	8.889	45.238	4.1%	517.091	3.4%	1153.598	2.1%	973.218	2.1%	568.712	2.7%	17.274		13.449	7.5%
16	9.291	24.208	8.6%	255.244	3.0%	556.938	2.8%	472.794	2.9%	222.202	2.7%	6.831	7.6%	5.973	11.8%
17	9.406			38.096	2.2%	88.948	3.5%	76.652	2.8%	102.033	2.3%	8.242	8.7%	0.941	
18	9.537			12.079	4.9%	30.835	5.6%	24.958	3.5%	34.218	5.5%	0.618		0.320	
19	9.640	14.494	11.7%	178.346	6.2%	410.477	4.4%	354.000	4.8%	166.424	6.3%	3.982	7.8%	3.549	14.6%
20	9.807	60.966		182.816	29.	389.848	9.5%	391.401	27.	628.619	14.4%	487.198	18.	37.619	91.
21	9.944	4.680		160.019	2.5%	387.234	3.6%	325.150	5.5%	507.505	4.6%	128.065	6.3%	6.003	
22	10.025	1.389		68.919	3.7%	173.207	3.0%	141.585	2.9%	231.535	2.2%	21.633		2.085	
23	10.108	1.459		67.832	3.5%	171.975	3.2%	134.109	2.9%	202.128	1.4%	10.478	5.2%	2.451	33.
24	10.234	0.140		17.534	11.6%	44.840	5.1%	36.562	8.4%	54.130	3.5%	1.680		0.227	
25	10.694	5.827		216.755	2.4%	525.250	2.4%	470.495	3.8%	744.925	2.3%	261.169	5.5%	7.153	7.0%
26	10.814	2.962		96.924	2.0%	228.066	1.6%	199.483	5.0%	272.655	1.6%	22.043	6.0%	2.913	15.
27	11.009	1.424		72.955	3.9%	180.294	3.1%	159.985	4.4%	246.055	1.0%	18.389	7.8%	1.800	
28	11.090	2.944		148.158	3.0%	350.271	2.3%	317.595	3.2%	524.395	0.9%	89.946	2.9%	3.828	
29	11.193	1.425		58.465	5.6%	144.748	4.0%	119.823	7.2%	153.642	2.8%			2.039	
30	11.370			10.800	8.3%	14.037	24.	25.268	14.0%	39.246	2.5%	3.715	42.	0.248	
31	11.485	1.823		109.391	6.5%	56.161	11.8%	234.415	3.8%	402.762	2.3%	84.471	2.7%	2.689	
32	11.615					138.024	5.3%								
33	11.648	3.591	17.	207.034	5.1%			468.869	3.5%	819.777	1.9%	347.969	3.6%	5.522	21.
34	11.824	3.209	14.7%	196.038	4.6%	56.598	12.3%	431.434	3.3%	714.369	2.2%	120.208	3.4%	4.994	19.
35	11.982	11.565	8.8%	43.508	3.8%	60.895	9.7%	106.526	4.4%	272.149	4.5%	714.908	8.4%	238.786	1.7%
36	12.120	2.056		12.014	8.8%	1.301		28.968	10.4%	71.126	5.5%	204.386	5.8%	33.339	7.7%
37	12.222	0.959		20.849	8.9%	16.741	27.	48.424	4.3%	106.347	3.4%	137.323	6.7%		
38	12.313	11.578	9.3%	43.523	6.5%	6.672		109.890	4.4%	284.855	2.9%	921.818	7.8%	305.164	1.5%
39	12.515	1.177		31.029	11.3%	6.731		79.524	6.8%	219.264	1.9%	416.748	6.2%	1.420	
40	12.592	2.611		184.325	8.2%	9.802	39.	419.512	5.1%	686.154	5.7%			3.841	15.
41	12.885	1.308		26.710	13.6%	9.406	42.	68.132	7.0%	178.704	4.0%	320.245	6.4%	7.190	13.0%
42	13.054	0.181		7.267	29.			17.917	14.5%	43.861	9.6%	71.559	4.2%	0.604	
43	13.233	0.292		23.664	22.			63.633	7.9%	178.478	4.4%	352.027	5.1%	3.833	
44	13.338			6.570		3.021		14.935		40.866	5.3%				
45	13.419	4.645		38.478	7.5%			99.119	6.4%	269.675	1.5%	714.920	2.0%	39.577	7.6%
46	13.589	1.334		25.827	10.4%			64.409	8.9%	184.818	2.0%	237.211	1.6%	1.238	66.
47	13.719	7.894	45.	69.221	6.0%			181.094	5.0%	487.355	1.4%	1408.731	3.3%		

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 5.5725 and decachlorobiphenyl at 20.7130.
2) Peaks chosen within window of +/- 0.01871 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.11477.

Aroclor Calibration Summary

Calibration of 21-May-1998 17:43 through 22-May-1998 09:07.
MCD1:[8080] 13,14 21MAY981614
METHOD: 8080_PCB:AN

RTX-35

TAM - HP0850

000118

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
48	13.771	9.809	32.			0.167								529.918	2.2%
49	13.845	5.020	46.	6.849				13.898	42.	36.342		165.748	6.4%	210.301	2.5%
50	13.962	2.955										113.462	4.2%	197.775	2.7%
51	14.013			4.915	33.	0.717		10.999	30.	31.302	2.8%	86.677			
52	14.160	2.456		34.977	10.8%	0.258		93.977	6.8%	277.752	2.8%	864.456	2.4%		
53	14.218	17.737	12.1%									697.493	8.4%	1070.193	2.8%
54	14.266			23.483	11.0%	0.683	85.	57.181	5.7%	166.633	1.8%				
55	14.392	2.273		2.887				2.552		12.659	19.	125.319	3.7%	174.316	4.5%
56	14.568	13.834	3.5%	7.851		0.181		12.998	30.	34.706		574.143	5.4%	1209.356	3.1%
57	14.622			5.208		4.647		9.631	11.7%	29.348	14.8%				
58	14.762	1.477		3.083		2.362		9.302		19.297		34.473	11.9%	4.076	
59	15.048	4.111	25.	2.293	29.	0.188		4.100	32.	13.128	11.4%	209.375	4.1%	511.632	6.8%
60	15.183			26.594	7.2%			70.175	7.7%	229.572	7.4%	480.185			
61	15.224	5.927	4.2%									561.903	4.6%	372.214	2.6%
62	15.296	3.088						8.308				140.453	4.6%	365.951	2.0%
63	15.426	2.251		1.109		0.675		2.444		8.250	34.	98.192	4.3%		
64	15.489	5.878	11.2%	3.892				6.491	34.	19.248	17.	313.869	3.0%	694.007	3.4%
65	15.587	11.060	12.6%	10.111	5.0%	0.500		22.281	17.	68.755	7.1%	1105.553	3.4%	1014.406	4.1%
66	15.734	6.675	12.8%	3.562	38.			4.193		5.729	63.	59.226	12.6%	995.447	2.6%
67	15.881	6.024		5.041				4.184		12.664		132.319	3.2%	559.192	3.7%
68	15.979							1.131		3.825		61.893	4.8%		
69	16.202	0.644		0.275				2.350		0.525		4.526	13.0%	173.483	8.1%
70	16.541	7.634		5.955		0.527		7.929		26.644	10.9%	369.895	2.3%	1111.009	3.3%
71	16.730	3.517												593.304	1.1%
72	16.756	5.983		3.464	34.	0.819		5.267	75.	12.802	19.	188.865	3.7%		
73	16.847	1.662		1.161				1.930		2.495		43.785	5.1%	267.515	4.3%
74	16.944	9.634	8.9%	7.397	6.9%	2.551		8.445		13.535	4.1%	164.173	3.5%	2377.427	4.8%
75	17.473	3.936	16.	3.884	29.	4.038	25.	3.661	33.	4.734	51.	4.988	18.	80.190	7.0%
76	17.644							2.996		1.025		0.299		41.834	10.8%
77	17.803	2.417		1.823				5.235		3.311		23.328	6.7%	707.901	3.7%
78	17.907	4.074	21.	3.619	28.	0.905		5.336		6.757	13.5%	112.302	5.1%	1267.163	5.1%
79	18.237			0.902						0.321		5.085	18.	31.341	10.5%
80	18.533	16.095	4.5%	18.414	26.	14.723	6.7%	17.015	18.	17.919	18.	17.233	14.0%	37.357	7.9%
81	18.767	18.926	8.1%	21.955	23.	11.492	13.4%	19.592	29.	21.360	21.	20.427	16.	31.029	7.7%
82	18.859	2.544		2.805		1.040		2.487		2.898		4.171		259.131	5.7%
83	19.027	0.962		1.488				3.668		2.954		4.284	14.7%	616.129	4.4%
84	19.882	23.463	5.7%	27.109	23.	13.568	3.1%	25.898	14.1%	26.599	2.3%	25.972	12.8%	146.015	5.8%
85	22.349	1.928		1.914	21.			2.134		1.965	11.8%	1.796			
======	======	==========		==========		==========		==========		==========		==========		==========	
	Total:	1963.8	9.2%	5159.6	4.0%	7461.4	4.8%	9058.8	4.1%	11488.6	3.6%	14100.5	6.4%	16492.0	4.0%

Retention Time Marker/Surrogate Standard Summary

Compound	Mean RT	RT Dev. Range	RT Crit.	Mean RF	Recovery Range	Surr Crit
tetrachloro-meta-xylene	5.5725	-.0169 to .0164	Passes...	18075.867	49.8 to 147.8%	** Fails *
decachlorobiphenyl	20.7130	-.0130 to .0181	Passes...	19007.457	54.5 to 278.3%	** Fails *

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 5.5725 and decachlorobiphenyl at 20.7130.
2) Peaks chosen within window of +/- 0.01871 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.11477.

Environmental Laboratories 55 South Park Drive Colchester VT 05446 (802) 655-1203

CHAIN OF CUSTODY RECORD

Report to:
Company: FLASLAND, BOVCK/LEE
Address: 6723 TOWNPATH RD
SYRACUSE, NY 13214
Contact: DAVID LAU
Phone: 315-446-9120
Fax:
Contract/ Quote #:

Invoice to
Company: SAA
Address:
Contact:
Phone:
PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 1 2 3 4 5

Custody Seal N / Y
Intact N / Y

Screened For Radioactivity ☐

Sampler's Name: DAVID LAU
Sampler's Signature:

Proj. No.: 64551
Project Name: ALLIED OU

ANALYSIS REQUESTED: PCBs

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	No./Type of Containers[2] VOA	A/G 1 Lt.	250 ml	P/O	Lab Sample ID (Lab Use Only)
					A66198					
W	5/6/98	1040		X	~~A66189~~ MS\MSD		6			
		1310			A66190		2			
		1430			A66191					
		1500			A66192					
		1605			A66193					
	5/7/98	0815			A66194					
		1010			A66195					
		1145			A66196					
		1330			A66197					
					TEMP BLANK					

Turn around time: ☒ Priority 1 or Standard ☐ Priority 2 or 50% * ☐ Priority 3 or 100% * ☐ Priority 4 ERS (Dallas Only) * Must Coordinate with Project Manager

Shipment For Case Complete ☐ Yes ☐ No

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	5/7/98	14:15			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
			Sharon Rizzo	5/8/98	1030

Remarks

Client's delivery of samples constitutes acceptance of ITS Environmental Laboratories terms and conditions contained in the Price Schedule.

[1] Matrix: WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - Sludge O - Oil

[2] Container: VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

ITS cannot accept verbal changes. Please Fax written changes to (802) 655-1248

000004

INTERTEK TESTING SERVICES ENVIRONMENTAL LABORATORIES LOG-IN SHEET

Lab Name: Intertek Testing Services Environmental Laboratories - Burlington, VT

Page 1 of 1

Received By (Print Name): Shannon Minor

Log-in Date: 5/8/98

Received By (Signature): Shannon Minor

Case Number: PCB

Sample Delivery Group No: KAL073

ETR Number: 609188

REMARKS:

1. **Custody Seal** ~~Present~~/Absent* ~~Intact~~/Broken
2. **Custody Seal Nos.:** N/A
3. **Chain-of-Custody Records** ~~Present~~/Absent*
4. **Sample Information Sheets** ~~Present~~/Absent*
5. **Airbill** ~~Airbill Sticker~~ ~~Present~~/Absent*
6. **Airbill No.:** 8004 7602 8170
7. **Sample Tags** ~~Present~~/Absent* **Sample Tag Numbers** ~~Listed~~/Not Listed on Chain-of-Custody
8. **Sample Condition:** Intact/~~Broken*~~ ~~Leaking~~
9. **Does information on the custody records, sample information sheets, sample tags and labels agree?** Yes/~~No*~~
10. **Date Received at Lab:** 5/8/98
11. **Time Received:** 1030
12. **Cooler Temperature:** 4°C, 5°C

Sample Transfer

Fraction: ALL

Area #: LVL 4

By: SM

On: 5/8/98

CORRESPONDING			
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
AL00189	N/A	357322	Were air bubbles present
AL00190	"	357323	in any VOA vials? N/A
AL00191	"	357324	Samples arrived
AL00192	"	357325	via cadence ice
AL00193	"	357326	intact. Custody
AL00194	"	357327	Seals intact.
AL00195	"	357328	
AL00196	"	357329	
AL00197	"	357330	

5/8/98

* Contact Project Director

Reviewed by: _____ Logbook No.: _____

Date: _____ Logbook Page No.: _____

ITS ENVIRONMENTAL-VT | 8080_PCB:EXW | Kalamazoo

CLIENT: BLABO2
CASE: PCB
SDG: KAL073
ETR NO: 69188
DATE: 5/8/98

ANALYST: KWB
SPIKER: KWB
WITNESS: JDV
Cu ~~Hg~~ KWB 5/8/98 LOT # 07012HZ
SILICA GEL LOT # 975186

SURR LOT # E04039801
MTX LOT # E05089801
CH_2Cl_2 LOT#: M07256
HEXANE LOT # L49280
H_2SO_4 LOT # M05026

000483

13 373/54

ITS Sample ID	Client ID	Sample Volume (1000ml)	Rinse 1.0 L bottles w/60ml CH2Cl2. Trans. rinse to Sep. funnel	pH between 5 and 9	Surr. 100 uL Pest Surr (DCB/TCX) 0.2 ppm	Mtx: 100 uL AR 1242/1254 5.0ppm to MS/MSD/LCS only	Shake 2 min. Decant thru Na2SO4 funnel into K-D set-up.	Repeat 2(X)	Hexane Exchange w/50ml	Conc. to 2.0-3.0 mL. Transfer to a 16ml vial.	Sulfuric Acid (H2SO4) cleanup	Pull off Hexane layer	Conc. to approx. 1.0 mL	Sulfur clean-up w/ Cu	Add extract to a 3 gram 3% deactivated silica gel column. Elute thru column w/60ml of hexane	Conc. to 1.0 mL. Place in a clear 2ml vial. Give extract w/paperwork to GC.
	PBLK M1	1000	KWB	KWB ✓	✓	X	KWB	KWB/JDV	KWB	KWB	KWB	KWB	KWB	KWB	KWB	KWB
M1	LCS	1000	↓	✓	✓	✓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
357322	A66189	990	↓	✓	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
357322 MS	A66189MS	1000	↓	✓	✓	✓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
357322 MD	A66189MSD	1000	↓	✓	✓	✓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
357323	A66190	930	↓	✓	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
357324	A66191	980	↓	✓	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
357325	A66192	960	↓	✓	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
357326	A66193	940	↓	✓	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
357327	A66194	990	↓	✓	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
357328	A66195	970	↓	✓	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
357329	A66196	990	↓	✓	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
357330	A66197	980	↓	✓	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

KWB 5/9/98

KWB 5/9/98

0054

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE

SDG# 70130

PCB ANALYSES

ALLIED OU

Analyses performed by:

Severn Trent Laboratories
Colchester, Vermont

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG# 70130 for the Allied OU sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analyses				
				VOA	BNA	PCB	TAL	MISC
A66199[1]	362068	water	8/5/98			x		
A66200	362067	water	8/5/98			x		
A66201	362066	water	8/5/98			x		
A66202	362065	water	8/5/98			x		
A66203	362069	water	8/5/98			x		
A66204	362070	water	8/6/98			x		
A66206	362072	water	8/6/98			x		
A66207	362073	water	8/6/98			x		

1 MS/MSD analysis performed on sample.

Introduction

Analyses were performed according to the USEPA SW-846 method 8081, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

The data presented in the package has been derived using a procedure developed by Aquatec, Inc. (currently Severn Trent) in an attempt to improve the analytical process of calibration, identification, and quantitation of PCBs as Aroclors. Key components of this procedure include:

Calibration

The response function of the electron capture detector is inherently non-linear, and while significant linearization is achieved for this detector by electronic means, some non-linearity remains. Power function linearization is used to "straighten the curve" and allow the use of response factors for calibration purposes.

During the initial calibration a response factor is calculated for each peak in the individual Aroclors.

A weighted response factor calculation has been used to adjust for non-linearity at the low end of the calibration curve.

Identification

Peak retention times are relative. Retention times are in set windows relative to the time markers DCB and TCMX. Time markers adjust for minor variations in column flow or instrument condition and allow the use of very tight windows which minimizes the number of both false positive and false negative peak identifications.

The determination of "which Aroclor or mixture of Aroclors will produce a chromatogram most similar to that of the residue" is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The "most similar" Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors. This is similar to the procedure presented by L.E. Slivon, P.M. Schumacher and A. Alford-Stevens for the determination of Aroclor composition from GC/MS level of chlorination results.

Identification/quantitation of Aroclors in samples is based on the combined response of two columns, typically RTX-5 and RTX-35. The pooling of response combines the unique qualities of both columns to derive a more defined Aroclor pattern which less likely to be affected by interferents. Identification/quantitation data for the individual columns is provided in the package and can be used as a check on the combined column results.

Data Assessment

1. Holding Time

The QAPP-specified holding times for PCB analyses of water samples are 5 days from date of sample receipt to extraction and 40 days from extraction to analysis. The technical holding times are 7 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blank. No field blanks were submitted with the samples.

3. System Performance

The system performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The initial calibration was within this limit for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limit.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

The recovery for one surrogate was below control limits in samples A66200, A66203 and A66206. Since recoveries for the remaining surrogate were within control limits, no data have been qualified based on the deviations. All other sample surrogate recoveries were within control limits.

6. Compound Identification

The determination of Aroclor presence is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The most similar Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors.

Identification/quantitation of Aroclors is based on the combined response of the RTX-5 and RTX-35 columns. Identification/quantitation data for the individual columns is provided in the package and has been used as a check on the combined column results.

A review of the chromatograms showed an extremely poor pattern match for Aroclor 1232 in sample A66204. While Aroclor 1242 was a slightly better match, it too was extremely poor. Quantitation "as" either Aroclor yielded similar results (0.13 for 1232 and 0.14 for 1242). Although the chromatograms indicate that PCBs are present in the sample, the pattern matches are extremely poor resulting in the qualification of the data as estimated with presumptive evidence of identification.

The chromatograms for sample A66199 show low levels of what may be potential PCBs. However, the low level and poor pattern match preclude identification or quantitation.

7. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits.

8. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
A66200 / A66201	ND	--	--	NA

ND Not detected.
NA Analyte not detected in sample and/or duplicate. RPD not applicable.

The duplicate results are acceptable.

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

DATA REVIEW CHECKLIST

PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were surrogate recoveries outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits? 0 out of 4			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? 0 out of 2			
Blanks			
Is a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Do any field/rinse blanks have positive results?			X
Are there field/rinse/equipment blanks associated with every sample?		X	

ao70130

PCB Data Review Checklist - Page 2

	YES	NO	NA
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks		X	
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?	X		
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?			X
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			X
PCB Identification			
Is both a combined and single column Aroclor Identification Report present for every sample?	X		
Do the combined column and individual column Aroclor identifications agree?	X		

PCB Data Review Checklist - Page 3

	YES	NO	NA
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			X
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Were field duplicates submitted with the samples?		X	

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding Time	Surrogates	
		TCX	DCB
A66199			
A66199 MS			
A66199 MSD			
A66200			
A66201			
A66202			
A66203			
A66204			
A66206			
A66207			

Surrogate Standards
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogates diluted out
: Recovery high
. Recovery low

Unless otherwise noted, all parameters are within specified limits.

PCB Calibration Summary

Instrument: HP2087
Column: RTX-5 / RTX-35

Date:	9/4/98-9/5/98	9/5/98	9/5/98	9/5/98	9/5/98		
Time:		0850	0910	1323	1342		
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok						
Aroclor 1221	ok						
Aroclor 1232	ok						
Aroclor 1242	ok		ok				
Aroclor 1248	ok	ok		ok			
Aroclor 1254	ok				ok		
Aroclor 1260	ok						
Tetrachloro-m-xylene	ok						
Decachlorobiphenyl	ok						
Affected Samples:							

CORRECTED ANALYSIS SUMMARY FORMS

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66199

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: 70130

Phase Type: WATER Lab Sample ID: 362068

Phase Weight: 1000 (mL) Date Received: 08/07/98

Injection Volume: 1.0 (uL) Date Extracted: 08/12/98

Dilution Factor: 1.0 Date Analyzed: 09/05/98

% Solids: Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

Severn Trent Laboratories 55 South Park Drive Colchester, Vermont 05446
Telephone (802) 655-1203
Fax (802) 655-1248

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66200

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: 70130

Phase Type: WATER Lab Sample ID: 362067

Phase Weight: 970 (mL) Date Received: 08/07/98

Injection Volume: 1.0 (uL) Date Extracted: 08/12/98

Dilution Factor: 1.0 Date Analyzed: 09/05/98

% Solids: Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66201

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: 70130

Phase Type: WATER Lab Sample ID: 362068

Phase Weight: 920 (mL) Date Received: 08/07/98

Injection Volume: 1.0 (uL) Date Extracted: 08/12/98

Dilution Factor: 1.0 Date Analyzed: 09/05/98

% Solids: Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.055	U
11104-28-2	Aroclor-1221	0.055	U
11141-16-5	Aroclor-1232	0.055	U
53469-21-9	Aroclor-1242	0.055	U
12672-29-6	Aroclor-1248	0.055	U
11097-69-1	Aroclor-1254	0.055	U
11096-82-5	Aroclor-1260	0.055	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66202

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: 70130

Phase Type: WATER Lab Sample ID: 362065

Phase Weight: 1000 (mL) Date Received: 08/07/98

Injection Volume: 1.0 (uL) Date Extracted: 08/12/98

Dilution Factor: 1.0 Date Analyzed: 09/05/98

% Solids: Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66203

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: 70130

Phase Type: WATER Lab Sample ID: 362069

Phase Weight: 1000 (mL) Date Received: 08/07/98

Injection Volume: 1.0 (uL) Date Extracted: 08/12/98

Dilution Factor: 1.0 Date Analyzed: 09/05/98

% Solids: Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66204

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: 70130

Phase Type: WATER Lab Sample ID: 362070

Phase Weight: 920 (mL) Date Received: 08/07/98

Injection Volume: 1.0 (uL) Date Extracted: 08/12/98

Dilution Factor: 1.0 Date Analyzed: 09/05/98

% Solids: Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.13	J
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

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FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66206

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: 70130

Phase Type: WATER Lab Sample ID: 362072

Phase Weight: 990 (mL) Date Received: 08/07/98

Injection Volume: 1.0 (uL) Date Extracted: 08/12/98

Dilution Factor: 1.0 Date Analyzed: 09/05/98

% Solids: Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

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FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66207

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: 70130

Phase Type: WATER Lab Sample ID: 362073

Phase Weight: 990 (mL) Date Received: 08/07/98

Injection Volume: 1.0 (uL) Date Extracted: 08/12/98

Dilution Factor: 1.0 Date Analyzed: 09/05/98

% Solids: Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

Committed To *Your* Success

Severn Trent Laboratories
55 South Park Drive
Colchester VT 05446

Tel: (802) 655-1203
Fax: (802) 655-1248

September 18, 1998

Ms. Laurie Indick
Blasland & Bouck Engineers
6723 Towpath Road
Box 66
Syracuse, NY 13214

Re: Laboratory Project No. 98000
Case: 98000; SDG 70130

Dear Ms. Indick:

Enclosed are the analytical results of samples received intact by Severn Trent Laboratories on August 07, 1998. Laboratory numbers have been assigned and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 08/0798	ETR No: 70130	
362065	A66202	08/05/98	Water
362066	A66201	08/05/98	Water
362067	A66200	08/05/98	Water
362068	A66199	08/05/98	Water
362068MS	A66199MS	08/05/98	Water
362068MD	A66199MSD	08/05/98	Water
362069	A66203	08/05/98	Water
362070	A66204	08/06/98	Water
362071	A66205	08/06/98	Water
362072	A66206	08/06/98	Water
362073	A66207	08/06/98	Water

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The PCB analysis of samples A66199, A66199MS and A66199MSD required additional sulfur cleanup. The method blank associated with these samples, PBLKM6, also received additional sulfur cleanup. The second analysis of the method blank was renamed PBLK6M to provide distinction between the two analyses.

Please note that the analysis of sample A66204 exhibited the presence of Aroclor 1232, as identified by the STL Software system. The laboratory observed an Aroclor pattern in this sample which did not exactly match the calibration standards. The identification of Aroclor 1232 is considered the best fit for this weathered pattern.

If there are any questions regarding this submittal, please contact James W. Madison at (802) 655-1203.

Sincerely,

Deborah A. Loring
Laboratory Director

DAL/cga
Enclosure

a part of
Severn Trent Services Inc

FORM 2
AROCLOR SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories-VT

Contract: 98000

Lab Code: INCHVT

Case: 98000

SAS No:

SDG: 70130

EPA SAMPLE NO.	TCX 1 % REC	#	TCX 2 % REC	#	DCB 1 % REC	#	DCB 2 % REC	#
PBLKM6	67		65		90		89	
PLCSM6	57	*	53	*	75		72	
PBLK6M	63		61		84		80	
A66202	62		60		69		64	
A66201	130		60		80		74	
A66200	127		56	*	72		68	
A66199	62		61		77		71	
A66199MS	68	D	66	D	90	D	86	D
A66199MSD	67	D	65	D	84	D	79	D
A66203	53	*	52	*	64		62	
A66204	70		69		96		93	
A66206	57	*	58	*	80		77	
A66207	68		70		93		90	

	Project Specific QC Limits
TCX = Tetrachloro-meta-Xylene	(60 - 150)
DCB = Decachlorobiphenyl	(60 - 150)

- Column to be used to flag recovery values
* - Values outside of QC limits
D - Surrogates calculated using diluted analysis
A - Extracted surrogates diluted out, surrogates added to diluted extract as retention time markers.

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FORM 3E
AROCLOR
MATRIX SPIKE BLANK RECOVERY

ıb Name: Severn Trent Laboratories-VT

Contract: 98000

Lab Code: INCHVT

Case: 98000

SAS No:

SDG: 70130

EPA SAMPLE NO.: PLCSM6

Compound	SPIKE ADDED ug/L	MSB CONCENTRATION ug/L	MSB % REC #	QC LIMITS REC.
Aroclor 1242	0.50	0.35	70	39-150
Aroclor 1254	0.50	0.33	66	29-131

- Column used to flag recovery and RPD values with an asterisk
* - Values outside of QC limits.

Spike Recovery: 0 out of 2 outside limits.

Comments:

FORM 3
AROCLOR MATRIX SPIKE RECOVERY

Lab Name: Severn Trent Laboratories-VT

Contract: 98000

Lab Code: INCHVT

Case: 98000

SAS No:

SDG: 70130

EPA SAMPLE NO.: A66199

Compound	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTATION ug/L	MS % REC #	QC LIMITS REC.
Aroclor 1242	0.50	0	0.37	74	39-150
Aroclor 1254	0.50	0	0.37	74	29-131

- Column used to flag recovery and RPD values with an asterisk
* - Values outside of QC limits.

Spike Recovery: 0 out of 2 outside limits.

Comments:

FORM 3
AROCLOR MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories-VT

Contract: 98000

Lab Code: INCHVT

Case: 98000

SAS No:

SDG: 70130

EPA SAMPLE NO.: A66199

Compound	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor 1242	0.50	0.46	92	22	30	39-150
Aroclor 1254	0.50	0.41	82	10	30	29-131

- Column used to flag recovery and RPD values with an asterisk
* - Values outside of QC limits.

RPD: 0 out of 2 outside limits.
Spike Recovery: 0 out of 2 outside limits.

Comments:

FORM 4
AROCLOR METHOD BLANK SUMMARY

Lab Name:	Severn Trent Laboratories-VT	Contract:	98000
Lab Code:	INCHVT	Case:	98000
Lab Sample ID:	PBLKM6	SDG:	70130
Matrix:	WATER	Level:	LOW
Date Extracted:	08/12/98	Date Analyzed(2):	09/05/98
Date Analyzed(1):	09/05/98	Time Analyzed(2):	04:56
Time Analyzed(1):	04:56	GC ID(2):	HP2087
GC ID(1):	HP2087	GC Column(2):	RTX-35
GC Column(1):	RTX-5		

LAB ID	CLIENT ID	DATE ANALYZED 1	DATE ANALYZED 2
PLCSM6	PLCSM6	09/05/98	09/05/98
362065	A66202	09/05/98	09/05/98
362066	A66201	09/05/98	09/05/98
362067	A66200	09/05/98	09/05/98
362069	A66203	09/05/98	09/05/98
362070	A66204	09/05/98	09/05/98
362072	A66206	09/05/98	09/05/98
362073	A66207	09/05/98	09/05/98

FORM 4
AROCLOR METHOD BLANK SUMMARY

Lab Name:	Severn Trent Laboratories-VT	Contract:	98000
Lab Code:	INCHVT	Case:	98000
Lab Sample ID:	PBLK6M	SDG:	70130
Matrix:	WATER	Level:	LOW
Date Extracted:	08/12/98	Date Analyzed(2):	09/05/98
Date Analyzed(1):	09/05/98	Time Analyzed(2):	05:35
Time Analyzed(1):	05:35	GC ID(2):	HP2087
GC ID(1):	HP2087	GC Column(2):	RTX-35
GC Column(1):	RTX-5		

LAB ID	CLIENT ID	DATE ANALYZED 1	DATE ANALYZED 2
362068	A66199	09/05/98	09/05/98
362068MS	A66199MS	09/05/98	09/05/98
362068MD	A66199MSD	09/05/98	09/05/98

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FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKM6

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: 70130

Phase Type: WATER Lab Sample ID: PBLKM6

Phase Weight: 1000 (mL) Date Received:

Injection Volume: 1.0 (uL) Date Extracted: 08/12/98

Dilution Factor: 1.0 Date Analyzed: 09/05/98

% Solids: Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK6M

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: 70130

Phase Type: WATER Lab Sample ID: PBLK6M

Phase Weight: 1000 (mL) Date Received:

Injection Volume: 1.0 (uL) Date Extracted: 08/12/98

Dilution Factor: 1.0 Date Analyzed: 09/05/98

% Solids: Sulfur Clean-up: Y (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

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BACCALC1.XLS

CALIBRATION SUMMARY
BACK CALCULATIONS

Lab ID: SEVERN TRENT LABORATORIES Calib date(s): 04-SEP-98 17:33 to
GC: HP2087 05-SEP-98 04:37
Col. 1: RTX-5
Col. 2: RTX-35 File: 03,04 04SEP981633

Standards	50 ppb	100 ppb	200 ppb	400 ppb	800 ppb	%RSD
Aroclor 1016	47.5	98	201.6	402.5	801	
Cal Fact	0.950	0.975	1.008	1.006	1.001	2.5
% Diff	5	3	-1	-1	0	
Aroclor 1221	52.7	105	206.7	401.8	784.8	
Cal Fact	1.054	1.051	1.034	1.005	0.981	3.1
% Diff	-5	-5	-3	0	2	
Aroclor 1232	48.2	97	196.1	399.5	809.2	
Cal Fact	0.964	0.970	0.981	0.999	1.012	2.0
% Diff	4	3	2	0	-1	
Aroclor 1242	47.9	96.0	200.9	400.4	804.8	
Cal Fact	0.958	0.960	1.005	1.001	1.006	2.5
% Diff	4	4	0	0	-1	
Aroclor 1248	46.2	93.5	194.9	400.7	814.7	
Cal Fact	0.924	0.935	0.975	1.002	1.018	4.2
% Diff	8	7	3	0	-2	
Aroclor 1254	49.7	101	197.3	398.4	803.8	
Cal Fact	0.994	1.008	0.987	0.996	1.005	0.9
% Diff	1	-1	1	0	0	
Aroclor 1260	50.2	102	197.6	424.5	775.5	
Cal Fact	1.004	1.022	0.988	1.061	0.969	3.5
% Diff	0	-2	1	-6	3	

Cal Fact = Calc. Conc. / Nominal Conc.

%RSD = STD Dev / Mean of Cal Fact

% Diff = (Nominal Amt-Calc Amt) / Nominal Amt*100

70130.XLS

AROCLOR CHECK STANDARD SUMMARY

Lab ID: SEVERN TRENT LABORATORIES
GC: HP2087
Col. 1: RTX-5
Col. 2: RTX-35

Initial Calib. 04SEP981633
date/time: 9/4/98 17:33 to 9/4/98 4:37

Check Standard File: 3,4 04SEP981634,13
Date: 09/05/98
Time: 8:50

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	211	5.5

Check Standard File: 3,4 04SEP981634,14
Date: 09/05/98
Time: 9:10

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1242	200	200	0.0

Check Standard File: 3,4 04SEP981634,27
Date: 09/05/98
Time: 13:23

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	183.7	8.0

Check Standard File: 3,4 04SEP981634,28
Date: 09/05/98
Time: 13:42

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1254	200	209	4.5

Aroclor Calibration Summary

RTX-5

JLC - HP2087

Calibration of 4-Sep-1998 17:33 through 5-Sep-1998 04:37.
MCD1:[8080] 03,04 04SEP981633
METHOD: 8080_PCB:AN

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
1	4.148	84.407	10.5%	48.656	8.5%	1.831	8.2%	2.894	3.5%	0.164				0.080	
2	4.670	28.814	14.9%	15.896	17.	1.571		1.114							
3	5.253	95.007	1.0%	62.195	2.1%	26.457	3.4%	23.281	3.0%	1.194		0.165		0.175	
4	5.362									7.058	5.9%	6.891	5.6%	6.965	3.9%
5	5.387	67.062	1.3%	50.393	1.2%	34.295	2.5%	29.643	2.3%						
6	5.465	218.034	2.8%	180.230	1.2%	153.529	1.0%	125.759	1.3%	11.787	5.1%	1.759		1.257	3.9%
7	5.721	1.095		9.938	7.1%	22.755	2.7%	15.881	2.1%	4.578	5.9%	0.203		0.098	
8	6.006			121.082	3.9%	259.610	5.7%	191.558	5.8%	103.427	2.7%	4.305	11.2%	2.496	9.1%
9	6.026	33.480	2.8%												
10	6.126			17.386	3.5%	34.426	0.9%	24.883	3.6%	6.855	4.0%	0.715	55.	0.551	67.
11	6.237	10.951	3.3%	88.165	2.2%	210.337	1.0%	151.170	1.1%	65.462	3.8%	2.375	8.5%	1.296	
12	6.395	0.794		2.918		6.332	9.2%	4.110							
13	6.582	18.341	13.5%	204.535	6.4%	520.113	4.7%	365.260	5.8%	232.230	7.9%	7.109		3.496	
14	6.722	9.739	4.9%	101.653	4.3%	253.864	2.5%	180.269	2.8%	109.751	2.6%	6.249			
15	6.824	4.651	6.3%	56.391	7.9%	148.454	8.4%	104.709	7.5%	56.479	8.6%	1.619		0.788	
16	6.890			24.291	5.0%	61.557	4.1%	43.159	8.4%	54.985	1.9%	1.724	19.	0.539	
17	7.051	2.593	9.2%	62.557	1.7%	163.242	3.4%	127.885	3.8%	238.444	3.2%	171.710	2.3%	10.567	5.5%
18	7.113			60.541	2.0%	159.738	3.0%	117.105	2.8%	199.433	1.1%	59.379			
19	7.162	4.061		52.311	9.3%	136.028	4.9%	95.178	5.3%	158.678	3.2%			5.270	83.
20	7.357	1.999	41.	72.900	1.9%	189.471	0.7%	150.133	0.4%	267.775	1.6%	94.214	3.5%	2.233	23.
21	7.407			50.989	3.7%	118.508	2.0%	100.229	2.3%						
22	7.545	1.584	25.	76.263	3.3%	176.830	2.7%	152.410	1.7%	264.647	3.9%	34.720	5.2%	1.702	8.0%
23	7.675	0.266		19.777	6.9%	36.247	2.0%	41.124	1.5%	66.099	4.1%	7.217	8.0%	0.403	
24	7.838			3.785	14.8%	3.081	5.8%	7.681	6.4%	13.531	7.5%	1.605			
25	7.904	0.550		37.107	6.8%	16.375	5.1%	75.924	5.7%	147.514	7.5%	29.919	8.5%	0.658	
26	7.963	1.306		69.468	4.0%	25.959	3.8%	147.504	2.9%	296.613	4.8%	131.022	6.5%		
27	8.029	5.979	3.6%	81.273	3.2%	34.091	1.2%	171.549	2.1%	344.345	2.3%	327.551	3.0%	128.818	4.4%
28	8.139	0.338		8.178	3.4%	4.764	4.0%	16.924	9.2%	43.204	5.4%	55.015	1.2%		
29	8.314	1.415	8.5%	57.364	7.3%	5.473	4.8%	124.076	7.5%	238.121	9.5%	96.178	2.3%	21.874	4.4%
30	8.406	5.360	2.7%	27.304	1.2%	5.017	3.8%	61.259	4.4%	168.782	2.4%	453.542	3.1%	164.775	4.6%
31	8.502	0.608		11.880	3.4%	1.086		27.538	1.9%	83.096	0.9%	163.612	0.6%		
32	8.615			0.903				2.116		5.871	4.7%	8.647	4.7%		
33	8.704	0.075		1.924	17.	0.106		4.762	9.8%	14.308	4.9%	25.709	5.1%	0.721	
34	8.800	0.411		8.442	7.0%	0.378		20.382	3.8%	63.636	3.1%	131.573	1.9%	5.808	6.8%
35	8.892	1.112	10.4%	13.227	4.6%	0.547		31.405	2.8%	98.768	4.2%	264.378	4.3%	29.144	4.6%
36	8.973			7.964	5.7%	0.291		18.471	3.4%	60.882	4.1%	86.262	4.6%		
37	9.024	1.707	7.9%									52.057		77.906	5.4%
38	9.077	2.439	6.4%	20.873	4.0%	0.661		51.748	2.7%	160.878	4.1%	487.367	1.8%	91.643	4.5%
39	9.298	3.135	2.7%	6.918	6.2%	0.196		14.811	4.2%	47.986	4.5%	103.236	3.0%	192.302	4.3%
40	9.386	1.779	4.0%	1.274				2.565	16.	9.034	9.2%	64.656	1.6%	115.136	4.5%
41	9.470			1.180				2.832		10.451	10.6%	32.716	6.2%		
42	9.529	7.092	2.0%											420.581	6.7%

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 4.9561 and decachlorobiphenyl at 14.4338.
2) Peaks chosen within window of +/- 0.01352 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.05519.

Aroclor Calibration Summary

RTX-5

JLC - HP2087

Calibration of 4-Sep-1998 17:33 through 5-Sep-1998 04:37.
MCD1:[8080] 03,04 04SEP981633
METHOD: 8080_PCB:AN

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
43	9.568			13.384	2.0%	0.741	56.	31.043	1.9%	103.927	3.8%	361.553	2.6%		
44	9.742	0.393										32.224	1.6%	30.639	4.7%
45	9.820											17.118	5.1%		
46	9.872	0.967		0.822								47.860	1.5%	78.646	4.4%
47	9.986	5.881	2.0%	3.238	2.1%	0.239		4.572	2.1%	14.426	3.1%	230.396	2.1%	501.150	6.5%
48	10.054	2.569	4.3%											193.922	4.6%
49	10.081			9.472	4.7%	0.249		22.015	4.2%	82.789	7.1%	249.109	8.0%		
50	10.230			1.095				1.502	3.8%	5.768	5.7%	76.359	4.1%	206.646	4.8%
51	10.362							0.597		2.752		34.575	5.6%		
52	10.408	1.066	56.	0.793	50.	0.346		1.036	55.	3.374	12.7%	39.703	1.9%	60.267	4.5%
53	10.511	4.948	3.5%	4.072	2.2%	0.187		7.268	3.6%	26.349	3.5%	432.172	1.5%	560.220	4.7%
54	10.663	0.888	41.	0.709				0.908	8.1%	3.310	7.6%	37.909	3.3%	77.474	4.9%
55	10.813	3.002	36.	1.754	24.	0.508	98.	1.065		2.360	17.	19.858	0.4%	329.849	6.5%
56	10.905	1.141		0.581				0.203		0.961		15.509	6.7%	184.229	4.0%
57	11.022	0.424		0.819				2.038		8.279	4.5%	129.998	5.8%	55.918	4.7%
58	11.102	0.319		0.222										52.871	4.6%
59	11.240	2.222	3.3%	1.296	1.5%	0.187		0.568		1.855	4.9%	24.462	0.9%	338.452	5.1%
60	11.339	1.167		0.686				0.305		1.021		15.566	2.4%	190.855	5.3%
61	11.421	0.957		0.792										120.564	3.5%
62	11.439							1.024		3.897	4.9%	63.238	5.8%		
63	11.530	2.734		1.892	81.	2.146		2.080	56.	2.813	31.	16.564	26.	34.305	5.9%
64	11.607	8.188										6.626		64.603	4.0%
65	11.720	3.089	10.2%	2.607	1.9%			0.955	14.2%	4.308	6.2%	52.418	2.0%	755.799	4.0%
66	12.236	1.223	11.1%	1.193		0.162		0.540		2.413	4.2%	44.942	3.6%	366.957	4.8%
67	12.369	1.218		1.073		0.639		0.821		1.619		2.543	21.	177.443	4.6%
68	12.464	1.568	16.	1.463	8.0%	1.075	16.	1.058	18.	2.013	9.6%	3.201	5.9%	206.523	4.5%
69	12.707									0.137		2.514	22.	12.797	4.3%
70	12.932	21.134	18.	19.673	19.	21.693	19.	18.824	22.	19.047	13.3%	18.514	21.		
71	12.960													91.371	3.8%
72	13.063	21.722	19.	20.343	20.	22.473	22.	18.994	21.	19.360	13.1%	18.473	22.	26.494	20.
73	13.274	0.846	17.	0.945		0.437		0.860		1.557	17.	2.507	11.9%	203.921	4.5%
74	13.363	0.077		0.104						0.137		0.159		13.088	6.4%
75	13.886	19.529	18.	18.996	17.	19.863	17.	19.364	23.	20.305	15.	20.145	21.	84.506	5.2%
======	======	==========		==========		==========		==========		==========		==========		==========	
	Total:	723.5	4.9%	1846.2	3.9%	2884.2	3.4%	2966.9	3.7%	3990.8	4.2%	4931.6	3.1%	6306.8	4.9%

Retention Time Marker/Surrogate Standard Summary

Compound	Mean RT	RT Dev. Range	RT Crit.	Mean RF	Recovery Range	Surr Crit
tetrachloro-meta-xylene	4.9561	-.0095 to .0083	Passes...	9183.924	85.3 to 107.5%	Passes...
decachlorobiphenyl	14.4338	-.0116 to .0106	Passes...	7710.756	92.8 to 120.4%	** Fails *

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 4.9561 and decachlorobiphenyl at 14.4338.
2) Peaks chosen within window of +/- 0.01352 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.05519.

000090

Arocld 'alibration Summary

Calibration of 4-Sep-1998 17:33 through 5-Sep-1998 04:37.
MCD1:[8080] 03,04 04SEP981633
METHOD: 8080_PCB:AN

RTX-35

JLC - HP2087

000091

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
1	4.195	287.532	10.1%	165.008	10.3%	12.739		14.402	70.	3.510	97.	3.282		2.816	77.
2	5.077	103.253	4.3%	84.190	3.3%	60.784	6.2%	55.741	1.7%	2.988					
3	5.228									34.963	6.6%	33.919	5.9%	34.372	5.8%
4	5.250	395.161	1.4%	265.170	2.3%	113.417	4.5%	106.353	2.1%						
5	5.439	263.766	1.2%	198.375	1.4%	124.032	3.5%	112.813	1.8%	6.566	9.0%	1.123		0.922	
6	5.523	866.870	2.9%	739.484	1.9%	625.625	1.0%	536.963	1.7%	51.471	5.5%	7.558	15.	6.177	8.8%
7	5.911	5.124	13.6%	37.206	5.7%	86.711	3.3%	63.169	2.9%	18.681	5.3%	1.224		0.634	
8	5.991	50.123	10.9%	28.611	16.	6.851		6.853	23.						
9	6.071	159.873	5.2%	642.126	2.8%	1353.919	4.8%	1015.398	5.6%	525.824	2.9%	21.919	4.9%	12.561	6.1%
10	6.208	10.690	9.9%	51.780	3.6%	112.905	3.5%	83.972	2.7%	22.064	8.7%	1.176		0.599	
11	6.335	16.936	8.1%	172.116	3.8%	414.467	2.7%	305.028	2.4%	155.759	4.9%	4.265	11.4%	1.637	
12	6.408	30.327		235.139		528.204	3.0%	397.758	2.5%	156.815					
13	6.595	82.411	5.2%	986.092	5.3%	2388.829	3.2%	1746.592	3.4%	1131.012	5.5%	34.365	14.9%	15.492	
14	6.798	36.800	6.4%	368.684	4.0%	883.097	2.6%	652.949	2.8%	322.901	5.4%	11.340	22.	6.743	35.
15	6.855									181.751	1.1%	15.960	12.0%		
16	6.917			19.018		58.041	3.6%	38.233	4.6%	60.840	4.7%				
17	6.970	20.469	8.1%	259.664	8.6%	660.546	8.1%	485.998	7.2%	251.772	10.5%	5.703	33.	3.426	52.
18	7.068	10.352		244.570	2.2%	630.710	2.9%	502.038	4.6%	966.149	3.2%	721.365	3.0%	44.697	7.2%
19	7.134	30.779		278.567	13.4%	711.641	6.7%	516.350	5.3%	895.571	3.8%	254.704	17.	35.258	
20	7.210			121.417		332.881	2.3%	225.129	3.6%	381.180	1.3%				
21	7.518	11.105	25.	343.734	1.2%	844.385	1.0%	704.438	1.1%	1183.645	0.4%	406.140	1.4%	9.092	33.
22	7.575			172.151	1.6%	388.739	2.0%	333.107	2.9%	470.328	3.2%			0.880	
23	7.723	5.011	12.7%	235.407	2.9%	513.994	3.1%	474.888	1.6%	870.110	3.6%	143.474	4.5%	3.322	51.
24	7.771	1.212		98.152		224.298	4.6%							0.650	
25	7.879	0.678		14.690	6.6%	10.935	5.9%	27.914	7.2%	55.347	8.6%	5.612	22.	0.310	
26	7.942	2.861	14.2%	167.524	4.7%	70.676	5.9%	338.284	4.1%	669.876	6.1%	138.557	6.7%	2.210	20.
27	8.001					156.211	3.6%								
28	8.033	6.170	10.5%	321.697	4.4%			685.959	2.4%	1357.315	3.8%	589.639	4.6%	7.198	18.
29	8.127	4.378	17.	298.824	5.4%	77.717	5.6%	619.596	4.3%	1161.663	5.5%	197.173	5.7%	4.352	17.
30	8.216	18.422	7.3%	64.389	3.6%	61.597	3.2%	145.279	4.4%	415.945	1.6%	1156.903	2.7%	520.132	4.4%
31	8.306	2.446		12.415	11.2%			28.017	6.3%	97.018	5.1%	325.094	1.3%	88.391	5.9%
32	8.355	4.578		26.862	6.2%	14.513	5.4%	57.220	1.8%	156.160	4.4%	237.629	1.4%		
33	8.421	16.141	15.	56.219	6.1%	5.879		134.394	3.3%	415.440	1.5%	1416.473	2.8%	630.291	5.5%
34	8.541											645.190	0.7%	5.059	93.
35	8.581	3.787	16.	284.494	7.7%	20.859	8.9%	602.283	7.0%	1138.605	8.0%				
36	8.656											30.093	6.7%		
37	8.769	2.246	11.0%	33.112	4.5%	10.152	8.1%	78.909	1.2%	247.010	2.8%	470.901	0.8%	27.665	5.7%
38	8.891	0.277		5.824	8.9%	0.579		14.006	6.2%	48.998	8.8%	96.882	4.7%	1.741	18.
39	9.012	1.734		35.867	4.9%	1.918		86.523	2.9%	274.125	2.6%	548.111	0.5%	24.387	7.3%
40	9.141	3.334		44.968	10.1%	1.418		113.027	10.6%	373.163	6.9%	1043.189	3.2%	115.521	6.8%
41	9.260	0.711		29.500	9.6%	1.383		70.383	9.4%	254.897	7.2%	345.112	6.6%	2.038	41.
42	9.357	9.888		92.555	4.8%	3.583		228.820	3.5%	711.254	3.1%	2122.505	0.8%		
43	9.399	12.710	8.7%			8.332								829.385	4.5%

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 4.6988 and decachlorobiphenyl at 14.6129.
2) Peaks chosen within window of +/- 0.01352 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.11392.

Aroclo(alibration Summary

RTX-35

JLC - HP2087

Calibration ... 4-Sep-1998 17:33 through 5-Sep-1998 04:37.
MCD1:[8080] 03,04 04SEP981633
METHOD: 8080_PCB:AN

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
44	9.544	4.814	36.									162.021	6.0%	327.419	4.7%
45	9.696			53.567	3.6%	1.422		131.039	3.3%	458.486	4.8%	1474.544	2.5%		
46	9.737	27.313	5.0%			2.423								1730.249	6.8%
47	9.759			35.560	3.7%	1.150		76.765	2.2%	254.031	4.3%				
48	9.879	2.817	11.1%	1.500	47.	0.104		2.363	36.	10.176	19.	181.462	3.8%	311.204	4.5%
49	10.014	21.852	4.3%	13.458	3.9%	0.837	80.	19.835	4.3%	69.775	5.5%	948.083	1.8%	2081.462	5.2%
50	10.128	1.123		2.467	4.3%	1.044		4.318	7.6%	14.653	9.4%	50.823	6.0%	24.120	
51	10.369	7.554	33.	4.265				5.516	9.9%	20.534	6.8%	328.447	5.0%	903.952	4.7%
52	10.458			40.991	12.6%	0.669		102.163	9.6%	404.357	7.8%	890.285			
53	10.491	8.676										828.744		672.390	4.9%
54	10.539	6.983												517.649	5.0%
55	10.701	10.094	7.6%	6.253	7.4%	0.917	28.	8.267	5.4%	28.483	6.3%	497.970	2.5%	1249.482	4.3%
56	10.775	15.619	5.1%	14.090	7.5%	0.741		26.973	6.1%	103.796	8.3%	1756.735	1.0%	1981.384	4.4%
57	10.899	10.743	5.9%	6.136	7.5%	2.138	8.6%	3.232	10.0%	8.876	14.6%	78.066	3.0%	1361.660	5.8%
58	11.001	5.113		3.727				3.946		15.327		204.837	4.5%	815.295	3.9%
59	11.084							1.650		6.235		95.602	3.5%	77.736	4.4%
60	11.244	1.206		0.644		0.387		0.279		1.089		9.601	17.	230.966	5.8%
61	11.499	12.984		11.172		2.181		11.660		44.117		632.006	3.4%	1689.276	4.8%
62	11.642													796.387	5.1%
63	11.673	7.593	46.	7.363	17.	3.990	26.	7.964		23.512	12.7%	328.330	6.2%		
64	11.736	2.833										66.361		430.173	4.4%
65	11.828	15.662	18.	13.387	1.9%	3.331		7.196	19.	25.276	6.8%	296.124	2.6%	3556.739	4.1%
66	11.936	3.871		0.787		0.751				1.370		9.655	9.0%	79.336	22.
67	12.218	11.397	19.	9.989	11.2%	11.292	13.0%	9.342		9.112	17.	10.315	26.	97.132	6.1%
68	12.362	3.015	70.	2.381	18.	2.251		3.645		2.969		5.679		49.721	6.1%
69	12.479	6.081	36.	5.280	5.8%	2.626	14.7%	7.403		8.796	22.	47.057	18.	1097.410	4.3%
70	12.557	7.796	21.	7.483	4.9%	2.013		8.613		14.323	22.	202.371	5.1%	2079.612	4.0%
71	12.604	5.135	40.	4.721	12.7%	3.556	11.7%	8.444		3.569					
72	12.824							29.604		1.005		16.849	51.	58.236	6.8%
73	13.039	82.802	14.1%	76.675	13.1%	83.598	13.0%	77.149	18.	76.816	10.4%	77.509	21.	133.704	10.6%
74	13.215	85.628	17.	79.477	16.	88.132	19.	75.380	19.	77.338	11.2%	75.943	22.	101.544	17.
75	13.278													363.318	7.5%
76	13.418	3.231	24.	3.647	16.	1.852	25.	2.414		5.997	5.2%	10.346	17.	923.977	4.9%
77	14.022	74.425	11.5%	72.267	10.1%	75.647	11.3%	71.158	13.0%	76.745	5.1%	73.962	11.3%	359.765	3.9%
======	======	==========		==========		==========		==========		==========		==========		==========	
	Total:	2924.5	5.0%	7712.9	4.3%	11815.6	3.8%	12315.1	4.0%	16837.5	4.4%	20396.3	4.5%	26539.3	4.8%

Retention Time Marker/Surrogate Standard Summary

Compound	Mean RT	RT Dev. Range	RT Crit.	Mean RF	Recovery Range	Surr Crit
tetrachloro-meta-xylene	4.6988	-.0166 to .0123	Passes...	40142.816	86.2 to 109.3%	Passes...
decachlorobiphenyl	14.6129	-.0151 to .0138	Passes...	32460.238	93.6 to 116.6%	** Fails *

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 4.6988 and decachlorobiphenyl at 14.6129.
2) Peaks chosen within window of +/- 0.01352 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.11392.

000092

Intertek Testing Services
Environmental Laboratories 55 South Park Drive Colchester VT 05446 (802) 655-1203

CHAIN OF CUSTODY RECORD

Report to:	Invoice to
Company: Blasland Bouck & Lee	Company: Blasland Bouck & Lee
Address: 6730 Tompkins Rd PO Box 66, Syracuse NY 13214	Address: 6730 Tompkins Rd, Syracuse NY 13214
Contact: David Lay	Contact:
Phone: (315) 446-9120	Phone:
Fax: (315) 449-2353	PO/SO #:
Contract/Quote #: 64551	

Sampler's Name: DAVE LAY / BRIAN LOOMIS

Sampler's Signature:

Proj. No.: 64551

Project Name: ~~Gux~~ KRSG - ALLIED SAMPLING

ANALYSIS REQUESTED: PCBs (8082)

Lab use only Due Date:

Temp. of coolers when received (C°): 1 2 3 4 5

Custody Seal N / Y

Intact N / Y

Screened For Radioactivity ☐

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	No./Type of Containers[2]: VOA	A/G 1 Lt.	250 ml	P/O	PCBs (8082)	Lab Sample ID (Lab Use Only)
W	8/5	1930		x	A 66202		2*			x	
W	8/5	1730		x	A 66201		2*			x	
W	8/5	1650		x	A 66200		2			x	
W	8/5	1500		x	A 66199 MSD/MS		6			x	
W	8/5	2015		x	A 66203		2			x	
W	8/6	0700		x	A 66204		2			x	
W	8/6	1115		x	A 66205		1			x	
W	8/6	1215		x	A 66206		2			x	
W	8/6	1530		x	A 66207		2			x	

Turn around time: ☒ Priority 1 or Standard ☐ Priority 2 or 50% * ☐ Priority 3 or 100% * ☐ Priority 4 ERS (Dallas Only) * Must Coordinate with Project Manager

Shipment For Case Complete ☐ Yes ☐ No

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	8/6/98	1630			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
			[signature]	8-7-98	0730

Remarks: HOLD A66205 FOR ANALYSIS

Client's delivery of samples constitutes acceptance of ITS Environmental Laboratories terms and conditions contained in the Price Schedule.

[1] Matrix: WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - Sludge O - Oil

[2] Container: VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

ITS cannot accept verbal changes. Please Fax written changes to (802) 655-1248

INTERTEK TESTING SERVICES ENVIRONMENTAL LABORATORIES LOG-IN SHEET

Lab Name: Intertek Testing Services Environmental Laboratories - Burlington, VT

Page 1 of 1

Received By (Print Name): Frank Bessette

Log-in Date: 8-7-98

Received By (Signature): Frank Bessette

Case Number: 98000

Sample Delivery Group No: 70130

ETR Number: 70130

REMARKS:

1. **Custody Seal** ~~Present~~/Absent* ~~Intact~~/Broken
2. **Custody Seal Nos.:** /
3. **Chain-of-Custody Records** Present/Absent*
4. **Sample Information Sheets** ~~Present~~/Absent*
5. **Airbill** Airbill/~~Sticker~~ Present/Absent*
6. **Airbill No.:** 8078630 12007
7. **Sample Tags** ~~Present~~/Absent* **Sample Tag Numbers** ~~Listed~~/Not Listed on Chain-of-Custody
8. **Sample Condition:** Intact/~~Broken~~* ~~Leaking~~
9. **Does information on the custody records, sample information sheets, sample tags and labels agree?** Yes/No*
10. **Date Received at Lab:** 8-7-98
11. **Time Received:** 0930
12. **Cooler Temperature:** 4°C-5°C

Sample Transfer

Fraction: All

Area #: LVL4 Fridge

By: FWB

On: 8-7-98

CORRESPONDING			
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66202	NA	362065	Were air bubbles present
A66201	"	362066	in any VOA vials? NA
A66200	"	362067	Samples Recv'd
A66199	"	362068	intact on ice
A66203	"	362069	at 4°C-6°C.
A66204	"	362070	Coolers Recv'd
A66205	"	362071	intact with no
A66206	"	362072	custody seals
A66207	"	362073	present.
			FWB
			8-7-98

* Contact Project Director

Reviewed by: _____

Logbook No.: _____

Date: _____

Logbook Page No.: _____

FORM DC-1

ITS ENVIRONMENTAL-VT 3510C 8080_PCB:EXW Kalamazoo

CLIENT: BLABO2
CASE: 98000
SDG: 70130
ETR NO: 70130
DATE: 8/12/98

ANALYST: DJP
SPIKER: DJP
WITNESS: JB
Cu ~~Hg~~ LOT # 61404EX
~~SILICA GEL~~ Florul LOT # 94277

SURR LOT # E072399001
MTX LOT # E050399001
CH2Cl2 LOT#: M13324
HEXANE LOT # M14279
H2SO4 LOT # M05026

381, 35

ITS Sample ID	Client ID	Sample Volume (1000ml)	Rinse 1.0 L bottles w/60ml CH2Cl2. Trans. rinse to Sep. funnel	pH between 5 and 9	Surr: 100 uL Pest Surr (DCB/TCX) 0.2 ppm	Mix: 100 uL AR 1242/1254 5.0ppm to MS/MSD/LCS only	Shake 2 min. Decant thru Na2SO4 funnel into K-D set-up.	Repeat 2(X)	Hexane Exchange w/60ml	Conc. to 2.0-3.0 mL. Transfer to a 16ml vial.	Sulfuric Acid (H2SO4) cleanup	Pull off Hexane layer	Conc. to approx. 1.0 mL	Sulfur clean-up w/ Cu	Add extract to a 1gm Florisil Cart. Elute thru Cart. w. 9mls 9:1 Hex/Acetone.	Conc. to 1.0 mL. Place in a clear 2ml vial. Give extract w/paperwork to GC.
	PBLK M6	1000	DJP	DJP	✓	X	DJP	DJP	DJP	JEB	JEB	JEB	JEB	DJP	DJP	JEB
M6	LCS	1000			✓	✓										
362065	A66202	1000			✓	X										
362066	A66201	920			✓	X										
362067	A66200	970			✓	X										
362068	A66199	1000			✓	X										
362068MS	A66199MS	970			✓	✓										
362068MD	A66199MSD	970			✓	✓										
362069	A66203	1000			✓	X										
362070	A66204	920			✓	X										
362072	A66206	990			✓	X										
362073	A66207	990			✓	X										

JEB 8/12/98

000451

JEB 8/12

035

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER
SUPERFUND SITE

SDG# KAL076

PCB ANALYSES

ALLIED OU

Analyses performed by:

Severn Trent Laboratories
Colchester, Vermont

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG# KAL076 for sampling at the Allied OU of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB and total organic carbon analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis	
				PCB	TOC
A66208	367948	water	10/3/98	x	
A66209	367947	water	10/3/98	x	

Introduction

Analyses were performed according to the USEPA SW-846 method 8081 modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The QAPP-specified holding times for PCB analyses are 5 days from sample receipt to extraction and 40 days from extraction to analysis for water samples. The technical holding times are 7 days from collection to extraction and 40 days to analysis.

The samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No Aroclors were detected in the method blank. No rinse blanks were submitted with the samples.

3. System Performance

The system performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument's daily performance is satisfactory.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The %RSD was within acceptable limits.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limits.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recovery for one surrogate was above control limits in sample A66208. Since recovery for the remaining surrogate was within control limits, no data have been qualified based on the deviation. All other surrogate recoveries were within control limits.

6. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All quantitated peaks fell within the appropriate retention time windows.

A review of the sample chromatograms show a very poor Aroclor pattern match. Although Aroclor 1242 is the best possible match, the poor correlation has resulted in the data being qualified as estimated with presumptive evidence of identification.

7. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

No matrix spike or matrix spike duplicate was extracted with the samples. A laboratory control sample was, however, extracted and analyzed with acceptable recoveries.

8. Field Duplicates

No field duplicates were included in this data set.

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

DATA REVIEW CHECKLIST

PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the samples numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were recoveries of TCX or DCB outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?		X	
Were matrix spikes analyzed at the required frequency?		X	
How many spike recoveries were outside of QC limits? NA out of NA			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? NA out of NA			
Blanks			
Is a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?			X
Is the chromatographic performance acceptable for each instrument?	X		
Do any method/reagent/instrument blanks have positive results?		X	

a64153

PCB Data Review Checklist - Page 2

	YES	NO	NA
Do any field/rinse blanks have positive results?			X
Are there field/rinse/equipment blanks associated with every sample?		X	
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks			X
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?	X		
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?			X
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	X		

PCB Data Review Checklist - Page 3

	YES	NO	NA
PCB Identification			
Is an analytical data summary sheet present for all samples?	X		
Were all positively identified compounds confirmed on a second column?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			X
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Where field duplicates submitted with the samples?		X	

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
A66208		↑	
A66209			

Surrogate Standards:
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogates diluted out
↑ Recovery high
↓ Recovery low

* Unless otherwise noted, all parameters are within specified limits.

PCB Calibration Summary

Instrument: 2759-1
Column: RTX-35

Date:	10/12/98	10/12/98	10/12/98	10/12/98			
Time:		151	2119	0228			
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	r^2	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok			
Aroclor 1221	--*						
Aroclor 1232	--*						
Aroclor 1242	--*						
Aroclor 1248	--*						
Aroclor 1254	--*						
Aroclor 1260	ok	ok	ok	ok			
Tetrachloro-m-xylene	ok						
Decachlorobiphenyl	ok						

Affected Samples:

* Single-point standards analyzed

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PCB Calibration Summary - Page 2

Instrument: 2759-1
Column: RTX-5

Date:	10/12/98	10/12/98	10/12/98	10/12/98			
Time:		1531	2119	0228			
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	r^2	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok			
Aroclor 1221	--*						
Aroclor 1232	--*						
Aroclor 1242	--*						
Aroclor 1248	--*						
Aroclor 1254	--*						
Aroclor 1260	ok	ok	ok	ok			
Tetrachloro-m-xylene	ok						
Decachlorobiphenyl	ok						
Affected Samples:							

* Single-point standard analyzed

a64153

CORRECTED ANALYSIS SUMMARY FORMS

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66208

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Matrix: (soil/water) WATER Lab Sample ID: 367948

Sample wt/vol: 840.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/98

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/05/98

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/12/98

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.060	U
11104-28-2	Aroclor-1221	0.060	U
1114-16-5	Aroclor-1232	0.060	U
53469-21-9	Aroclor-1242	0.33	JK
12672-29-6	Aroclor-1248	0.060	U
11097-69-1	Aroclor-1254	0.060	U
11096-82-5	Aroclor-1260	0.060	U

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A66209

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Matrix: (soil/water) WATER Lab Sample ID: 367947

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/05/98

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/05/98

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/12/98

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
1114-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.089	~~P~~ JU
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

Committed To *Your* Success

Severn Trent Laboratories
55 South Park Drive
Colchester VT 05446

Tel: (802) 655-1203
Fax: (802) 655-1248

October 13, 1998

Ms. Laurie Indick
Blasland & Bouck Engineers
6723 Towpath Road
Box 66
Syracuse, NY 13214

Re: Laboratory Project No. 91082
Case No. PCB; SDG KAL076

Dear Ms. Indick:

Enclosed are the analytical results of samples received intact by Severn Trent Laboratories on October 5, 1998. Laboratory numbers have been assigned and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 10/05/98	ETR No: 70954	
367946	H80231	10/01/98	Soil
367946MS	H80231MS	10/01/98	Soil
367946MD	H80231MSD	10/01/98	Soil
367947	A66209	10/03/98	Water
367948	A66208	10/03/98	Water

The PCB analyses of samples H80231, H80231MS and H80231MSD were accomplished at dilutuions based on screen analyses which indicated that target Aroclors would be above calibration range in full strength acquisitions. As a result, matrix spike compounds were diluted below levels of contribution.

The analyses of samples A66209 and A66208 exhibited the presence of PCB peaks which did not match the Aroclors in the laboratory calibration standards. These peaks have been quantified as Aroclor 1242, however the patterns were significantly different.

001

Committed To *Your* Success

If there are any questions regarding this submittal, please contact James W. Madison at (802) 655-1203.

Sincerely,

Deborah A. Loring
Laboratory Manager

DAL/mim

Enclosure

002

FORM 2
WATER OTHER SURROGATE RECOVERY

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

GC Column(1): RTX-35 ID: 0.32 (mm) GC Column(2): RTX-5 ID: 0.32 (mm)

	CLIENT SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK09	71	84	84	83			0
02	09LCS	66	81	81	80			0
03	A66209	64	92	72	69			0
04	A66208	69	141*	64	59			1
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								

		ADVISORY QC LIMITS
S1 (TCX)	= Tetrachloro-m-xylene	(30-140)
S2 (DCB)	= Decachlorobiphenyl	(30-140)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
WATER OTHER LAB CONTROL SAMPLE

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Matrix Spike - Sample No.: O9LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Aroclor-1242	0.50		0.35	70	39-150
Aroclor-1254	0.50		0.39	78	29-131

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

FORM 4
OTHER METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PBLK09

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Lab Sample ID: PBLK09 Lab File ID: _____

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 10/05/98

Date Analyzed (1): 10/12/98 Date Analyzed (2): 10/12/98

Time Analyzed (1): 1721 Time Analyzed (2): 1721

Instrument ID (1): 2759_1 Instrument ID (2): 2759_2

GC Column (1): RTX-5 ID: 0.32(mm) GC Column (2): RTX-35 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	O9LCS	O9LCS	10/12/98	10/12/98
02	A66209	367947	10/12/98	10/12/98
03	A66208	367948	10/12/98	10/12/98
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: _____

FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLK09

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Matrix: (soil/water) WATER Lab Sample ID: PBLK09

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:10/05/98

Concentrated Extract Volume: 1(mL) Date Analyzed: 10/12/98

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
1114-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_1 Calibration Date(s): 10/12/98 10/12/98

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1133 1507

LAB FILE ID: RF50: 12OCT981020-RF100: 12OCT981020RF200: 12OCT981020
RF400: 12OCT981020RF800: 12OCT981020

COMPOUND	RF50	RF100	RF200	RF400	RF800
Aroclor-1016	64.600	52.110	47.265	42.998	40.919
(2)	465.320	192.760	181.235	168.175	156.580
(3)	45.680	43.430	42.135	39.772	37.596
(4)	124.460	116.990	110.740	102.648	96.026
(5)	82.720	80.480	78.065	73.658	71.035
Aroclor-1221					
(2)					
(3)					
(4)					
(5)					
Aroclor-1232					
(2)					
(3)					
(4)					
(5)					
Aroclor-1242			98.755		
(2)			132.655		
(3)			111.980		
(4)			268.445		
(5)			81.775		
Aroclor-1248			177.270		
(2)			155.620		
(3)			43.770		
(4)			103.660		
(5)			147.315		
Aroclor-1254			104.380		
(2)			84.800		
(3)			156.915		
(4)			288.175		
(5)			71.315		
Aroclor-1260	132.220	131.640	128.130	120.850	116.486
(2)	540.060	527.730	515.995	485.990	461.612
(3)	250.180	252.440	246.790	238.962	232.548
(4)	135.160	134.010	132.160	125.302	122.164
(5)	149.960	146.900	145.145	139.748	136.852
Tetrachloro-m-xylene	5304.800	4895.500	4833.800	4618.550	4452.562

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_1 Calibration Date(s): 10/12/98 10/12/98

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1133 1507

LAB FILE ID: RF50: 12OCT981020-RF100: 12OCT981020RF200: 12OCT981020
RF400: 12OCT981020RF800: 12OCT981020

COMPOUND	RF50	RF100	RF200	RF400	RF800
Decachlorobiphenyl	5602.200	4905.900	4603.450	4178.875	3833.662

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_1 Calibration Date(s): 10/12/98 10/12/98

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1133 1507

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR	-35.258797	39.2911061	1.000
(2)	LINR	-65.007195	144.702824	0.991
(3)	LINR	-20.348517	36.9549109	0.999
(4)	LINR	-27.083457	93.7156639	0.999
(5)	LINR	-16.162418	69.9577841	1.000
Aroclor-1221	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1232	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1242	LINR	0.00000000	98.7550000	1.000
(2)	LINR	0.00000000	132.655000	1.000
(3)	LINR	0.00000000	111.980000	1.000
(4)	LINR	0.00000000	268.445000	1.000
(5)	LINR	0.00000000	81.7750000	1.000
Aroclor-1248	LINR	0.00000000	177.270000	1.000
(2)	LINR	0.00000000	155.620000	1.000
(3)	LINR	0.00000000	43.7700000	1.000
(4)	LINR	0.00000000	103.660000	1.000
(5)	LINR	0.00000000	147.315000	1.000
Aroclor-1254	LINR	0.00000000	104.380000	1.000
(2)	LINR	0.00000000	84.8000000	1.000
(3)	LINR	0.00000000	156.915000	1.000
(4)	LINR	0.00000000	288.175000	1.000
(5)	LINR	0.00000000	71.3150000	1.000
Aroclor-1260	LINR	-15.473510	114.866491	1.000
(2)	LINR	-18.472332	454.626419	0.999
(3)	LINR	-9.7531405	230.636671	1.000
(4)	LINR	-11.961908	120.786339	1.000
(5)	LINR	-9.3814880	135.635914	1.000
Tetrachloro-m-xylene	LINR	-1.4686553	4392.55641	1.000

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_1 Calibration Date(s): 10/12/98 10/12/98

Column: RTX-5 ID: 0.32 (mm) Calibration Time(s): 1133 1507

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-3.7103213	3704.87496	0.998

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_2 Calibration Date(s): 10/12/98 10/12/98

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1133 1507

LAB FILE ID: RF50: 12OCT981020-RF100: 12OCT981020RF200: 12OCT981020
RF400: 12OCT981020RF800: 12OCT981020

COMPOUND	RF50	RF100	RF200	RF400	RF800
Aroclor-1016	96.780	90.840	85.710	79.795	75.614
(2)	55.800	54.760	53.205	50.748	49.418
(3)	99.920	99.320	95.710	93.368	91.529
(4)	132.200	126.840	117.615	107.425	99.296
(5)	47.780	47.180	44.390	42.542	40.679
Aroclor-1221					
(2)					
(3)					
(4)					
(5)					
Aroclor-1232					
(2)					
(3)					
(4)					
(5)					
Aroclor-1242			101.960		
(2)			165.480		
(3)			48.230		
(4)			239.970		
(5)			106.385		
Aroclor-1248			29.020		
(2)			130.210		
(3)			59.000		
(4)			173.940		
(5)			61.890		
Aroclor-1254			72.855		
(2)			80.175		
(3)			135.380		
(4)			47.685		
(5)			232.590		
Aroclor-1260	142.800	141.400	136.045	128.178	123.571
(2)	555.820	544.050	525.160	487.102	461.666
(3)	165.900	163.870	159.470	151.008	146.370
(4)	277.920	277.290	271.020	259.792	251.532
(5)	107.980	108.150	107.160	103.218	101.401
Tetrachloro-m-xylene	4805.000	4771.400	4799.150	4675.875	4529.675

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_2 Calibration Date(s): 10/12/98 10/12/98

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1133 1507

LAB FILE ID: RF50: 12OCT981020-RF100: 12OCT981020RF200: 12OCT981020
RF400: 12OCT981020RF800: 12OCT981020

COMPOUND	RF50	RF100	RF200	RF400	RF800
Decachlorobiphenyl	4515.000	3949.500	3751.300	3395.375	3156.375

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_2 Calibration Date(s): 10/12/98 10/12/98

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1133 1507

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Aroclor-1016	LINR	-24.311790	73.8675714	0.999
(2)	LINR	-12.654350	48.8076481	1.000
(3)	LINR	-8.8230533	90.7337148	1.000
(4)	LINR	-32.633269	96.4436410	0.998
(5)	LINR	-17.385577	40.0414707	1.000
Aroclor-1221	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1232	LINR			
(2)	LINR			
(3)	LINR			
(4)	LINR			
(5)	LINR			
Aroclor-1242	LINR	0.00000000	101.960000	1.000
(2)	LINR	0.00000000	165.480000	1.000
(3)	LINR	0.00000000	48.2300000	1.000
(4)	LINR	0.00000000	239.970000	1.000
(5)	LINR	0.00000000	106.385000	1.000
Aroclor-1248	LINR	0.00000000	29.0200000	1.000
(2)	LINR	0.00000000	130.210000	1.000
(3)	LINR	0.00000000	59.0000000	1.000
(4)	LINR	0.00000000	173.940000	1.000
(5)	LINR	0.00000000	61.8900000	1.000
Aroclor-1254	LINR	0.00000000	72.8550000	1.000
(2)	LINR	0.00000000	80.1750000	1.000
(3)	LINR	0.00000000	135.380000	1.000
(4)	LINR	0.00000000	47.6850000	1.000
(5)	LINR	0.00000000	232.590000	1.000
Aroclor-1260	LINR	-16.536887	121.650575	1.000
(2)	LINR	-21.871679	452.826828	0.999
(3)	LINR	-14.159640	144.419583	1.000
(4)	LINR	-12.221525	248.879711	1.000
(5)	LINR	-8.0729667	100.639801	1.000
Tetrachloro-m-xylene	LINR	-0.8299120	4506.01936	1.000

FORM 6
OTHER INITIAL CALIBRATION DATA

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_2 Calibration Date(s): 10/12/98 10/12/98

Column: RTX-35 ID: 0.32 (mm) Calibration Time(s): 1133 1507

COMPOUND	CURVE	COEFFICENTS A0	A1	%RSD OR R^2
Decachlorobiphenyl	LINR	-3.3910813	3055.56546	0.999

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_1 Calibration Date: 10/12/98 Time: 1531

Lab File ID: 12OCT981020-I1 Init. Calib. Date(s): 10/12/98 10/12/98

Heated Purge: (Y/N) N Init. Calib. Times: 1133 1308

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	200	200	LINR	0.0	15.0
Aroclor-1260	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	20	20	LINR	0.0	15.0
Decachlorobiphenyl	21	20	LINR	5.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_1 Calibration Date: 10/12/98 Time: 2119

Lab File ID: 12OCT981631-I1 Init. Calib. Date(s): 10/12/98 10/12/98

Heated Purge: (Y/N) N Init. Calib. Times: 1133 1308

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	210	200	LINR	5.0	15.0
Aroclor-1260	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_1 Calibration Date: 10/13/98 Time: 0228

Lab File ID: 12OCT981631-I2 Init. Calib. Date(s): 10/12/98 10/12/98

Heated Purge: (Y/N) N Init. Calib. Times: 1133 1308

GC Column: RTX-5 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	210	200	LINR	5.0	15.0
Aroclor-1260	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	23	20	LINR	15.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_2 Calibration Date: 10/12/98 Time: 1531

Lab File ID: 12OCT981020-I1 Init. Calib. Date(s): 10/12/98 10/12/98

Heated Purge: (Y/N) N Init. Calib. Times: 1133 1308

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	210	200	LINR	5.0	15.0
Aroclor-1260	200	200	LINR	0.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	22	20	LINR	10.0	15.0

MR 2

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_2 Calibration Date: 10/12/98 Time: 2119

Lab File ID: 12OCT981631-I1 Init. Calib. Date(s): 10/12/98 10/12/98

Heated Purge: (Y/N) N Init. Calib. Times: 1133 1308

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	220	200	LINR	10.0	15.0
Aroclor-1260	210	200	LINR	5.0	15.0
Tetrachloro-m-xylene	21	20	LINR	5.0	15.0
Decachlorobiphenyl	23	20	LINR	15.0	15.0

FORM 7
OTHER CONTINUING CALIBRATION CHECK

Lab Name: SEVERN TRENT LABORATORIES Contract: 91082

Lab Code: INCHVT Case No.: PCB SAS No.: SDG No.: KAL076

Instrument ID: 2759_2 Calibration Date: 10/13/98 Time: 0228

Lab File ID: 12OCT981631-I2 Init. Calib. Date(s): 10/12/98 10/12/98

Heated Purge: (Y/N) N Init. Calib. Times: 1133 1308

GC Column: RTX-35 ID: 0.32 (mm)

COMPOUND	SAMPLE AMOUNT	CAL200 AMOUNT	CURVE	%D	MAX %d
Aroclor-1016	220	200	LINR	10.0	15.0
Aroclor-1260	220	200	LINR	10.0	15.0
Tetrachloro-m-xylene	22	20	LINR	10.0	15.0
Decachlorobiphenyl	23	20	LINR	15.0	15.0

Severn Trent Laboratories
55 South Park Drive, Colchester, VT 05446 Tel: (802) 655-1

CHAIN OF CUSTODY RECORD

Report to:
Company: Evergreen Engineering
Address: 6123 Temporary
Syracuse NY 13214
Contact: Bill McCune
Phone: (315) 446 9122
Fax: 315 449 2553
Contract/ Quote #:

Invoice to
Company: BBL
Address: 6123 Temporary
Syracuse NY 13214
Contact: Bill McCune
Phone: (315) 446 9120
PO/SO #:

ANALYSIS REQUESTED: PCB As per Rich Patriatt (315) 446-9120

Lab use only
Due Date:
Temp. of coolers when received (C°): 1 2 3 4 5
Custody Seal N / Y
Intact N / Y
Screened For Radioactivity ☐

Sampler's Name: Brian Lewis
Sampler's Signature:

Proj. No.: 645551
Project Name: Allied Paper

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	PCB	Lab Sample ID (Lab Use Only)
S	10/1/98			X	480231			2		X	
W	10/1/98	1315		X	A66209		2	2		X	
W	10/1/98	1600		X	A66208		1	2		X	

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	10/5/98	1630			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 10/5/98	Time: 0930

Remarks: 7 DAY TAT on A66209 & A66208

Client's delivery of samples constitutes acceptance of Severn Trent Laboratories terms and conditions contained in the Price Schedule.

[1] Matrix: WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - Sludge O - Oil
[2] Container: VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

STL cannot accept verbal changes. Please Fax written changes to (802) 655-1248

000004

SEVERN TRENT LABORATORIES LOG-IN SHEET

Lab Name: Severn Trent Laboratories - VT

Page 1 of 1

Received By (Print Name): DONALD C. DAWTCHT JR.

Log-in Date 10/5/98

Received By (Signature):

Case Number: PCB

Sample Delivery Group No: KAL076

ETR Number: 70954

REMARKS:

1. **Custody Seal** ~~Present/Absent*~~ ~~Intact/Broken~~
2. **Custody Seal Nos.:** N/A
3. **Chain-of-Custody Records** ~~Present/Absent*~~
4. **Sample Information Sheets** ~~Present/Absent*~~
5. **Airbill** ~~Airbill Sticker~~ ~~Present/Absent*~~
6. **Airbill No.:** 8085 5230 3674
7. **Sample Tags** ~~Present/Absent*~~ **Sample Tag Numbers** ~~Listed/Not Listed on Chain-of-Custody~~
8. **Sample Condition:** ~~Intact/Broken*~~ ~~Leaking~~
9. **Does information on the custody records, sample information sheets, sample tags and labels agree?** Yes/No*
10. **Date Received at Lab:** 10/5/98
11. **Time Received:** 0930
12. **Cooler Temperature:** 4°C

Sample Transfer

Fraction: ALL

Area #: LVL 4 FRIDGE

By: DCS

On: 10/5/98

CORRESPONDING

CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
H80231	N/A	367946	Were air bubbles present
A66209	"	367947	in any VOA vials? NO
A66208	"	367948	SAMPLES RECVD
			INTACT IN
			COOLER W/ ICE.
			COOLER WAS INTACT
			AS WERE CUSTODY
			SEALS ON OUTSIDE
			OF COOLER.

DW 10/5/98

* Contact Project Director

Reviewed by: _____

Logbook No.: 000285

Date: _____

Logbook Page No.: _____

Severn Trent Laboratories-VT | 8080_PCB:EXW | Kalamazoo

CLIENT: BLABO2
CASE: PCB
SDG: KAL076
TR NO: 70954
DATE: 10/5/98

ANALYST: JDV
SPIKER: JDV
WITNESS: THT
~~Hg~~ Cu LOT # 01404EX
SILICA GEL LOT # ~~EX 01404EX~~ JDV 10/5/98
FLORISIL LOT # 940861

SURR LOT # E09229801
MTX LOT # E05089801
CH2Cl2 LOT # ~~M26039~~ M35307 JDV 10/5/98
HEXANE LOT # M16323
H2SO4 LOT # M26039

STL Sample ID	Client ID	Sample Vol. (1000ml). Measure entire sample volume using a Grad. Cylinder. Trans. to Sep. Funnel	Surr: 100 uL Pest Surr (DCB/TCX) 0.2 ppm	Mtx: 100 uL AR 1242/1254 5.0ppm to MS/MSD/LCS only	Check PH between 5-9. If PH needs to be adjusted use 6N NaOH or 50% H2SO4.	Rinse 1.0 Liter bottle and Grad. Cylinder w/ 60mls CH2CL2. Trans. to Sep. Funnel	Shake 2 min. Decant thru Na2SO4 funnel into K-D set-up.	Repeat 2(X)	Hexane Exchange w/30ml	Conc. to 2.0-3.0 mL. Transfer to a 16ml vial.	Sulfuric Acid (H2SO4) cleanup	Pull off Hexane layer	Conc. to approx. 1.0 mL	Sulfur cleanup w/ Cu	Add extract to a 1gm Florisil Cart. Elute thru Cart. w/ 8mls 9:1 Hex Acetone.	Conc. to 1.0 mL. Place in a clear 2ml vial. Give extract w/paperwork to GC.
P	PBLK 09	1000	✓	X	JDV	JDV	JDV	JDV	JDV	JDV	JDV	JDV	JDV	JDV	JDV	JDV
09	LCS	1000	✓	✓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
367947	A606209	1000	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
367948	A606208	840	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

JDV 10/5/98

JDV 10/5/98

000270

061

DATA REVIEW FOR

ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER
SUPERFUND SITE

SDG# KAL079

PCB ANALYSES

ALLIED OU

Analyses performed by:

Severn Trent Laboratories
Colchester, Vermont

Review performed by:

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Blasland, Bouck & Lee, Inc.
Syracuse, New York

Summary

The following is an assessment of the PCB data package for SDG# KAL079 for the Allied OU sampling of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site. Included with this assessment are the data review check sheets used in the review of the package and sample results for PCB analyses. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analyses				
				VOA	BNA	PCB	TAL	MISC
A66250	374478	groundwater	12/15/98			x		
A66251	374479	groundwater	12/15/98			x		
A66252	374480	groundwater	12/15/98			x		
A66253	374481	groundwater	12/15/98			x		
A66254[1]	374482	groundwater	12/15/98			x		
A66255	374483	groundwater	12/15/98			x		

1 MS/MSD analysis performed on sample

Introduction

Analyses were performed according to the USEPA SW-846 method 8082, modified for PCB only analysis.

The data review process is intended to evaluate the data on a technical basis. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
- R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

The data presented in the package has been derived using a procedure developed by Aquatec, Inc. in an attempt to improve the analytical process of calibration, identification, and quantitation of PCBs as Aroclors. Key components of this procedure include:

Calibration

The response function of the electron capture detector is inherently non-linear, and while significant linearization is achieved for this detector by electronic means, some non-linearity remains. Power function linearization is used to "straighten the curve" and allow the use of response factors for calibration purposes.

During the initial calibration a response factor is calculated for each peak in the individual Aroclors.

A weighted response factor calculation has been used to adjust for non-linearity at the low end of the calibration curve.

Identification

Peak retention times are relative. Retention times are in set windows relative to the time markers DCB and TCMX. Time markers adjust for minor variations in column flow or instrument condition and allow the use of very tight windows which minimizes the number of both false positive and false negative peak identifications.

The determination of "which Aroclor or mixture of Aroclors will produce a chromatogram most similar to that of the residue" is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The "most similar" Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors. This is similar to the procedure presented by L.E. Slivon, P.M. Schumacher and A. Alford-Stevens for the determination of Aroclor composition from GC/MS level of chlorination results.

Identification/quantitation of Aroclors in samples is based on the combined response of two columns, typically RTX-5 and RTX-35. The pooling of response combines the unique qualities of both columns to derive a more defined Aroclor pattern which less likely to be affected by interferents. Identification/quantitation data for the individual columns is provided in the package and can be used as a check on the combined column results.

Data Assessment

1. Holding Time

The QAPP-specified holding times for PCB analyses of water samples are 10 days from date of sample receipt to extraction and 40 days from extraction to analysis. The technical holding times are 7 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks, i.e., method, field or rinse blanks, are prepared to identify any contamination which may have been introduced in to the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blanks. No field blanks were submitted with the samples.

3. System Performance

The system performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method allows a maximum RSD of 20%. The initial calibration was within this limit for all Aroclors.

4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limit, with the following exceptions:

Instrument HP3327 1/19/99 16:35

Aroclor 1248 +21.0%

Since no Aroclor 1248 was detected in the associated samples and since the Aroclor response was increasing, no data have been qualified based on the %D.

Instrument HP3327 1/19/99 22:36

Aroclor 1242 +27.0%

Positive Aroclor 1242 data for all samples have been qualified as estimated with a potential high bias based on the %D.

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Recovery for one surrogate was below control limits in samples A66259, A66251, A66253, A66254MS, A66254MSD andA66255. Since recoveries for the remaining surrogate were within control limits, no data have been qualified based on the deviations. All other sample surrogate recoveries were within control limits.

6. Compound Identification

The determination of Aroclor presence is made by expressing the unknown sample chromatogram as a linear combination of the Aroclors. The most similar Aroclor or mixture of Aroclors is determined by using a least squares minimization of the difference between the unknown chromatogram and the linear combination of Aroclors.

Identification/quantitation of Aroclors is based on the combined response of the RTX-5 and RTX-35 columns. Identification/quantitation data for the individual columns is provided in the package and has been used as a check on the combined column results.

Aroclor 1232 was reported as present in sample A66253. However, a review of the sample chromatograms showed a very poor Aroclor pattern match. Based on the evaluation, data for Aroclor 1232 has been qualified as estimated with presumptive evidence of identification in the sample All other Aroclors have been correctly identified/quantitated.

7. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits. All matrix spike blank recoveries were also within control limits.

8. Field Duplicates

No field duplicates were included in this data set.

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.

DATA REVIEW CHECKLIST

PCB Data Review Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?	X		
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were surrogate recoveries outside of specified limits for any sample or blank?	X		
If yes, were the samples reanalyzed?		X	
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits? 0 out of 4			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? 0 out of 2			
Blanks			
Is a Method Blank Summary Form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has an instrument blank been analyzed at the beginning of each 12 hour period following the initial calibration?			X
Do any method/reagent/instrument blanks have positive results?		X	
Do any field/rinse blanks have positive results?			X

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PCB Data Review Checklist - Page 2

	YES	NO	NA
Are there field/rinse/equipment blanks associated with every sample?		X	
Calibration and GC Performance			
Are the following chromatograms and data printouts present?			
Aroclor 1016/1260	X		
Aroclor 1221	X		
Aroclor 1232	X		
Aroclor 1242	X		
Aroclor 1248	X		
Aroclor 1254	X		
Instrument Blanks			X
Are Initial Calibration Summary Forms present and complete for each column and analytical sequence?	X		
Are the linearity criteria for the initial analyses within limits for both columns (20% RSD)	X		
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	X		
Is a Calibration Verification Summary Form present and complete for each continuing standard analyzed?	X		
Are %D values for all compounds within limits (less than 15%)?		X	
Analytical Sequence Check			
Is a analytical sequence form present and complete for each column and each period of analyses?	X		
Was the proper analytical sequence followed?	X		
Cleanup Efficiency Verification			
If GPC cleanup was performed, is Gel Permeation Chromatography Check Form present?			X
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?			X
PCB Identification			
Is both a combined and single column Aroclor Identification Report present for every sample?	X		

PCB Data Review Checklist - Page 3

	YES	NO	NA
Do the combined column and individual column Aroclor identifications agree?	X		
Were there any false negatives?		X	
Was GC/MS confirmation provided when required?			X
Compound Quantitation and Reported Detection Limits			
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Chromatogram Quality			
Were the baselines stable?	X		
Were any electronegative displacement (negative peaks) or unusual peaks detected?		X	
Field Duplicates			
Were field duplicates submitted with the samples?		X	

PCB Holding Time and Surrogate Recovery Summary

Sample ID	Holding Time	Surrogates	
		TCX	DCB
A66250		↓	
A66251		↓	
A66252			
A66253		↓	
A66254			
A66254MS		↓	
A66254MSD		↓	
A66255		↓	

Surrogate Standards
TCX Tetrachloro-m-xylene
DCB Decachlorobiphenyl

Qualifiers:
D Surrogates diluted out
↑ Recovery high
↓ Recovery low

Unless otherwise noted, all parameters are within specified limits.

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PCB Calibration Summary

Instrument: HP3327
Column: RTX-35 / RTX-5

Date:	1/18/99-1/19/99	1/19/99	1/19/99	1/19/99	1/19/99	1/19/99	1/19/99
Time:		520	544	1057	1121	1635	1859
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok						
Aroclor 1221	ok						
Aroclor 1232	ok						
Aroclor 1242	ok		ok				
Aroclor 1248	ok	ok		ok		21.0	
Aroclor 1254	ok				ok		
Aroclor 1260	ok						ok
Tetrachloro-m-xylene	ok						
Decachlorobiphenyl	ok						
Affected Samples:						66254	
						66254MS	
						66254MD	
						66255	

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PCB Calibration Summary - Page 2

Instrument: HP3327
Column: RTX-35 / RTX-5

Date:		1/19/99	1/19/99				
Time:		2212	2236				
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	%RSD	%D	%D	%D	%D	%D	%D
Aroclor 1016							
Aroclor 1221							
Aroclor 1232							
Aroclor 1242			27.0				
Aroclor 1248		ok					
Aroclor 1254							
Aroclor 1260							
Tetrachloro-m-xylene							
Decachlorobiphenyl							
Affected Samples:			66250				
			66251				
			66252				
			66253				
			66254				
			66254MS				
			66254MD				
			66255				

aokal079

CORRECTED ANALYSIS SUMMARY FORMS

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66250

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: KAL079

Phase Type: WATER Lab Sample ID: 374478

Phase Weight: 980. (mL) Date Received: 12/18/98

Injection Volume: 1.0 (uL) Date Extracted: 12/18/98

Dilution Factor: 1.0 Date Analyzed: 01/19/99

% Solids: Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.051	U
11104-28-2	Aroclor-1221	0.051	U
11141-16-5	Aroclor-1232	0.051	U
53469-21-9	Aroclor-1242	0.051	U
12672-29-6	Aroclor-1248	0.051	U
11097-69-1	Aroclor-1254	0.051	U
11096-82-5	Aroclor-1260	0.051	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66251

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: KAL079

Phase Type: WATER Lab Sample ID: 374479

Phase Weight: 1000. (mL) Date Received: 12/18/98

Injection Volume: 1.0 (uL) Date Extracted: 12/18/98

Dilution Factor: 1.0 Date Analyzed: 01/19/99

% Solids: Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.080	
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66252

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: KAL079

Phase Type: WATER Lab Sample ID: 374480

Phase Weight: 910. (mL) Date Received: 12/18/98

Injection Volume: 1.0 (uL) Date Extracted: 12/21/98

Dilution Factor: 1.0 Date Analyzed: 01/19/99

% Solids: Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.055	U
11104-28-2	Aroclor-1221	0.055	U
11141-16-5	Aroclor-1232	0.055	U
53469-21-9	Aroclor-1242	0.055	U
12672-29-6	Aroclor-1248	0.055	U
11097-69-1	Aroclor-1254	0.055	U
11096-82-5	Aroclor-1260	0.055	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66253

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: KAL079

Phase Type: WATER Lab Sample ID: 374481

Phase Weight: 800. (mL) Date Received: 12/18/98

Injection Volume: 1.0 (uL) Date Extracted: 12/18/98

Dilution Factor: 1.0 Date Analyzed: 01/19/99

% Solids: Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.062	U
11104-28-2	Aroclor-1221	0.062	U
11141-16-5	Aroclor-1232	0.44	JN
53469-21-9	Aroclor-1242	0.062	U
12672-29-6	Aroclor-1248	0.062	U
11097-69-1	Aroclor-1254	0.062	U
11096-82-5	Aroclor-1260	0.062	U

Severn Trent Laboratories 55 South Park Drive Colchester, Vermont 05446
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Fax (802) 655-1248

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66254

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: KAL079

Phase Type: WATER Lab Sample ID: 374482

Phase Weight: 980. (mL) Date Received: 12/18/98

Injection Volume: 1.0 (uL) Date Extracted: 12/21/98

Dilution Factor: 1.0 Date Analyzed: 01/19/99

% Solids: Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.051	U
11104-28-2	Aroclor-1221	0.051	U
11141-16-5	Aroclor-1232	0.051	U
53469-21-9	Aroclor-1242	0.051	U
12672-29-6	Aroclor-1248	0.051	U
11097-69-1	Aroclor-1254	0.051	U
11096-82-5	Aroclor-1260	0.051	U

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FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

A66255

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: KAL079

Phase Type: WATER Lab Sample ID: 374483

Phase Weight: 980. (mL) Date Received: 12/18/98

Injection Volume: 1.0 (uL) Date Extracted: 12/18/98

Dilution Factor: 1.0 Date Analyzed: 01/19/99

% Solids: Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.051	U
11104-28-2	Aroclor-1221	0.051	U
11141-16-5	Aroclor-1232	0.051	U
53469-21-9	Aroclor-1242	0.051	U
12672-29-6	Aroclor-1248	0.051	U
11097-69-1	Aroclor-1254	0.051	U
11096-82-5	Aroclor-1260	0.051	U

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Colchester VT 05446

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January 27, 1999

Ms. Laurie Indick
Blasland & Bouck Engineers
6723 Towpath Road
Box 66
Syracuse, NY 13214

Re: Laboratory Project No. 98000
Case: 98000; SDG KAL079

Dear Ms. Indick:

Enclosed are the analytical results of samples received intact by Severn Trent Laboratories on December 8, 15, 18, and 22, and January 4, 1998. Laboratory numbers have been assigned and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 12/08/98	ETR No: 71764	
373487	A66610	12/04/98	Water
	Received: 12/15/98	ETR No: 71855	
374148	A66611	12/11/98	Water
	Received: 12/18/98	ETR No: 71904	
374478	A66250	12/15/98	Water
374479	A66251	12/15/98	Water

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Lab ID	Client Sample ID	Sample Date	Sample Matrix
Received: 12/18/98 ETR No: 71904 (continued)			
374480	A66252	12/15/98	Water
374481	A66253	12/15/98	Water
374482	A66254	12/15/98	Water
374482MS	A66254MS	12/15/98	Water
374482MD	A66254MSD	12/15/98	Water
374483	A66255	12/15/98	Water
Received: 12/22/98 ETR No: 71947			
374920	A66612	12/18/98	Liquid
374921	A66613	12/18/98	Liquid
374922	A66614	12/19/98	Liquid
374923	A66615	12/19/98	Liquid
374924	A66616	12/22/98	Liquid
Received: 01/04/99 ETR No: 72031			
375508	A66617	12/29/98	Water
375509	A66618	12/29/98	Water

The PCB analyses of select samples in this delivery group exhibited recovery of surrogate compound tetrachloro-m-xylene slightly below control criteria. Surrogate compound decachlorobiphenyl exhibited acceptable recovery in all samples. Please note that two of eight calibration check standards exhibited an elevated response resulting in percent difference slightly above quality control criteria. In each instance, the second check standard analyzed in sequence exhibited acceptable recovery.

Samples in this delivery group were reported as the best match to combinations of the seven Aroclor standards by use of the STL processing software. In general, the standard Aroclors are sufficiently unique to provide precise identifications and quantitations of complex mixtures with minimal weathering. For highly altered samples, certain subtle identification distinctions, such as the difference between 1016 and 1242 become less precise. In all cases, quantitation remains highly reliable.

a part of

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If there are any questions regarding this submittal, please contact James W. Madison at (802) 655-1203.

Sincerely,

Kim S. Watson for

Deborah A. Loring
Laboratory Director

DAL/mim
Enclosure

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FORM 2
AROCLOR SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories-VT
Contract: 98000
Lab Code: INCHVT
Case: 98000
SAS No:
SDG: KAL079

EPA SAMPLE NO.	TCX 1 % REC	#	TCX 2 % REC	#	DCB 1 % REC	#	DCB 2 % REC	#
PBLKU8	65		66		91		93	
PLCSU8	66		71		105		107	
A66610	77		80		90		92	
PBLKW6	61		61		75		78	
PLCSW6	71		68		76		78	
A66611	73		71		80		81	
PBLKX5	84		82		100		102	
PLCSX5	52	*	46	*	71		71	
PBLKY6	63		50	*	81		82	
PLCSY6	82		77		111		110	
A66250	59	*	57	*	85		84	
A66251	58	*	54	*	83		85	
A66252	85		82		76		77	
A66253	109		57	*	80		82	
A66254	79		78		97		100	
A66254MS	55	*	49	*	61		62	
A66254MSD	57	*	54	*	81		82	
A66255	65		54	*	78		80	
PBLKB7	59	*	64		77		78	
PLCSB7	79		80		88		91	
A66612	77		77		75		77	
A66613	71		70		72		74	
A66614	79		80		75		78	
A66615	74		73		66		68	

	Project Specific QC Limits
TCX = Tetrachloro-meta-Xylene	(60 - 150)
DCB = Decachlorobiphenyl	(60 - 150)

- Column to be used to flag recovery values
* - Values outside of QC limits
D - Surrogates calculated using diluted analysis
A - Extracted surrogates diluted out, surrogates added to diluted extract as retention time markers.

FORM 2
AROCLOR SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories-VT

Contract: 98000

Lab Code: INCHVT

Case: 98000

SAS No:

SDG: KAL079

EPA SAMPLE NO.	TCX 1 % REC #	TCX 2 % REC #	DCB 1 % REC #	DCB 2 % REC #
A66616	76	75	62	64
PBLKF1	61	78	76	79
PLCSF1	67	74	70	72
A66617	77	78	87	91
A66618	78	78	85	91

	Project Specific QC Limits
TCX = Tetrachloro-meta-Xylene	(60 - 150)
DCB = Decachlorobiphenyl	(60 - 150)

- Column to be used to flag recovery values
* - Values outside of QC limits
D - Surrogates calculated using diluted analysis
A - Extracted surrogates diluted out, surrogates added to diluted extract as retention time markers.

FORM 3
AROCLOR MATRIX SPIKE RECOVERY

Lab Name: *Severn Trent Laboratories-VT* Contract: 98000

Lab Code: INCHVT Case: 98000

SAS No: SDG: KAL079

EPA SAMPLE NO.: A66254

Compound	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTATION ug/L	MS % REC #	QC LIMITS REC.
Aroclor 1242	0.50	0	0.40	80	39-150
Aroclor 1254	0.50	0	0.39	78	29-131

- Column used to flag recovery and RPD values with an asterisk
* - Values outside of QC limits.

Spike Recovery: 0 out of 2 outside limits.

Comments:

Severn Trent Laboratories 55 South Park Drive Colchester, Vermont 05446
Telephone (802) 655-1203

FORM 3
AROCLOR MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories-VT

Contract: 98000

Lab Code: INCHVT

Case: 98000

SAS No:

SDG: KAL079

EPA SAMPLE NO.: A66254

Compound	SPIKE ADDED ug/L	MSD CONCENTRATION ug/L	MSD % REC #	RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor 1242	0.51	0.46	90	14	30	39-150
Aroclor 1254	0.51	0.47	92	19	30	29-131

- Column used to flag recovery and RPD values with an asterisk
* - Values outside of QC limits.

RPD: 0 out of 2 outside limits.
Spike Recovery: 0 out of 2 outside limits.

Comments:

FORM 3E
AROCLOR
MATRIX SPIKE BLANK RECOVERY

Lab Name: Severn Trent Laboratories-VT

Contract: 98000

Lab Code: INCHVT

Case: 98000

SAS No:

SDG: KAL079

EPA SAMPLE NO.: PLCSX5

Compound	SPIKE ADDED ug/L	MSB CONCENTRATION ug/L	MSB % REC #	QC LIMITS REC.
Aroclor 1242	0.50	0.33	66	39-150
Aroclor 1254	0.50	0.35	70	29-131

- Column used to flag recovery and RPD values with an asterisk
* - Values outside of QC limits.

Spike Recovery: 0 out of 2 outside limits.

Comments:

FORM 3E
AROCLOR
MATRIX SPIKE BLANK RECOVERY

Lab Name: Severn Trent Laboratories-VT

Contract: 98000

Lab Code: INCHVT

Case: 98000

SAS No:

SDG: KAL079

EPA SAMPLE NO.: PLCSY6

Compound	SPIKE ADDED ug/L	MSB CONCENTRATION ug/L	MSB % REC #	QC LIMITS REC.
Aroclor 1242	0.50	0.50	100	39-150
Aroclor 1254	0.50	0.60	120	29-131

- Column used to flag recovery and RPD values with an asterisk
* - Values outside of QC limits.

Spike Recovery: 0 out of 2 outside limits.

Comments:

FORM 4
AROCLOR METHOD BLANK SUMMARY

Lab Name:	Severn Trent Laboratories-VT	Contract:	98000
Lab Code:	INCHVT	Case:	98000
Lab Sample ID:	PBLKX5	SDG:	KAL079
Matrix:	WATER	Level:	LOW
Date Extracted:	12/18/98	Date Analyzed(2):	01/19/99
Date Analyzed(1):	01/19/99	Time Analyzed(2):	06:56
Time Analyzed(1):	06:56	GC ID(2):	HP3327
GC ID(1):	HP3327	GC Column(2):	RTX-35
GC Column(1):	RTX-5		

LAB ID	CLIENT ID	DATE ANALYZED 1	DATE ANALYZED 2
PLCSX5	PLCSX5	01/19/99	01/19/99
374478	A66250	01/19/99	01/19/99
374479	A66251	01/19/99	01/19/99
374481	A66253	01/19/99	01/19/99
374482MS	A66254MS	01/19/99	01/19/99
374482MD	A66254MSD	01/19/99	01/19/99
374483	A66255	01/19/99	01/19/99

FORM 4
AROCLOR METHOD BLANK SUMMARY

Lab Name:	Severn Trent Laboratories-VT	Contract:	98000
Lab Code:	INCHVT	Case:	98000
Lab Sample ID:	PBLKY6	SDG:	KAL079
Matrix:	WATER	Level:	LOW
Date Extracted:	12/21/98	Date Analyzed(2):	01/19/99
Date Analyzed(1):	01/19/99	Time Analyzed(2):	07:44
Time Analyzed(1):	07:44	GC ID(2):	HP3327
GC ID(1):	HP3327	GC Column(2):	RTX-35
GC Column(1):	RTX-5		

LAB ID	CLIENT ID	DATE ANALYZED 1	DATE ANALYZED 2
PLCSY6	PLCSY6	01/19/99	01/19/99
374480	A66252	01/19/99	01/19/99
374482	A66254	01/19/99	01/19/99

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKX5

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: KAL079

Phase Type: WATER Lab Sample ID: PBLKX5

Phase Weight: 1000. (mL) Date Received:

Injection Volume: 1.0 (uL) Date Extracted: 12/18/98

Dilution Factor: 1.0 Date Analyzed: 01/19/99

% Solids: Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

FORM 1
AROCLOR ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKY6

Lab Name: Severn Trent Laboratories-VT Lab Code: INCHVT

Contract: 98000 Case: 98000 SDG: KAL079

Phase Type: WATER Lab Sample ID: PBLKY6

Phase Weight: 1000. (mL) Date Received:

Injection Volume: 1.0 (uL) Date Extracted: 12/21/98

Dilution Factor: 1.0 Date Analyzed: 01/19/99

% Solids: Sulfur Clean-up: N (Y/N)

CAS NO.	COMPOUND	CONCENTRATION ug/L	QUALIFIER
12674-11-2	Aroclor-1016	0.050	U
11104-28-2	Aroclor-1221	0.050	U
11141-16-5	Aroclor-1232	0.050	U
53469-21-9	Aroclor-1242	0.050	U
12672-29-6	Aroclor-1248	0.050	U
11097-69-1	Aroclor-1254	0.050	U
11096-82-5	Aroclor-1260	0.050	U

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BACCALC.XLT

CALIBRATION SUMMARY
BACK CALCULATIONS

Lab ID: STL-VT
GC: HP3327
Col. 1: RTX-5
Col. 2: RTX-35

Calib date(s): 18-JAN-99 10:27 to 19-JAN-99 00:06

File: 11,12 18JAN990911

Standards	50 ppb	100 ppb	200 ppb	400 ppb	800 ppb	%RSD
Aroclor 1016	51.8	103	202	401	792	
Cal Fact	1.036	1.030	1.010	1.003	0.990	1.9
% Diff	-4	-3	-1	0	1	
Aroclor 1221	53.8	105	207	402	783	
Cal Fact	1.076	1.050	1.035	1.005	0.979	3.7
% Diff	-8	-5	-4	-1	2	
Aroclor 1232	51.6	101	204	400	795	
Cal Fact	1.032	1.010	1.020	1.000	0.994	1.5
% Diff	-3	-1	-2	0	1	
Aroclor 1242	51.9	104	199	398	797	
Cal Fact	1.038	1.040	0.995	0.995	0.996	2.4
% Diff	-4	-4	1	1	0	
Aroclor 1248	50.6	101	194	393	810	
Cal Fact	1.012	1.010	0.970	0.983	1.013	2.0
% Diff	-1	-1	3	2	-1	
Aroclor 1254	50.3	100	202	408	789	
Cal Fact	1.006	1.000	1.010	1.020	0.986	1.2
% Diff	-1	0	-1	-2	1	
Aroclor 1260	47.0	99.8	203	388	812	
Cal Fact	0.940	0.998	1.015	0.970	1.015	3.3
% Diff	6	0	-2	3	-2	

Cal Fact = Calc. Conc. / Nominal Conc.

%RSD = STD Dev / Mean of Cal Fact

% Diff = (Nominal Amt-Calc Amt) / Nominal Amt*100

KAL079F7.XLS

AROCLOR CHECK STANDARD SUMMARY

Lab ID: STL-VT
GC: HP3327
Col. 1: RTX-5
Col. 2: RTX-35

Initial Calib.
date/time: 1/18/99 10:27 to
1/19/99 0:06

Check Standard File: 11,12 18JAN990938,13
Date: 1/19/99
Time: 5:20

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	208	4.0

Check Standard File: 11,12 18JAN990938,14
Date: 1/19/99
Time: 5:44

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1242	200	216	8.0

Check Standard File: 11,12 18JAN990938,27
Date: 1/19/99
Time: 10:57

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	228	14.0

Check Standard File: 11,12 18JAN990938,28
Date: 1/19/99
Time: 11:21

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1254	200	224	12.0

Check Standard File: 11,12 18JAN990938,41
Date: 1/19/99
Time: 16:35

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	242	21.0

KAL079F7.XLS

AROCLOR CHECK STANDARD SUMMARY

Lab ID: STL-VT
GC: HP3327
Col. 1: RTX-5
Col. 2: RTX-35

Initial Calib. date/time: 1/18/99 10:27 to 1/19/99 0:06

Check Standard File: 11,12 18JAN990938,42
Date: 1/19/99
Time: 16:59

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1260	200	226	13.0

Check Standard File: 11,12 18JAN990938,55
Date: 1/19/99
Time: 22:12

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1248	200	221	10.5

Check Standard File: 11,12 18JAN990938,56
Date: 1/19/99
Time: 22:36

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.
AR1242	200	254	27.0

Check Standard File:
Date:
Time:

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.

Check Standard File:
Date:
Time:

Compound	Nominal Amount (ppb)	Calc. Amount (ppb)	% Diff.

Aroclor Calibration Summary

RTX-5

Calibration of 18-Jan-1999 10:27 through 19-Jan-1999 00:06.
MCD1:[8080] 11,12 18JAN990911
METHOD: 8080_PCB:AN

JLC - HP3327

0184

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
1	2.695	2.961	5.6%	2.986	3.6%	2.665	1.7%	3.035	10.8%	2.865		2.905		2.891	1.9%
2	3.209	88.937	7.9%	51.576	6.8%	2.000	9.0%	4.293	10.7%	0.976		0.871		1.031	
3	3.637	27.498	10.9%	15.502	6.2%	1.355		1.843		1.680		1.566		1.036	
4	4.170	104.787	2.3%	70.558	2.2%	27.914	1.5%	27.308	2.3%	1.728		0.451		0.420	
5	4.298	79.776	0.8%	62.943	1.0%	40.978	0.7%	39.585	1.8%	9.556	6.5%	8.650	5.3%	8.554	5.8%
6	4.384	255.612	3.0%	219.688	2.7%	178.937	3.5%	164.876	3.7%	16.671	4.8%	3.238	30.	2.669	34.
7	4.663	3.439		12.970	6.7%	28.287	16.	21.229	9.1%	7.520	23.	2.074		1.511	
8	4.934	19.308	2.4%	12.330										1.692	
9	4.979			139.533	2.7%	312.747	4.1%	250.134	4.3%	139.578	2.5%	5.302	5.1%	2.761	6.7%
10	5.011	43.364	3.9%	129.203	4.2%							7.329			
11	5.142	3.124	5.1%	16.290	4.2%	36.215	0.6%	27.797	2.5%	6.751	6.3%	0.499		0.284	
12	5.277	13.582	1.2%	118.987	0.9%	272.493	0.8%	219.130	0.8%	92.917	2.9%	3.945	1.7%	2.131	3.9%
13	5.431	4.235	3.6%	5.047	6.8%	5.886	4.4%	5.234	5.6%	4.272	8.8%	4.374	3.0%	4.395	4.4%
14	5.483			2.922	11.5%	5.870	5.4%	4.089	8.8%						
15	5.561	4.814	30.	29.159	4.0%	65.038	1.2%	51.563	1.7%	17.778	6.0%	1.987	57.	1.630	
16	5.601	3.906		19.496	1.6%	41.184	1.0%	32.240	2.5%						
17	5.723	21.105	1.7%	235.257	1.9%	554.652	0.6%	437.482	0.7%	269.620	3.2%	9.553	3.4%	4.248	7.3%
18	5.904	13.715		129.684	0.7%	296.418	1.1%	238.196	1.4%	129.337	1.9%	8.215		2.404	
19	6.042	6.521	1.8%	72.196	4.1%	172.144	3.9%	139.921	3.6%	69.929	5.1%	2.414	7.4%	1.457	25.
20	6.140	0.594		22.670	1.4%	62.567	0.5%	44.483	1.3%	62.927	2.1%	1.918	4.2%	0.497	32.
21	6.290	0.148		8.565	4.6%	23.066	1.5%	17.638	2.4%	24.265	4.1%	0.708		0.125	
22	6.357	3.325	4.4%	78.190	1.0%	201.001	2.5%	171.871	2.9%	315.803	2.6%	247.375	3.0%	14.251	3.0%
23	6.443	3.001	46.	71.673	1.6%	184.109	2.2%	146.739	2.2%	239.401	1.8%	62.510	2.9%	2.499	57.
24	6.514	1.059		47 421	1.1%	126.200	2.0%	93.391	2.1%	147.197	2.0%			0.887	
25	6.692	0.379		1.442	8.1%	2.099	4.0%	2.340	5.1%	0.405					
26	6.774	2.388	6.7%	91.817	1.3%	232.954	0.4%	202.011	0.9%	345.815	1.7%	127.266	0.8%	2.326	6.5%
27	6.845	3.192	3.8%	63.584	1.0%	123.507	0.7%	124.073	1.9%	140.380	2.5%			1.226	
28	7.032	1.748	4.7%	85.700	1.8%	193.045	1.0%	180.800	1.6%	300.483	2.8%	42.448	1.4%	1.804	10.1%
29	7.137									4.800		2.002	8.1%		
30	7.209	0.361		22.579	2.8%	40.049	1.8%	49.620	2.2%	75.727	3.7%	8.724	3.9%	0.419	
31	7.322			3.834	6.1%	3.322	6.1%	7.290	4.1%	7.263	7.2%	0.768			
32	7.446	0.069		4.349	15.	2.492	5.2%	8.036	4.8%	14.059	4.7%	2.028	10.3%	0.157	
33	7.533	0.726		44.915	1.7%	18.271	2.5%	93.525	1.4%	168.986	3.1%	39.140	1.3%	0.906	
34	7.619	1.760	7.0%	83.834	0.9%	29.321	1.4%	185.882	1.0%	344.100	2.2%	167.992	1.1%	2.548	8.5%
35	7.711	6.436	3.3%	85.858	0.8%	31.892	1.2%	186.329	1.5%	340.977	2.3%	394.612	3.5%	159.699	2.6%
36	7.870	0.226		5.702	6.2%	3.938	6.1%	13.848	3.3%	39.890	2.6%	60.494	1.3%	0.636	
37	8.109	1.503	6.6%	70.969	2.5%	5.936	2.6%	155.891	3.0%	260.430	3.8%	104.974	2.0%	23.436	
38	8.255	5.592	5.6%	22.464	1.5%	3.455	5.1%	55.104	1.5%	151.905	1.8%	493.559	4.2%	196.969	2.4%
39	8.385	0.550		12.020	3.3%	0.992		29.837	1.9%	88.973	3.3%	185.021	2.2%	2.250	11.0%
40	8.546			0.781				1.356		3.858		7.278	10.2%		
41	8.665			1.938	7.5%	0.100		4.841	7.0%	14.279	6.4%	27.862	1.9%	0.493	
42	8.797	0.551		9.764	2.6%	0.458		24.349	2.5%	71.416	2.4%	155.058	2.1%	6.216	7.3%
43	8.929	1.325		14.919	2.1%	0.602		37.695	2.9%	110.223	4.0%	311.430	2.3%	32.300	3.5%
44	9.037	0.325		8.602	3.8%	0.288		20.835	3.0%	65.481	4.5%	90.239	2.5%		
45	9.110	1.693										45.257	2.1%	87.782	2.7%
46	9.187	2.809	6.1%	27.928	1.2%	0.802		70.166	1.4%	192.879	2.5%	588.219	2.0%	98.869	4.0%
47	9.495	3.156	5.2%	7.548	3.9%	0.150		17.303	3.4%	52.790	3.8%	97.337	1.5%	228.551	2.6%
48	9.636	1.711		1.277				2.507	5.0%	8.127	4.2%	67.211	2.0%	126.437	2.1%

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 3.8981 and decachlorobiphenyl at 15.0985.
2) Peaks chosen within window of +/- 0.01415 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.08431.

Aroclor Calibration Summary

RTX-5

Calibration of 18-Jan-1999 10:27 through 19-Jan-1999 00:06.
MCD1:[8080] 11,12 18JAN990911
METHOD: 8080_PCB:AN

JLC - HP3327

0185

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
49	9.745			1.386				3.402	5.4%	10.994	3.9%	33.206	1.9%		
50	9.829	7.552	3.6%									244.889		511.688	3.0%
51	9.876			15.500	2.2%	0.324		37.376	1.0%	116.375	1.8%	388.186	2.7%		
52	10.122	0.301						0.521		1.795		29.055	2.4%	27.272	3.8%
53	10.180			1.120				2.407	17.	8.027	4.0%	16.866	1.8%		
54	10.245			0.533				1.215		4.103	4.1%	13.768	2.2%	4.183	
55	10.339	0.755		0.511				0.930		2.991	5.8%	48.808	1.9%	81.889	2.9%
56	10.504	5.800	5.2%	3.336	6.8%			4.635	6.7%	14.321	3.0%	254.162	3.2%	571.853	2.9%
57	10.584	2.306	9.6%											195.860	2.1%
58	10.611			12.085	3.3%	0.266		28.986	3.9%	96.675	4.2%	266.234	1.2%		
59	10.850	1.910		1.234				1.560		5.417	6.4%	88.397	3.2%	246.633	6.2%
60	11.017			0.205				0.696		2.769	10.3%	39.384	3.2%		
61	11.078							1.178		3.600		42.809	2.2%	62.206	3.2%
62	11.208	5.466	7.0%	4.851	6.8%			9.138	5.8%	31.112	4.1%	540.747	2.0%	700.212	2.5%
63	11.396	0.530		0.450				0.765		3.321	14.5%	44.038	3.9%	86.002	4.0%
64	11.518	0.098										4.561		17.751	7.8%
65	11.579	2.639	6.3%	1.443				0.532		1.931		21.314	2.6%	436.979	2.3%
66	11.683	1.152		0.641				0.244		0.991		17.992	4.4%	234.110	4.4%
67	11.794	0.348		0.863				2.451		9.538	5.9%	158.204	3.5%	57.282	5.2%
68	11.891	0.248		0.177						0.272		2.906	11.4%	64.786	6.4%
69	12.037	2.371		1.464				0.543		2.049		32.054	3.1%	472.208	3.2%
70	12.137	1.122		0.722				0.249		1.017		19.818	4.1%	253.178	2.1%
71	12.229	0.616		0.652				1.037		4.671	8.7%	87.188	3.6%	153.113	3.9%
72	12.331	0.189		0.215				0.242		1.131		17.795	5.7%	37.117	5.8%
73	12.414	1.164		0.658		1.232		0.552		0.844		7.657	16.	77.334	4.8%
74	12.523	3.255		2.948				1.022		4.864	9.7%	67.856	2.9%	1040.224	2.7%
75	12.634											2.265		19.859	6.7%
76	12.720											0.675		29.757	5.9%
77	12.990	1.230		1.340				0.503		2.902		60.275	3.1%	493.777	3.8%
78	13.066													18.134	8.4%
79	13.117	0.579		0.577				0.175		1.365		2.462		229.238	3.6%
80	13.196	0.526		0.624						1.554		3.068		261.952	3.5%
81	13.405											3.316		13.228	12.6%
82	13.605	5.141	4.0%	5.276	3.2%	4.979	1.6%	5.063	3.0%	5.411	9.6%	6.145	31.		
83	13.632													106.958	4.2%
84	13.931	0.341		0.518				0.126		0.894		2.028		230.757	4.3%
85	14.020											0.084		11.426	6.9%
86	14.547	7.114	3.5%	7.809	5.0%	7.475	8.5%	6.843	4.5%	7.467	2.2%	8.249	20.	75.229	3.8%
======	======	==========		==========		==========		==========		==========		==========		==========	
	Total:	794.1	3.5%	2313.8	2.2%	3349.7	1.7%	3728.1	2.1%	4712.4	2.8%	5971.3	2.6%	7852.6	3.3%

Retention Time Marker/Surrogate Standard Summary

Compound	Mean RT	RT Dev. Range	RT Crit.	Mean RF	Recovery Range	Surr Crit
tetrachloro-meta-xylene	3.8981	-.0070 to .0063	Passes...	10981.653	78.1 to 107.9%	** Fails *
decachlorobiphenyl	15.0985	-.0074 to .0059	Passes...	8497.925	91.6 to 113.5%	Passes...

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 3.8981 and decachlorobiphenyl at 15.0985.
2) Peaks chosen within window of +/- 0.01415 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.08431.

Aroclor Calibration Summary

RTX-35

Calibration of 18-Jan-1999 10:27 through 19-Jan-1999 00:06.
MCD1:[8080] 11,12 18JAN990911
METHOD: 8080_PCB:AN

JLC - HP3327

0186

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
1	3.722	127.567	7.6%	73.977	7.3%	3.377		4.284	33.	0.638		0.965		0.949	
2	4.641	47.555	4.9%	39.787	4.5%	29.372	3.7%	27.157	2.6%	2.038		0.328		0.266	
3	4.846	160.293	2.5%	112.357	2.3%	52.052	2.6%	51.225	3.5%	14.067	6.3%	12.172	5.6%	12.214	6.8%
4	5.086	102.560	2.2%	78.881	1.3%	49.514	1.3%	48.127	3.8%	2.925	9.8%	0.383		0.339	
5	5.201	323.108	4.3%	281.373	4.2%	245.149	4.8%	219.648	4.3%	24.915	13.7%	7.513	80.	7.016	
6	5.275	45.769	1.3%	30.714	1.0%			12.716							
7	5.764	2.400		16.494	0.4%	37.477	1.2%	28.751	1.8%	8.623	3.7%	0.788		0.363	
8	5.867	23.225	2.9%	14.658	1.3%	4.652	1.6%	4.701	3.2%	0.345					
9	6.006	68.215	4.0%	263.505	4.2%	550.148	5.7%	439.788	5.3%	222.977	2.7%	9.502	1.9%	5.253	3.9%
10	6.224	2.495		16.725	4.1%	37.562	2.2%	29.466	2.7%	8.251	5.6%	0.432		0.246	
11	6.437	6.747	5.0%	67.609	1.9%	159.767	1.1%	125.513	1.6%	62.348	3.7%	1.997		1.020	
12	6.506	6.139										6.267	8.6%	6.154	20.
13	6.555	12.424	3.9%	94.163	1.0%	211.651	1.7%	169.992	1.6%	63.430	2.1%	3.747			
14	6.606	5.516		43.028	0.7%	97.767	0.7%	75.765	1.6%	26.769	1.5%	1.384			
15	6.677	4.139	3.2%	21.539	2.6%	45.998	1.5%	35.565	2.3%	6.499	4.1%	0.608		0.359	
16	6.861	26.427	1.3%	284.031	1.1%	682.700	0.8%	526.290	1.7%	324.972	2.9%	11.996		5.409	
17	7.190	14.380	1.3%	134.053	1.6%	306.960	2.4%	242.483	2.3%	117.840	1.9%	4.669	3.8%	2.700	12.9%
18	7.294			22.466	1.4%	58.763	2.3%	44.602	1.7%	67.327	1.3%	6.388	4.8%	0.410	
19	7.398	0.178		7.998	3.7%	22.099	1.6%	15.409	2.4%	22.228	2.8%	0.546		0.148	
20	7.476	8.027	4.6%	89.592	2.6%	213.035	2.7%	169.813	2.6%	83.688	4.1%	2.638	7.0%	1.430	
21	7.643	4.415	4.9%	101.479	1.9%	260.098	3.1%	222.556	2.9%	412.037	2.6%	322.503	3.8%	18.988	3.5%
22	7.753	2.598		95.249	0.6%	247.382	1.9%	193.180	1.9%	318.051	1.5%	79.703	1.3%	2.319	
23	7.814	0.895		39.089	0.9%	104.500	0.6%	78.608	1.5%	131.106	2.0%			0.817	
24	7.882	0.807		39.141	1.4%	105.489	1.8%	75.066	1.6%	114.506	1.5%	5.433	4.2%	0.741	
25	7.971	0.289		11.977	3.1%	31.857	0.9%	24.062	2.3%	33.741	2.2%	1.156		0.237	
26	8.106	0.384		1.885	6.3%	2.762	7.8%	3.025	5.0%						
27	8.381	5.261	6.6%	134.804	0.8%	317.884	1.5%	288.997	1.3%	458.892	1.0%	163.609	1.3%	3.555	12.2%
28	8.476	0.769		45.158	2.9%	113.112	0.8%	92.868	3.3%	140.724	3.3%	10.402	10.6%	0.686	
29	8.646	0.665		37.314	2.3%	85.949	0.6%	78.835	3.0%	128.058	2.6%	10.151	5.2%	0.681	
30	8.714	1.467	9.0%	74.961	2.4%	160.174	1.2%	158.535	2.6%	276.094	3.6%	49.663	2.3%	1.500	7.1%
31	8.793	0.509		27.476	3.3%	61.812	0.8%	52.347	3.7%	70.553	3.2%			0.583	
32	8.970	1.438		17.988		3.871	33.	11.346	31.	18.738	9.2%	5.459	86.	1.578	
33	9.063	1.057		56.388	0.7%	24.389	1.5%	114.663	1.5%	205.921	2.0%	49.569	1.4%	1.285	8.5%
34	9.150	0.493		29.050	2.9%	50.668	1.6%	63.178	2.3%	96.835	2.4%			0.528	
35	9.212	2.216	9.3%	103.318	1.1%	38.695	1.0%	225.003	1.7%	411.811	1.7%	203.591	1.7%	3.148	11.0%
36	9.359	1.661	5.1%	96.255	0.7%	26.277	1.9%	199.951	1.5%	342.725	2.3%	64.261	1.6%	2.078	6.9%
37	9.508	7.131	4.4%	21.894	2.6%	22.934	2.4%	55.044	2.0%	153.665	1.2%	486.893	2.4%	210.178	2.5%
38	9.659	0.793		4.198	8.8%	0.789		10.911	6.8%	31.594	3.5%	117.912	1.7%	30.721	4.2%
39	9.726	0.293		10.076	6.2%	5.345	8.2%	22.973	4.9%	55.022	2.4%	81.454	2.1%		
40	9.838	6.676	4.3%	22.645	2.4%	2.585	9.0%	55.710	1.6%	155.607	1.6%	568.595	3.4%	251.539	2.7%
41	10.029											233.782	2.2%	2.064	11.0%
42	10.072	1.272		87.365	0.9%	7.148	6.0%	185.017	1.3%	309.347	2.7%			1.941	
43	10.211			0.388				1.032		3.839	9.3%	7.766	7.9%		
44	10.366	0.824		12.619	4.8%	3.740	5.6%	31.983	2.7%	92.042	1.8%	186.979	2.3%	10.354	4.5%
45	10.565			2.343	8.6%	0.103		5.980	7.6%	18.028	4.7%	36.565	2.7%	0.648	
46	10.742	0.591		13.698	4.9%	0.569		33.839	2.5%	99.592	2.5%	207.105	1.8%	8.157	5.2%
47	10.840			2.254				5.006		15.094	5.7%				
48	10.922	1.751		18.943	3.0%	0.844		47.555	2.4%	139.783	4.0%	407.137	1.9%	45.271	3.4%
49	11.069	0.477		12.199	2.1%	0.474		29.594	3.3%	91.470	3.5%	126.948	2.8%	0.576	

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 4.2443 and decachlorobiphenyl at 16.8605.
2) Peaks chosen within window of +/- 0.01415 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.09551.

Aroclor Calibration Summary

RTX-35

Calibration of 18-Jan-1999 10:27 through 19-Jan-1999 00:06.
MCD1:[8080] 11,12 18JAN990911
METHOD: 8080_PCB:AN

JLC - HP3327

0187

Peak Response Factors and Relative Deviations

Peak #	RT	Aroclor 1221		Aroclor 1232		Aroclor 1016		Aroclor 1242		Aroclor 1248		Aroclor 1254		Aroclor 1260	
50	11.191	3.746	10.7%	33.929	2.3%	0.955		88.231	1.7%	260.734	2.8%	836.619	1.3%	139.331	3.7%
51	11.251	4.737												352.280	3.5%
52	11.293			1.686								83.894	1.7%		
53	11.312			1.389				2.999	19.	10.269	14.2%				
54	11.412	1.764		0.507								69.722	2.6%	136.972	2.9%
55	11.457			1.600				4.294	16.	15.037	13.1%	46.023	3.7%		
56	11.572			21.090	2.5%	0.498		52.665	2.4%	164.294	2.1%	525.228	2.2%		
57	11.628	11.984	4.4%	14.584	2.2%	0.565	98.	31.720	3.3%	94.749	3.4%	426.564	2.6%	803.470	3.1%
58	11.776	1.090		0.672				1.188		4.043	11.5%	74.778	2.8%	128.097	3.2%
59	11.910	8.720	5.9%	5.972	6.0%			9.335	5.7%	30.239	4.8%	412.312	2.1%	902.901	2.4%
60	12.013			0.627				1.485		5.102	9.7%				
61	12.032											19.272	7.2%	4.147	6.5%
62	12.256	2.861	3.0%	1.928		0.343		2.391	8.6%	8.352	5.3%	137.772	4.8%	377.878	6.8%
63	12.332	1.687		17.429	4.9%	0.392		43.147	4.1%	142.623	4.5%	288.350	2.5%		
64	12.367	3.187										309.049	1.5%	312.606	3.0%
65	12.418	3.090	21.	1.497		1.357		3.293						232.730	2.2%
66	12.435							1.589		5.363	10.8%	72.440	4.7%		
67	12.563	3.878	10.3%	2.664				3.395	19.	11.036	5.5%	203.113	2.5%	546.291	3.1%
68	12.627	5.894	4.9%	5.732	8.8%			11.654	4.9%	40.599	5.6%	724.167	1.7%	804.041	3.2%
69	12.738	3.465	8.4%	1.989				0.699		2.562		31.390	7.3%	632.110	2.7%
70	12.829	6.245		4.019	61.	2.089	88.	3.257	88.	7.240	23.	84.803	1.8%	353.961	4.2%
71	12.897			0.327				0.715		1.744		33.146	4.3%	26.326	9.7%
72	13.041	0.481								0.265		3.253		90.329	8.0%
73	13.251	5.521	22.	5.077	22.	0.604		5.626	34.	15.577	5.4%	250.973	2.5%	764.419	2.4%
74	13.372	2.686		4.215										359.317	2.8%
75	13.390			2.188				2.246		6.370	9.3%	119.080	2.4%		
76	13.450	1.218		1.181						0.738		22.809	1.6%	170.234	4.7%
77	13.525	4.310	10.2%	4.164	12.2%			1.752		7.291	10.4%	107.795	3.0%	1364.845	2.7%
78	13.621									0.208		3.189	11.6%	13.820	15.
79	13.886	0.390		0.285		0.138				0.230		0.654		36.002	6.1%
80	14.025	1.349	80.	1.516	91.	0.472		0.728		0.995		1.640		16.216	9.5%
81	14.141	1.537		1.916	42.			0.531		2.091	24.	12.852	4.0%	381.149	3.5%
82	14.220	2.382	17.	2.987	27.			0.999		4.199	8.7%	66.755	1.4%	702.933	4.2%
83	14.499											2.804		12.980	7.2%
84	14.759	5.528	5.9%	5.724	6.5%	5.315	5.7%	5.519	4.1%	5.552	5.4%	5.772	10.7%	23.641	6.4%
85	14.971	0.770		0.789		0.673		0.687		0.814		0.792		7.970	8.0%
86	15.052	0.200		0.258				0.096		0.413		1.078		108.427	5.9%
87	15.222	0.313		0.548				0.121		0.925		1.968	9.6%	251.380	5.3%
88	16.043	6.671	5.8%	6.930	6.1%	6.413	5.5%	6.731	7.2%	7.268	7.8%	7.251	5.9%	79.576	6.4%
******	******	==========		==========		==========		==========		==========		==========		==========	
	Total:	1127.6	4.2%	2968.5	2.7%	4507.3	2.3%	4925.2	2.6%	6241.7	2.6%	8486.3	2.3%	10780.8	3.4%

Retention Time Marker/Surrogate Standard Summary

Compound	Mean RT	RT Dev. Range	RT Crit.	Mean RF	Recovery Range	Surr Crit
tetrachloro-meta-xylene	4.2443	-.0110 to .0135	Passes...	16207.473	76.3 to 108.7%	** Fails *
decachlorobiphenyl	16.8605	-.0138 to .0106	Passes...	9251.593	90.0 to 111.2%	Passes...

Notes:

1) Retention times linearly adjusted to place tetrachloro-meta-xylene at 4.2443 and decachlorobiphenyl at 16.8605.
2) Peaks chosen within window of +/- 0.01415 of the mean RT of corresponding peaks in all mixtures.
3) Quantitation is based on HEIGHTS; instrument response is linearized by RESPONSE = HEIGHT^ 1.09551.

Chain-of-Custody Record

Inchcape Testing Services
Aquatec Laboratories

55 South Park Drive
Colchester, VT 05446

TEL: (802) 655-1203
FAX: (802) 655-1248

PAGE 1 OF 1

COMPANY INFORMATION	COMPANY'S PROJECT INFORMATION	SHIPPING INFORMATION
Name: Blasland, Bouck & Lee, Inc	Project Name: Kalamazoo Allied OU	Carrier: Fed Ex
Address: 6723 Towpath Rd Syracuse NY 13214	Project Number: 645.51	Airbill Number: 8069740876 93
	Sampler Name(s): R. Patchett J. Sanderf	Date Shipped: 12/16/98
Telephone: 315/446-9120		Hand Delivered: ☐ yes ☒ no
Facsimile:		
Contact Name: Laurie Indick	INCHCAPE LABORATORY INFORMATION	Quote #: Client Code:

SAMPLE IDENTIFICATION (NOTE 1)	COLLECTION DATE	COLLECTION TIME	GRAB	COMPOSITE	MATRIX	ANALYSIS/REMARKS (NOTE 2,3)	NUMBER OF CONTAINERS (VOLUME/CONTAINER TYPE/PRESERVATIVE (NOTE 4): PCB / Amber/Liter)
A66250	12/15/98		X		water		2
A66251	↓		X		↓		2
A66252	↓		X		↓		2
A66253	↓		X		↓		2
A66254	↓		X		↓	MS/MSD volume included	5
A66255	↓		X		↓		2

Relinquished by: (signature)	DATE	TIME	Received by: (signature)
R. Patchett	12/16/98	1030	
Relinquished by: (signature)	DATE	TIME	Received by: (signature)
Relinquished by: (signature)	DATE	TIME	Received for Laboratory by: (signature)
	12/17/98	0945	

NOTES TO SAMPLER(S): (1) Limit Sample Identification to 6 characters, if possible; (2) Indicate designated Lab Q.C. sample and type (e.g.: MS/MSD/REP) and provide sufficient sample; (3) Field duplicates are separate sample; (4) e.g.: 40 ml/glass/H_2SO_4

Notes to Lab: Run Kalamazoo Specific Software

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

SEVERN TRENT LABORATORIES LOG-IN SHEET - Form DC-1

Lab Name: Severn Trent Laboratories - VT

Page 1 of 1

Received By (Print Name): DONALD C. DAWILKE JR.

Log-in Date: 12/18/98

Received By (Signature):

Case Number: 98000

Sample Delivery Group No: KAL079

ETR Number: 71904

REMARKS:

1. **Custody Seal** ~~Present/Absent*~~ ~~Intact/Broken~~
2. **Custody Seal Nos.:** N/A
3. **Chain-of-Custody Records** ~~Present/Absent*~~
4. **Sample Information Sheets** ~~Present/Absent*~~
5. **Airbill** ~~Airbill/Sticker~~ ~~Present/Absent*~~
6. **Airbill No.:** 806974087693
7. **Sample Tags** ~~Present/Absent*~~ **Sample Tag Numbers** ~~Listed/Not Listed on Chain-of-Custody~~
8. **Sample Condition:** ~~Intact/Broken*~~ ~~Leaking~~
9. **Does information on the custody records, sample information sheets, sample tags and labels agree?** Yes/No*
10. **Date Received at Lab:** 12/17/98
11. **Time Received:** 0945
12. **Cooler Temperature:** 3°C

Sample Transfer

Fraction: ALL

Area #: LVL 4 ENDICE

By: DCJ

On: 12/17/98

CORRESPONDING			
CLIENT SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
A66250	N/A	374478	Were air bubbles present
A66251	"	374479	in any VOA vials? N/A
A66252	"	374480	SAMPLES RECIVD
A66253	"	374481	INTACT IN COOLER
A66254	"	374482	W/ICE, COOLER
A66255	"	374483	WAS INTACT W/NO
			CUSTODY SEALS.

12/18/98

* Contact Project Director

Reviewed by: _____ Logbook No.: _____

Date: _____ Logbook Page No.: 0703

** COOLER RECEIPT CHECKLIST **

WERE CUSTODY SEALS PRESENT ON THE COOLERS?

YES NO

IF SO, WERE THERE CUSTODY SEAL NUMBERS?

YES NO

LIST THE CUSTODY SEAL NUMBERS. _____ _____

WHAT TYPE OF COOLING WAS UTILIZED?

ICE MELTED ICE PACKS NONE

COOLER TEMPERATURE (degrees c): 3-

DATE AND TIME COOLER RECEIVED: 12/17/98 0945

DO SAMPLES APPEAR TO BE INTACT: YES NO

DO ANY SAMPLES HAVE SHORT HOLDING TIMES?
(less than seven days)

WET CHEM	YES	NO
EXTRACTABLES	YES	NO
UNPRES VOA	YES	NO

RADIATION SCREEN RESULTS <0.05 MR/HR YES NO

0708

Severn Tr aboratories-VT 8080_PCB:EXW Kalamazoo

CLIENT:	BLABO2	ANALYST:	NAW	SURR LOT #	E12149805
CASE:	98000	SPIKER:	NAW	MTX LOT #	E12079802
SDG:	KAL079	WITNESS:	JB	CH2Cl2 LOT#:	M41315
ETR NO:	71904	Hg LOT #	—	HEXANE LOT #	M14279
DATE:	12/18/98	SILICA GEL LOT #	—	H_2SO_4 LOT #	M26039

Florisil # 940861

396/50

(10)

STL Sample ID	Client ID	Sample Vol. (1000ml). Measure entire sample volume using a Grad. Cylinder. Trans. to Sep. Funnel	Surr: 100 uL Pest Surr (DCB/TCX) 0.2 ppm	Mtx: 100 uL AR 1242/1254 5.0ppm to MS/MSD/LCS only	Check PH between 5-9. If PH needs to be adjusted use 6N NaOH or 50% H2SO4.	Rinse 1.0 Liter bottle and Grad. Cylinder w/ 60mls CH2CL2. Trans. to Sep. Funnel	Shake 2 min. Decant thru Na2SO4 funnel into K-D set-up.	Repeat 2(X)	Hexane Exchange w/60ml	Conc. to 2.0-3.0 mL. Transfer to a 16ml vial.	Sulfuric Acid (H2SO4) cleanup	Pull off Hexane layer	Conc. to approx. 1.0 mL	Sulfur clean-up w/ Cu	Add extract to a 1gm Florisil Cart. Elute thru Cart. w. 9mls 9:1 Hex/Acetone.	Conc. to 1.0 mL. Place in a clear 2ml vial. Give extract w/paperwork to GC.
*	PBLK X5	1000	✓	X	NAW	NAW	NAW	NAW	NAW	WAJ	WAJ	WAJ	WAJ	WAJ	WAJ	WAJ
X5	LCS P	1000	✓	✓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
374478	A66250	980	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
374479	A66251	1000	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
~~374480~~	~~A66252~~	~~910~~	~~✓~~	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
374481	A66253	800	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
~~374482~~	~~A66254~~	~~980~~	~~✓~~	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
374483	A66255	980	✓	X	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
374482MS	A66254MS	1000	✓	✓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
374482MD	A66254MD	990	✓	✓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

Samples got mixed up and re-extracted WAJ 12/21/98

* Sample Blank PBLK X5 Had water in it TB 12/19/98

WAJ 12/21/98

Sulphur/Copper Cleanup ERB 1/14/99

XLB 12/21/98

Severn Trent Laboratories-VT | 8080_PCB:EX | Kalamazoo

CLIENT:	BLABO2	ANALYST:	WMT	SURR LOT #	E12149805 OTM
CASE:	98000	SPIKER:	WMT	MTX LOT #	~~E11239801~~ 12/21 E12079802
SDG:	KAL079	WITNESS:	DOP	CH2Cl2 LOT#:	M41315
ETR NO:	71904	Hg LOT #		HEXANE LOT #	M14279
DATE:	WMT 12/21/98 ~~12/21/98~~ 12/21/98	SILICA GEL LOT #	Florisil # 940861	H_2SO_4 LOT #	M39036

0663

396/67

STL Sample ID	Client ID	Sample Vol. (1000ml). Measure entire sample volume using a Grad. Cylinder. Trans. to Sep. Funnel	Surr. 100 uL Pest Surr (DCB/TCX) 0.2 ppm	Mtx: 100 uL AR 1242/1254 5.0ppm to MS/MSD/LCS only	Check PH between 5-9. If PH needs to be adjusted use 6N NaOH or 50% H2SO4.	Rinse 1.0 Liter bottle and Grad. Cylinder w/ 60mls CH2CL2. Trans. to Sep. Funnel	Shake 2 min. Decant thru Na2SO4 funnel into K-D set-up.	Repeat 2(X)	Hexane Exchange w/60ml	Conc. to 2.0-3.0 mL. Transfer to a 16ml vial.	Sulfuric Acid (H2SO4) cleanup	Pull off Hexane layer	Conc. to approx. 1.0 mL	Sulfur clean-up w/ Cu	Add extract to a 1gm Florisil Cart. Elute thru Cart. w. 9mls 9:1 Hex/Acetone.	Conc. to 1.0 mL. Place in a clear 2ml vial. Give extract w/paperwork to GC.
PBLKY6	PBLK	1000	✓		WMT	WMT	WMT	WMT	WMT	WMT	WMT	WMT	WMT	WMT	WMT	WMT
Y6LCS	LCS	1000	✓	✓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
374480	A66252	910	✓		↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
374482	A66254	980	✓		↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

WMT 12/21/98

Sulfur / Copper Cleanup EEB 1/14/99

WMT 12/21/98