160425

SMITH ENVIRONMENTAL TECHNOLOGIES CORPORATION

ERCS REGION V

QA/QC DATA REVIEW

TO: Sam Borries - OSC USEPA Region V
FROM: Mark Douglas - Tand D Coordinator
THRU: DAN WILSON - QA/QC Manager
PROJECT NAME: Sauget Landfill Site G Q SB
JOB NUMBER: B168
LAB/SMITH SAMPLE REFERENCE: 9503/342-001-003 /6-16 16:40 ~~Seal~~ DJW, 7-16 16:40 ~~Seal~~ DJW 18-16 12:00
METHODS: SW846 8080 Requested, 8080 mod. run by lab

The following two tier review is based on information outlined in OSWER Directive 9360.4-01 (April 1990), Data Validation Procedures. This document is intended for guidance in assessing and substantiating data for various users.

I. METALLIC INORGANIC PARAMETERS

A. Sample Holding Times: [Metals 6mo., cyanide 14 - mercury 28 days, chromium (+6) 24 hours]
Sample Date:_____ Extraction Date:_____ Analysis Date:_____
_____

Acceptable
No Action
Action

B. Initial and Continuing Calibration Verification:
Range of 90-110% of mean value: Y___N___, except tin/mercury at 80-120%: Y__N__, and cyanide at 85-115%: Y__N__ , Calibration standard and blank analyzed at the beginning and after every 10 samples Y__N__, Any samples >110% of highest calibration standard:Y__N__
_____

Acceptable
No Action
Action

C. Blanks:
Concentration of blanks fall below MDL:Y__N__, One method blank for each 20 samples Y__N__ _____
_____

Acceptable
No Action
Action

D. ICP Interference Check Sample:
All ICP ICS results inside of control limits(+/- 20% of mean value) Y__ N__, Are Al, Ca, Fe, Mg lower in the sample than in ICS:Y__N__
Was ICS analyzed at the beginning an end of each run or at least every 8 hr., whichever is more frequent.: Y__N__ _____
_____

Acceptable
No Action
Action

E. Error Determination (MS/MSD/Surrogates):
Percent Recovery MS____%, percent recovery MSD____%, Adjustment of sample value for bias (reciprocal value of % recovery: % bias____)
Determination of Precision: Was a minimum of eight replicates analyzed? Y__N__, Coefficient of variation(%RSD): False positive Y__N__, False negative Y__N_____
_____

Acceptable
No Action
Action

IV. PCB's

A. Sample Holding time(water - 7 days to extraction, soil, sludge, sediment 14 days to extract, all analyze within 40 days after extraction) — **Acceptable** / **No Action** / **Action**

B. Instrument performance — **Acceptable** / **No Action** / **Action**
Standard chromatograms depict adequate quantitation peak resolution Y✓N__, raw data examined Y✓N__, spot check of surrogate compound retention times Y__N✓
No surrogates run - Pattern Recognition used.

C. Initial and continuing calibration verification: — **Acceptable** / **No Action** / **Action**
Aroclors of interest have been analyzed at a minimum of three different concentrations Y✓N__, the %RSD of the calibration factor for all aroclors is less than or equal to 10% for the initial linearity check Y✓N__, continuing calibration for each aroclor of interest was analyzed daily Y✓N__, Is the %D > 15% on the quantitation column or > 20% on the confirmation column Y__N✓ If yes, was the data flagged (J). Y__N__ _____

D. Error Determination: — **Acceptable** / **No Action** / **Action**
Were matrix samples used? Y__N✓, were site background samples used? Y__N✓, were site action level samples used? Y__N✓
Determination of Bias: Percent recovery: were 8 spiked samples replicates for the matrix of interest analyzed at the required frequency Y__N✓, is the average recovery between 80-120%, adjustment for sample values of bias: Y__N__ % bias, determination of precision replicate analysis Y__N__, coefficient of variation (% RSD) Y✓N__ ___% 2.34-14.74

E. Blanks: — **Acceptable** / **No Action** / **Action**
Method blank analysis reported per matrix, per concentration level, at the proper frequency, for each GC system used to analyze samples, for each extraction batch Y✓N__, all blank analyses contain < the required detection limits of any PCB or interfering peak Y✓N__ _____

F. Compound identification: — **Acceptable** / **No Action** / **Action**
Positive results identified using the correct retention time window, peak height ratio, and "fingerprint" pattern Y✓N__, dual column confirmation of positive results identify the same aroclor or that the lab performed GC/MS confirmation of PCB results that were > 10 ng/ul Y__N__ _____

G. Compound quantitation and reported detection limits: — **Acceptable** / **No Action** / **Action**
Reported values, both positive and non-detect, have been correctly adjusted Y✓N__ _____

H. Surrogate recovery: — **Acceptable** / **No Action** / **Action**
Recoveries within the control limits Y__N__, if recoveries are out of control limits, what criteria was used to determine the appropriate action?
Surrogates were not run
Pattern recognition was used

VI. Non-Metal Inorganic Parameters (i.e., pH, TOC, flash point) — **Acceptable** / **No Action** / **Action**

A. Refer to the appropriate reference, such as 40 CFR Part 136, SW846, EPA Methods and to QAPP for project. _____

VII. Overall Assessment of the data:

Based upon the information provided, the data is considered **acceptable** ✓, **not acceptable** ___, for use as reported

Comments:

No method was requested on Chain of Custody nor was a QA protocol or level requested on Chain of Custody.

- T and D Coordinator requested PCB's by SW-846 method 8080 on contract at start of project.
- Also, QA Protocol on Subcontract was QA/QC For Removal Activities Level II
- Site requested only PCB's and not PCB's/Pesticides

Note: This data validation only involved the following and indicated QA Review form sections: ☐ **Metallic Inorganic Parameters,** ☐ **BNA's by GC/MS Analysis,** ☐ **VOA's by GC/MS Analysis,** ■ **PCB's,** ☐ **GC Analysis (i.e., Herbicides, Organophosphate, Pesticides),** ☐ **Non-Metal inorganic Parameters (i.e., pH, TOC, flash point)** DJW 10/17/95

Reviewer	Reviewer
T&D Coordinator	QA Manager
Title	Title
10-24-95	10/17/95
Date of Review	Date of Review

h:\QAREVIEW.DOC 08-22-95

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

October 16, 1995

Mr. Dan Wilson
Riedel/Smith Environmental
18207 Edison Avenue
Chesterfield, MO 63017

Dear Dan:

This letter is in response to our conversation on Friday October 13, 1995. During our conversation, you had mentioned that 'there is no copy of SW-846 8080 modified'. This seems to reflect on some confusion as to what exactly is meant by the word "modified". The word "modified" (or in some cases the letter "m") on a report does not mean the method was modified, it is merely Environmetrics' internal way to determine how the sample is to be analyzed and extracted, in accordance with the method, to meet the client's request for the exclusion of pesticides from the method, turnaround time, and concentration level of PCBs.

The method of analysis requested was method 8080. The only acceptable method applicable to poly-chlorinated biphenyls using electron capture detector is SW-846 8080 Final (Promulgated) Updates II & IIA third edition. Absolutely no modification was made to the method by Environmetrics concerning quality control and method criteria for PCBs. The modifications were the request of the client to analyze only for PCBs in the sample, and fast turnaround. Method SW-846 8080 includes pesticides along with PCBs. The quality control contained in method 8080 integrates specific criteria for data quality objectives directly related to the pesticide portion of the analysis. These data quality objectives cannot be applied when only analyzing for PCBs. All data quality objectives were in compliance with the portion of quality control that applies to PCBs. Further, a medium level extraction was done on each of the samples. This extraction is directly referred to on page 5-8080A as extraction method 3550 for soils. This extraction method was used because the expected concentration of PCB was in parts per million, and to expedite the sample extraction time by avoiding the concentration of the extract.

All data issued for PCBs has been completed in accordance with SW-846 and its applicable quality control standards. We therefore feel that the methodology was correctly applied and we firmly stand behind all data issued. If you have any questions, please call me at (314) 427-0550. Thank you.

Sincerely,

Anne Arnold
Project Manager

John Walsh
Organic Group Manager

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

SMITH ENVIRONMENTAL TECHNOLOGIES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: KEN BRAIG

INVOICE # 31130
PO # 32872-1
PROJECT # 2T3051, T05-9502-010

PCB ANALYSIS
METHOD SW-846 8080

SAMPLE ID: 6-LB 16:40 SEAL #142832
LAB ID: 9503/342-001

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	2.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	2.0	U
53469-21-9	PCB-1242	2.0	U
12672-29-6	PCB-1248	2.0	U
11097-69-1	PCB-1254	2.0	U
11096-82-5	PCB 1260	2.0	U

SAMPLE ID: 7-LB 16:40 SEAL #142836
LAB ID: 9505/342-002

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	2.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	2.0	U
53469-21-9	PCB-1242	2.0	U
12672-29-6	PCB-1248	2.0	U
11097-69-1	PCB-1254	2.0	8.0
11096-82-5	PCB 1260	2.0	11.0

SAMPLE ID: 18-LB 12:00 SEAL #142835
LAB ID: 9505/342-003

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	2.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	2.0	U
53469-21-9	PCB-1242	2.0	U
12672-29-6	PCB-1248	2.0	U
11097-69-1	PCB-1254	2.0	U
11096-82-5	PCB 1260	2.0	5.0

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

SMITH ENVIRONMENTAL TECHNOLOGIES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: KEN BRAIG

INVOICE # 31130
PO # 32872-1
PROJECT # 2T3051, T05-9502-010

U = UNDETECTED
B = PRESENT IN BLANK
J = DETECTED, BUT BELOW PRACTICAL
QUANTITATION LIMIT

DATE COLLECTED : 3/20/95
DATE RECEIVED : 3/21/95 13:41
DATE ANALYZED : 3/21/95
ANALYST : C.D.

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Rudd Environmental Services
24-48 hr Turnaround

Level 2 QA/QC P.O.# 32872-1

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
2T305'	T05-9502-010

SAMPLERS: *(Signature)*

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS							REMARKS
													Seal #
6-LB	3/20	1640		X	LB-6								142 832
7-LB	3/20	1640		X	LB-7								142 836
18-LB	3/20	1700		X	LB-18								142 835

Shipment Complete

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
X [signature]	3/21/95 1100	[signature]			
[signature]	3-21-95 1230	[signature]			

Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

** 1 Day **

INTERNAL CUSTODY TRANSFER RECORD/LABORATORY WORK REQUEST

** 1 Day **

COC : 25781

Status: 1 Day

Company Name: Riedel Environmental Services Number: R013

Contact: Ken Braig

Date Due (PM): 03/22/95

Project No.: T05-9502-010

Address: 18207 Edison Avenue

Date Received: 03/21/95

Date Due (Client): 03/22/95

P.O. No.: 32872-1

City/State/Zip: Chesterfield, Mo. 63017

Date Logged: 03/21/95

Mode: Call

Quotation No.:

Sample Id. No.	Client Sample Name/Number	Matrix	Container	Preservative	Date Collected	Temp	Tests
503000342-001-01	LB-6 Special Instructions:	SOIL	1-250 ml GLASS	Cold	03/20/95		MODIFIED PCB-8080M
503000342-002-01	LB-7 Special Instructions:	SOIL	1-250 ml GLASS	Cold	03/20/95		MODIFIED PCB-8080M
503000342-003-01	LB-18 Special Instructions:	SOIL	1-250 ml GLASS	Cold	03/20/95		MODIFIED PCB-8080M

Items Transferred	Relinquished By	Date		Logged In By	Date	Time
3		03/21/95	PM Signature : Anne Morris Anne Morris Client Services Rep.	Phyllis Woods Login Coordinator	03/21/95	13:41:03

** 1 Day **

** 1 Day **

** 1 Day **

INTERNAL CUSTODY TRANSFER RECORD/LABORATORY WORK REQUEST

** 1 Day **

COC : 25781
Company Name: Riedel Environmental Services Number: R013
Address: 18207 Edison Avenue
City/State/Zip: Chesterfield, Mo. 63017

Status: 1 Day
Contact: Ken Braig
Date Received: 03/21/95
Date Logged: 03/21/95

Date Due (PM): 03/22/95
Date Due (Client): 03/22/95
Mode: Call

Project No.: T05-9502-010
P.O. No.: 32872-1
Quotation No.:

Items Transferred	Relinquished By	Date	Time	Received By	Date	Time	Reason For Transfer
1-3	[signature]	3-21	150	PWoods	3/21/95	1 54 Am	PCB Reg

CASE NARRATIVE

REQUIREMENTS FOR ANY QA/QC LEVEL

Please Note: If a CLP Package or the USEPA QA/QC Reporting Package known as "Quality Assurance/Quality Control - Guidance for Removal Activities" is requested all QA/QC reporting documentation required in those documents takes precedence over these requirements.

- **General Requirements/Information** (Required for all QA/QC Levels)

1. Date sampled 3-20-95 Date received 3-21-95
2. Number of samples received 3
3. Sample description Soil
4. Sample preparation date 3-21-95
   Date extracted (if applicable) "
5. Date analyzed 3-21-95 Time analyzed 16:01-16:59
   Analyst CJD
6. Did Riedel indicate a specific method? Yes ___ No X
   a. If Yes, what was that method? ___
7. Did Riedel specify additional QA/QC requirement beyond the minimum and mandatory items? Yes ___ No X If yes, please specify. ___
   a. What QA/QC level was requested? N/A Used by lab? ___
   b. If lab used a different QA/QC level than requested by Riedel, an explanation must be supplied by lab. N/A

- **QC Remarks** (Required as relates to QA/QC level requested)

1. Were holding times met? Yes X No ___ If No, why? ___
2. Test Methods
   a. Parameters PCB
   b. *Approved* Methods 8080
   c. Was a cleanup method requested *for Semi-Volatile Organic Analyses*?
      1. Yes ___ No X
      2. If No, what method was used and why? S & Florisil
      3. If Yes, identify method used? ___

3. Were peak resolutions *(i.e. Chromatograms)* requested? Yes ___ No X If Yes, please comment. _

4. Initial calibration (% Relative Standard Deviation) <20%.

5. Has continuing calibration (% difference) been requested? If yes, indicate % difference. <15%.

6. Were all Matrix Spikes/Matrix Spike duplicates < 20% RSD? Yes ___ No ___

   a. If Yes, indicate I.D. No. and %. _____
   b. If No, indicate I.D. No. and %, plus why the < 20% RSD was not obtained. _____

7. Were surrogates run *for Organic Analyses*? Yes ___ No X

   a. If Yes, indicate type and recovery (Min. Recovery is 80%). _____
   b. If not, indicate why not. Pattern Recognition
   c. If min. recovery was not obtained, indicate why not? _____

8. Please provide the following as applicable.

   a. Minimum Detection Limits: _____
   b. Estimated Quantitation Limits: _____
   c. Dilution Factor:

9. Were *any other annomalies encountered during the analysis*? Yes ___ No X

   a. If Yes, type: _____
   b. If Yes, why were they observed? _____

10. Was this laboratory work performed under either "Minimum and Mandatory Contractual Terms for Analytical Laboratories not on the Pre-Approved Midwest/Great Lakes Region Acceptance List" or a "Master Subcontract" with your laboratory, specifically for ERCS Region V? Yes X No___

    a. If yes, Environmetrics states that the USEPA document known as "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures Interim Final EPA/540/G-90/004 April 1990" was utilized as guidance in the review and validation of all data for this project.

11. **WARNING!! NO DATA SHALL BE RELEASED** verbally, written, or otherwise to any authorized representative of Riedel Environmental Services, Inc. or their client that does not meet or exceed the QA/QC levels established in any written or verbal RFP for this project, or the requirements for any and all SW 846 Methods or EPA Methods utilized for this project.

Any incorrect data that is released to any authorized Riedel Environmental Services, Inc. representative or their client that causes improper site related work or disposal decisions to be made by Riedel Environmental Services, Inc. or their client, will cause Environmetrics to be completely liable for all costs associated with those decisions.

12. Reporting

a. Contact Person Name: _____ Phone No. _____

b. Reporting Party:

Signature: Anne Morris

Printed Name: Anne Morris

This Minimum and Mandatory Requirements for any QA/QC level must be completed and returned to the following within three (3) working days of data submittal to Riedel Project Manager.

Please submit as indicated below:

Yes	No	
X	___	Original to Riedel Project Manager at:
___	___	Copy to St. Louis District Office:
___	___	Copy to Chicago District Office:
___	___	Copy to Detroit District Office:

Riedel Environmental Services, Inc.
Attn: Daniel J. Wilson
18207 Edison Avenue
Chesterfield, MO 63005
Phone:(314) 532-7660
Fax:(314) 536-1655

Riedel Environmental Services, Inc.
***Non-ERCS Projects: ___ Tony Price ___ Bruce Mack**
***ERCS Projects: ___ Mark Douglas ___ Todd Ritsema**
500 Eastern Avenue
Bensonville, IL 60106
Phone:(708) 238-1818
Fax:(708) 238-1838

Riedel Environmental Services, Inc.
Attn: Charlie Klumb
28340 Goddard Road
Romulus, MI 48174
Phone:(313) 946-8640
Fax:(313) 946-8676

Date Due 3/22/95

ENVIRONMETRICS PCB in SOIL EXTRACTION RECORD

PCB 3374

SER#

DATE 3/21/95 ANALYST P Woods METHOD 8080-M Extraction Solvent Lot #

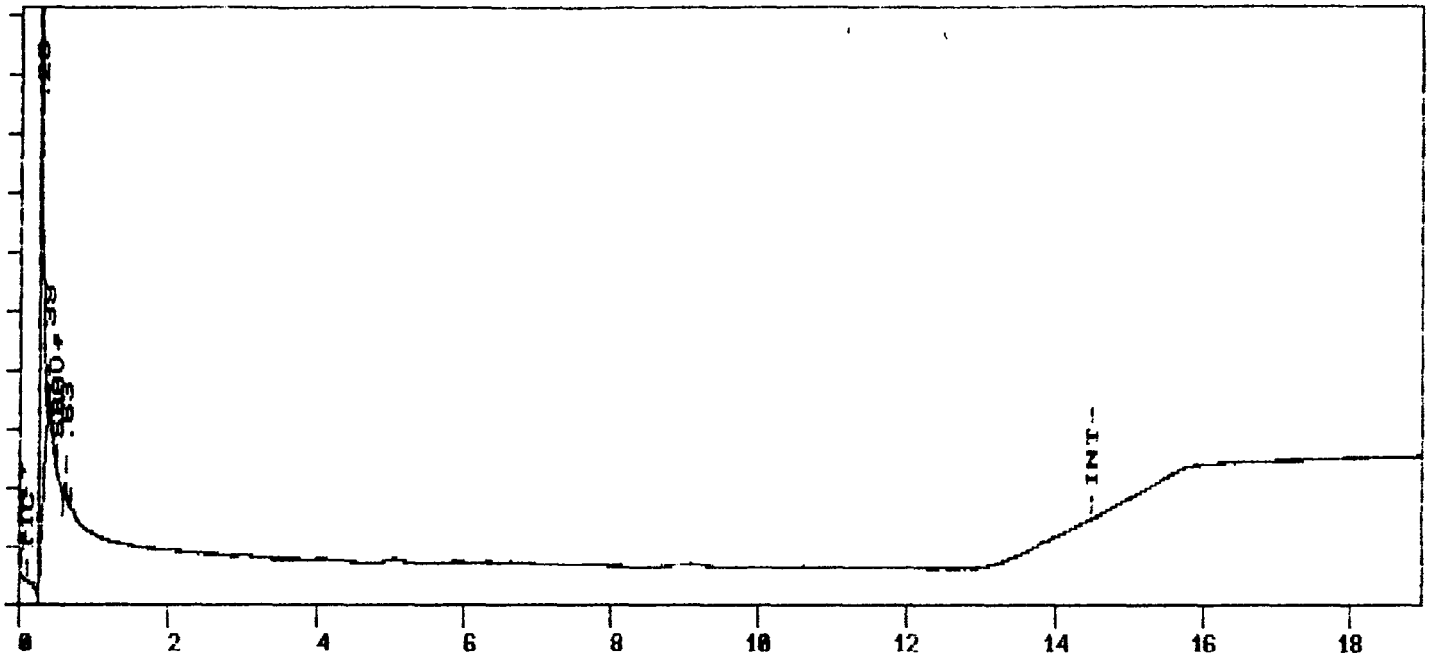
1st = 1.0mL sample extract diluted to 10.0mL
2nd = 100 µl 1st diluted to 10.0mL.
10% = 1.0mL 1st diluted to 10.0mL.
3rd = 100 µl 2nd diluted to 10.0mL.

#	Customer	Sample Number	Site ID.	Description	Sample Weight	Ext Vol	1st	10%	2nd	3rd	Cleanup S	Cleanup Flo	Cleanup Hg	% LOD
1	Reedel	9503-342	LB 6	Soil	10.0gr	100 ml	X				X	X		
2		342-2	LB 7				X							
3		342-3	LB-18				X							
4		342-3 M. Spike	MS LB-18				X							
5		342-3 M. S. Dup	MSD LB-18		10.0gr		X							
6		M. Blank	PCB3374	Method/reagent			X				X	X		
7														
8														
9														
10														
11														
12														

Spike Isomer A-1248 | Standard # OPS 301-A | Standard Conc. 1002 µg/ml | Volume used 500 µl

Ext. Trans.	Relinquished By	Date	Time	Transfer To	COMMENTS
1-6	P Woods	3/21/95	3:35 pm	[illegible]	

File=C:\DIRECT\DATA3\032153AA.01R Date printed=03-21-1995 Time= 15:12:48
Sample Name=HEXANE BLANK
0.0 to 19.0 min. Low Y=-8.49 High Y=41.51 mv Span=50.0



210 13 MIN 15oC/MIN 250 4 MIN 250 INJ 300 DET 24 MLS/MIN
Data file = C:\DIRECT\DATA3\032153AA.01R
Date stamp = 03/21/95 Time = 15:12:08
Sample name = HEXANE BLANK
Collected on Mar 21, 1995 15:12:08 from port # 3
Operator = CJ
Sequence file = 032153AA.SEQ #1
Instrument = V3700--DET 3A
Method name = C:\DIRECT\DATA3\START3.MET version # 60
Date method last modified = 03/21/95 Time = 10:17:48
Calibration file = C:\DIRECT\DATA3\MAR21AC.CAL version # 2
Date cal file last modified = 03/21/95 Time = 10:17:18
Run time = 19.00 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1
Sample Weight = 1 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-21-1995 Time = 15:13:51

12

MD 3-22-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.286		118.2028	91.3569%	118,202.8	91.357%	BB	0.033	59,632.04	93.9950%
2	0.392		7.9778	6.1659%	7,977.8	6.166%	BB	0.051	2,611.72	4.1167%
3	0.628		3.2051	2.4772%	3,205.1	2.477%	BB	0.045	1,197.98	1.8883%

Total area = 129385.8 Total amount = 129.3858 Sample units = Ug,Mg/Kg,L Total height = 63441.73

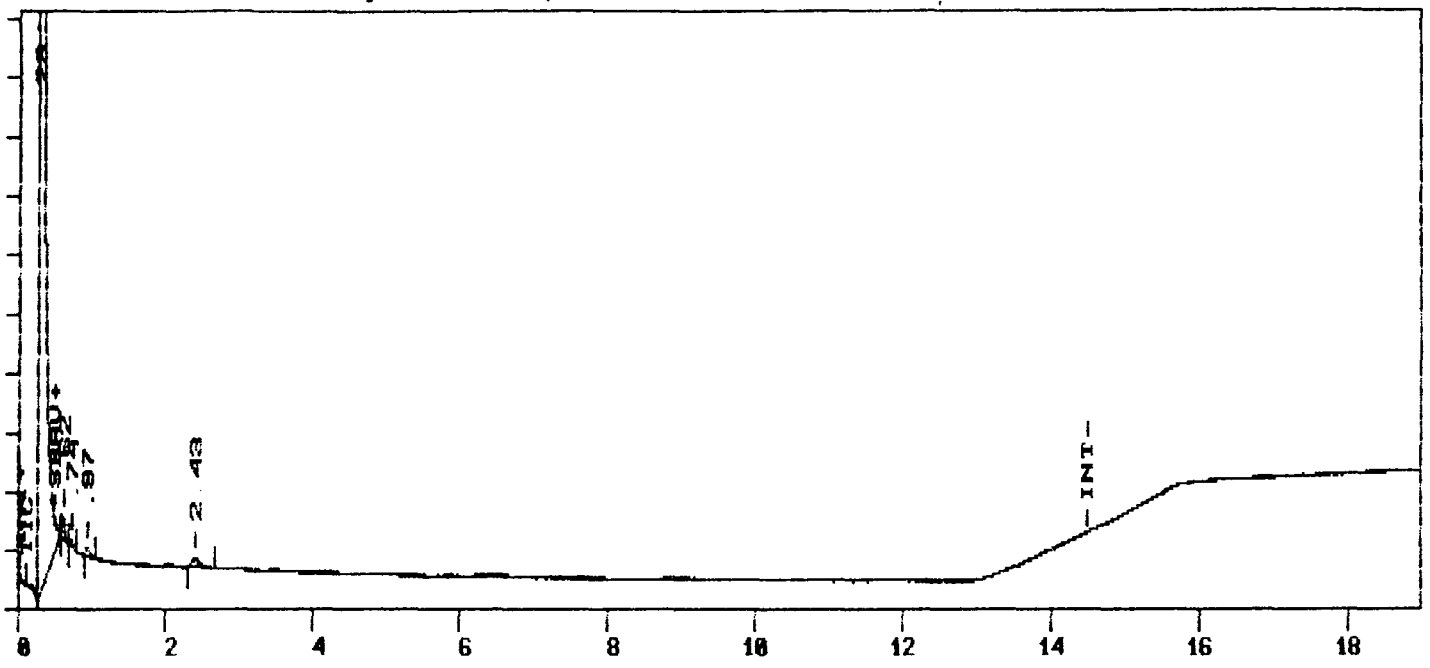
PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA3\MAR21AC.CAL
Calibration file date: 3/21/95 10:13
Instrument: GC3 Column: OV101 10%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA3\032153AA.01R
Sample name: HEXANE BLANK
Injection Date: Mar 21, 1995 15:12:08
Dilution: 1.0 Sample Weight: 1.0
Amount injected: 1.0

A1242	was not detected.
A1248	was not detected.
A1254	was not detected.
A1260	was not detected.

File=C:\DIRECT\DATA3\032153AA.02R Date printed=03-21-1995 Time= 15:36:41
Sample Name=PCB 3374 SOIL METHOD BLANK
0.0 to 19.0 min. Low Y=-7.441 High Y=42.559 mv Span=50.0



210 13 MIN 15oC/MIN 250 4 MIN 250 INJ 300 DET 24 MLS/MIN
Data file = C:\DIRECT\DATA3\032153AA.02R
Date stamp = 03/21/95 Time = 15:36:26
Sample name = PCB 3374 SOIL METHOD BLANK
Collected on Mar 21, 1995 15:36:26 from port # 3
Operator = CJ
Sequence file = 032153AA.SEQ #2
Instrument = V3700--DET 3A
Method name = C:\DIRECT\DATA3\START3.MET version # 60
Date method last modified = 03/21/95 Time = 10:17:48
Calibration file = C:\DIRECT\DATA3\MAR21AC.CAL version # 2
Date cal file last modified = 03/21/95 Time = 10:17:18
Run time = 19.00 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1
Sample Weight = 1 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-21-1995 Time = 15:37:44

CP 3-22-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.287		1,003.4058	98.3728%	1,003,405.8	98.373%	BB	0.042	393,537.84	98.9790%
2	0.624		4.7492	0.4656%	4,749.2	0.466%	BB	0.046	1,702.75	0.4283%
3	0.742		1.7300	0.1696%	1,730.0	0.170%	BB	0.045	643.06	0.1617%
4	0.967	- 1242	3.1037	0.3043%	3,103.7	0.304%	BB	0.065	793.26	0.1995%
5	2.426	- 1242, 48, 54	7.0150	0.6877%	7,015.0	0.688%	BB	0.127	920.48	0.2315%

Total area = 1020004 Total amount = 1020.004 Sample units = Ug,Mg/Kg,L Total height = 397597.4

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA3\MAR21AC.CAL
Calibration file date: 3/21/95 10:13
Instrument: GC3 Column: OV101 10%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA3\032153AA.02R
Sample name: PCB 3374 SOIL METHOD BLANK
Injection Date: Mar 21, 1995 15:36:26
Dilution: 1.0 Sample Weight: 1.0
Amount injected: 1.0

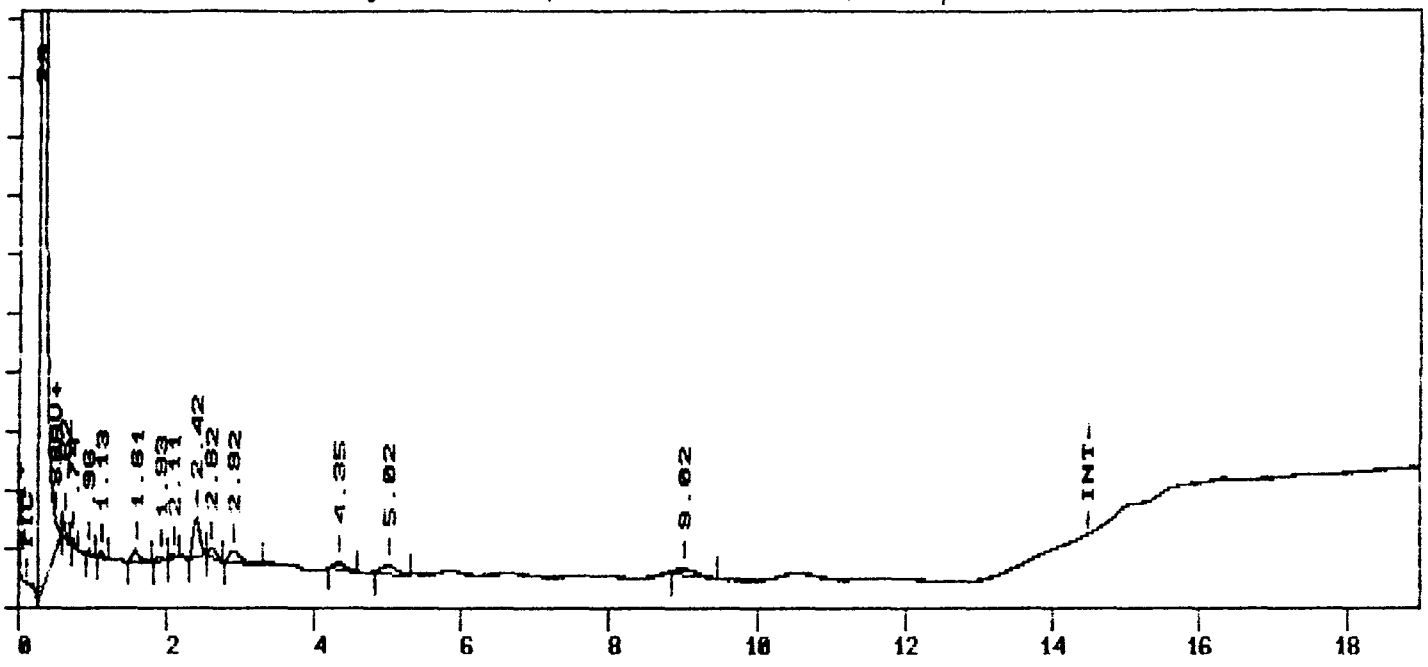
PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	0.97	793	87.667	0.0081 MG/L
	0.97	793		

A1248 was not detected.

A1254 was not detected.

A1260 was not detected.

File=C:\DIRECT\DATA3\032153AA.03R Date printed=03-21-1995 Time= 16:01:31
Sample Name=R013 PCB 3374 SOIL 9503-342-001
0.0 to 19.0 min. Low Y=-7.233 High Y=42.767 mv Span=50.0



210 13 MIN 15oC/MIN 250 4 MIN 250 INJ 300 DET 24 MLS/MIN
Data file = C:\DIRECT\DATA3\032153AA.03R
Date stamp = 03/21/95 Time = 16:00:44
Sample name = R013 PCB 3374 SOIL 9503-342-001
Collected on Mar 21, 1995 16:00:45 from port # 3
Operator = CJ
Sequence file = 032153AA.SEQ #3
Instrument = V3700--DET 3A
Method name = C:\DIRECT\DATA3\START3.MET version # 60
Date method last modified = 03/21/95 Time = 10:17:48
Calibration file = C:\DIRECT\DATA3\MAR21AC.CAL version # 2
Date cal file last modified = 03/21/95 Time = 10:17:18
Run time = 19.00 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-21-1995 Time = 16:02:35

MD 3-22-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.287		98,477.3125	92.2906%	984,773.1	92.291%	BB	0.042	386,942.44	97.1229%
2	0.623		420.9855	0.3945%	4,209.9	0.395%	BB	0.048	1,466.43	0.3681%
3	0.742		160.7883	0.1507%	1,607.9	0.151%	BB	0.042	636.19	0.1597%
4	0.963	- 1242	184.0270	0.1725%	1,840.3	0.172%	BB	0.063	486.81	0.1222%
5	1.133	- 1242, 48	222.6606	0.2087%	2,226.6	0.209%	BB	0.064	578.86	0.1453%
6	1.606	- 1242, 48	715.0867	0.6702%	7,150.9	0.670%	BB	0.121	982.20	0.2465%
7	1.933	- 1248	210.2127	0.1970%	2,102.1	0.197%	BB	0.103	338.74	0.0850%
8	2.112		177.2361	0.1661%	1,772.4	0.166%	BB	0.081	363.61	0.0913%
9	2.421		2,014.2731	1.8877%	20,142.7	1.888%	BB	0.104	3,236.25	0.8123%
10	2.617	- 1242, 48, 54	546.3294	0.5120%	5,463.3	0.512%	BB	0.129	704.84	0.1769%
11	2.919	- 1242, 48, 54	1,101.7865	1.0326%	11,017.9	1.033%	BB	0.185	993.59	0.2494%
12	4.350	- 1254	667.8607	0.6259%	6,678.6	0.626%	BB	0.194	575.11	0.1444%
13	5.023	- 1254	880.2289	0.8249%	8,802.3	0.825%	BB	0.234	626.95	0.1574%
14	9.016	- 1260	924.7839	0.8667%	9,247.8	0.867%	BB	0.326	473.05	0.1187%

Total area = 1067036 Total amount = 106703.6 Sample units = Ug,Mg/Kg,L Total height = 398405.1

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA3\MAR21AC.CAL
Calibration file date: 3/21/95 10:13
Instrument: GC3 Column: OV101 10%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA3\032153AA.03R
Sample name: R013 PCB 3374 SOIL 9503-342-001
Injection Date: Mar 21, 1995 16:00:45
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	0.96	487	72.875	1.1766 MG/L
	1.13	579		
	1.61	982		
	2.62	705		
	2.92	994		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	1.93	339	48.286	0.9898 MG/L
	2.11	364		
	2.62	705		
	2.92	994		
	4.35	575		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.62	705	35.986	0.7148 MG/L
	2.92	994		
	4.35	575		
	5.02	627		

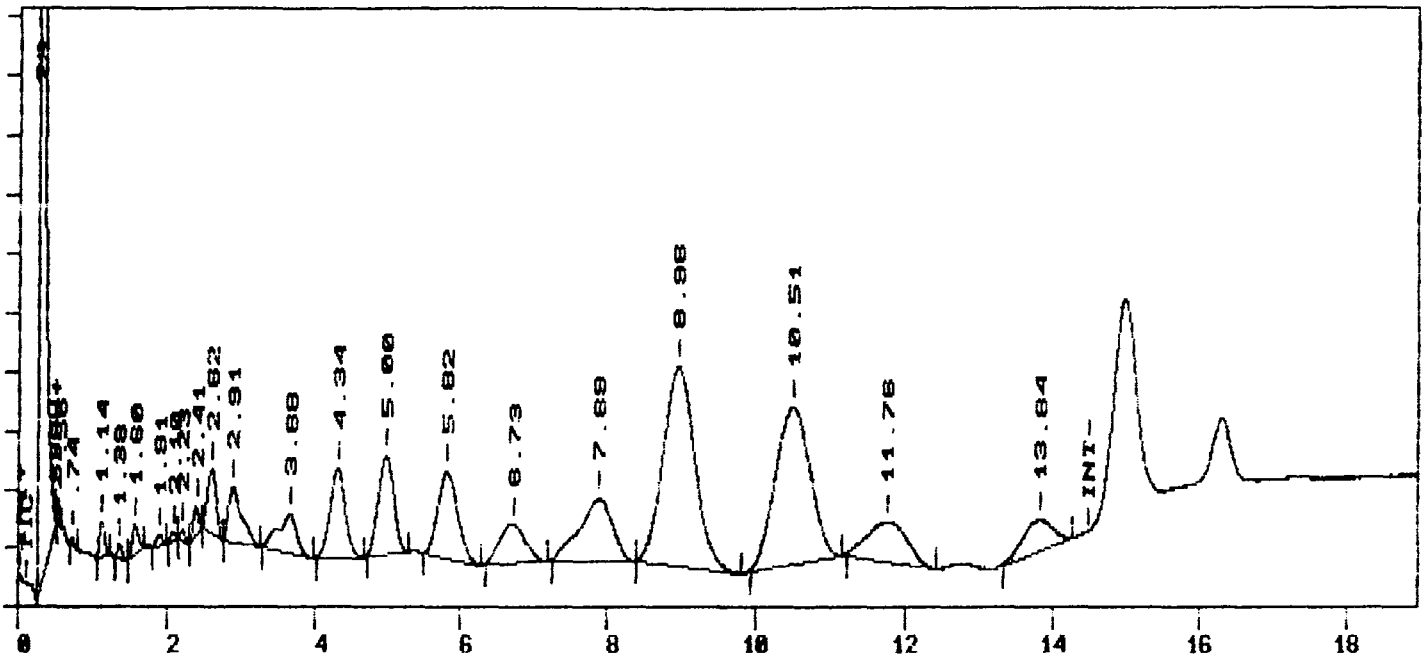
PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1260	5.02	627	0.0	0.2502 MG/L

LOD 16.10

$2 \times \frac{1}{.8390} = 2.4$

<2

File=C:\DIRECT\DATA3\032153AA.04R Date printed=03-21-1995 Time= 16:25:21
Sample Name=R013 PCB 3374 SOIL 9503-342-002
0.0 to 19.0 min. Low Y=-7.089 High Y=42.911 mv Span=50.0



210 13 MIN 15oC/MIN 250 4 MIN 250 INJ 300 DET 24 MLS/MIN
Data file = C:\DIRECT\DATA3\032153AA.04R
Date stamp = 03/21/95 Time = 16:25:04
Sample name = R013 PCB 3374 SOIL 9503-342-002
Collected on Mar 21, 1995 16:25:04 from port # 3
Operator = CJ
Sequence file = 032153AA.SEQ #4
Instrument = V3700--DET 3A
Method name = C:\DIRECT\DATA3\START3.MET version # 60
Date method last modified = 03/21/95 Time = 10:17:48
Calibration file = C:\DIRECT\DATA3\MAR21AC.CAL version # 2
Date cal file last modified = 03/21/95 Time = 10:17:18
Run time = 19.00 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-21-1995 Time = 16:26:25

CJD 3-22-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.286		105,454.3984	34.6369%	1,054,544.0	34.637%	BB	0.042	415,395.25	81.1477%
2	0.556		384.3904	0.1263%	3,843.9	0.126%	BB	0.029	2,186.83	0.4272%
3	0.737		179.2544	0.0589%	1,792.5	0.059%	BB	0.042	717.09	0.1401%
4	1.142	- 1242	1,396.9880	0.4588%	13,969.9	0.459%	BB	0.076	3,059.54	0.5977%
5	1.385	- 1242, 48	468.6646	0.1539%	4,686.6	0.154%	BB	0.064	1,226.94	0.2397%
6	1.596	- 1242, 48	1,493.5203	0.4906%	14,935.2	0.491%	BB	0.101	2,454.56	0.4795%
7	1.912	- 1248	632.8178	0.2079%	6,328.2	0.208%	BB	0.102	1,029.11	0.2010%
8	2.102		398.6113	0.1309%	3,986.1	0.131%	BB	0.080	834.84	0.1631%
9	2.227		384.2353	0.1262%	3,842.4	0.126%	BB	0.073	877.46	0.1714%
10	2.414		1,245.5327	0.4091%	12,455.3	0.409%	BB	0.086	2,403.23	0.4695%
11	2.623	- 1242, 48, 54	4,534.1113	1.4892%	45,341.1	1.489%	BB	0.138	5,490.15	1.0725%
12	2.906	- 1242, 48, 54	6,167.5352	2.0258%	61,675.4	2.026%	BB	0.216	4,752.50	0.9284%
13	3.683		6,102.2969	2.0043%	61,023.0	2.004%	BB	0.294	3,455.53	0.6750%
14	4.337	- 1254	11,007.1016	3.6153%	110,071.0	3.615%	BB	0.241	7,601.83	1.4850%
15	4.999	- 1254	12,378.1113	4.0656%	123,781.1	4.066%	BB	0.248	8,312.52	1.6239%
16	5.824	- 1254, 60	13,789.5684	4.5292%	137,895.7	4.529%	BB	0.314	7,318.49	1.4297%

18	7.894		16,473.7109	5.4109%	164,737.1	5.411%	BB	0.516	5,320.87	1.0394%
19	8.964	- 1260	50,132.0547	16.4661%	501,320.6	16.466%	BB	0.500	16,710.22	3.2644%
20	10.510		43,331.6602	14.2325%	433,316.6	14.232%	BB	0.545	13,258.91	2.5901%
21	11.764		12,728.0254	4.1806%	127,280.3	4.181%	BB	0.615	3,450.05	0.6740%
22	13.840		7,608.2617	2.4990%	76,082.6	2.499%	BB	0.474	2,677.07	0.5230%

Total area = 3044565 Total amount = 304456.5 Sample units = Ug,Mg/Kg,L Total height = 511900.3

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA3\MAR21AC.CAL
Calibration file date: 3/21/95 10:13
Instrument: GC3 Column: OV101 10%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA3\032153AA.04R
Sample name: R013 PCB 3374 SOIL 9503-342-002
Injection Date: Mar 21, 1995 16:25:04
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	1.14	3060	69.325	5.9095 MG/L
	1.14	3060		
	1.60	2455		
	2.62	5490		
	2.91	4753		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	1.91	1029	100.521	6.5692 MG/L
	2.23	877		
	2.62	5490		
	2.91	4753		
	4.34	7602		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.62	5490	22.8	6.8509 MG/L
	2.91	4753		
	4.34	7602		
	5.00	8313		
	5.82	7318		

LOD 14.74

A1254 $\frac{1}{.8526} \times 14 = 8.2$

PCB Calculator(c) - Automatic Resulting Sample Report

Sample continued from previous page
Data file: C:\DIRECT\DATA3\032153AA.04R Injection Date:
Mar 21, 1995 16:25:04

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1260	5.00	8313	50.196	8.5193 MG/L
	5.82	7318		
	6.73	3367		
	8.96	16710		

9

STD	STD(H)	Sample
4.98	65113	8312
5.78	45768	7318
6.58	38517	3367
7.48	29542	5320
8.90	60175	16710
	239,115	41027

MD 3.22.95

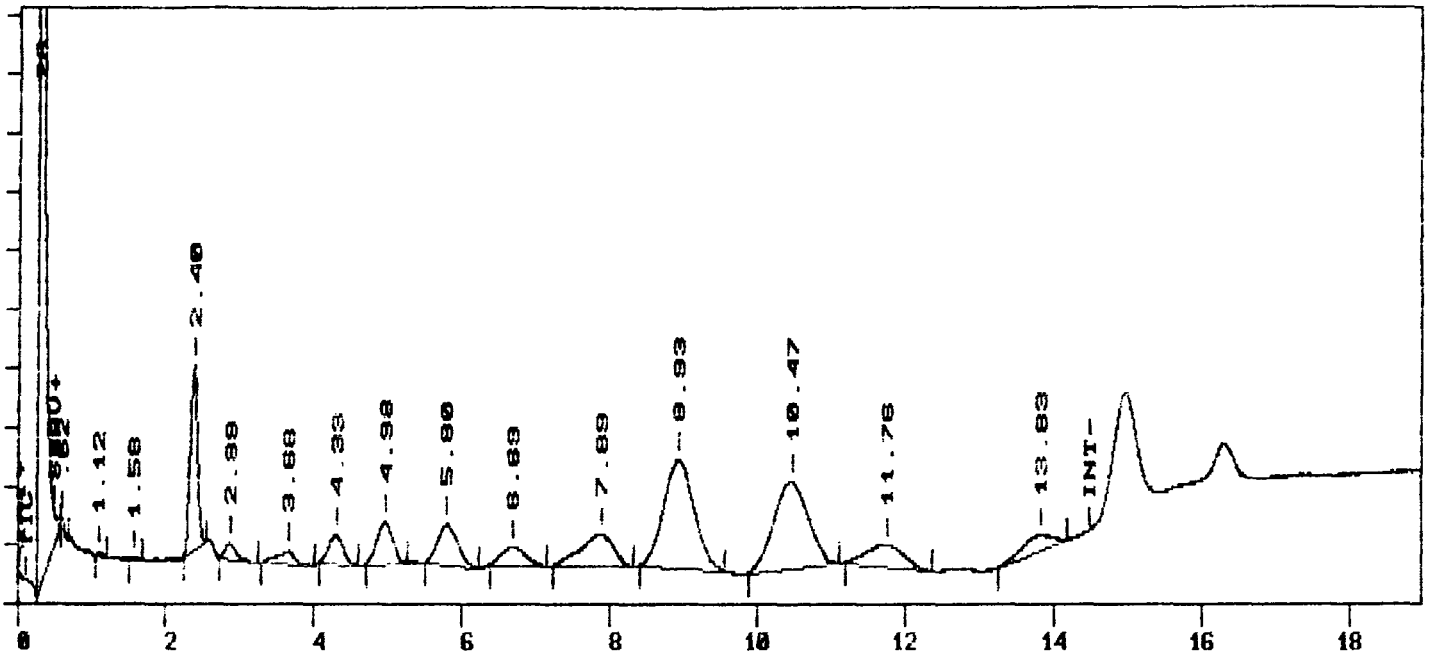
$$\frac{.5}{239,115} \times \frac{X}{41027}$$

$$X = .0858 \times 100 \text{ Dil F.}$$

$$X = 9 \times \frac{1}{.8526} = 110$$

11 A1260
+ 8 A1254
19

File=C:\DIRECT\DATA3\032153AA.05R Date printed=03-21-1995 Time= 16:58:25
Sample Name=R013 PCB 3374 SOIL 9503-342-003
0.0 to 19.0 min. Low Y=-7.164 High Y=42.836 mv Span=50.0



210 13 MIN 15oC/MIN 250 4 MIN 250 INJ 300 DET 24 MLS/MIN
Data file = C:\DIRECT\DATA3\032153AA.05R
Date stamp = 03/21/95 Time = 16:49:20
Sample name = R013 PCB 3374 SOIL 9503-342-003
Collected on Mar 21, 1995 16:49:20 from port # 3
Operator = CJ
Sequence file = 032153AA.SEQ #5
Instrument = V3700--DET 3A
Method name = C:\DIRECT\DATA3\START3.MET version # 60
Date method last modified = 03/21/95 Time = 10:17:48
Calibration file = C:\DIRECT\DATA3\MAR21AC.CAL version # 2
Date cal file last modified = 03/21/95 Time = 10:17:18
Run time = 19.00 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-21-1995 Time = 16:59:29

PJD 3-22-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.285		112,082.7734	51.9959%	1,120,827.8	51.996%	BB	0.043	434,061.72	89.0632%
2	0.617		276.5635	0.1283%	2,765.6	0.128%	BB	0.046	1,011.58	0.2076%
3	1.120	- 1242	164.1567	0.0762%	1,641.6	0.076%	BB	0.072	381.48	0.0783%
4	1.579	- 1242, 48	117.1828	0.0544%	1,171.8	0.054%	BB	0.084	232.07	0.0476%
5	2.403	- 1242, 48, 54	10,556.9707	4.8974%	105,569.7	4.897%	BB	0.114	15,395.38	3.1589%
6	2.893	- 1242, 48, 54	1,697.4658	0.7875%	16,974.7	0.787%	BB	0.193	1,466.24	0.3009%
7	3.683		1,993.2656	0.9247%	19,932.7	0.925%	BB	0.288	1,152.72	0.2365%
8	4.327	- 1254	3,396.6597	1.5757%	33,966.6	1.576%	BB	0.228	2,485.89	0.5101%
9	4.979	- 1254	5,203.1646	2.4138%	52,031.6	2.414%	BB	0.246	3,521.45	0.7225%
10	5.803	- 1254, 60	6,442.1416	2.9886%	64,421.4	2.989%	BB	0.312	3,438.44	0.7055%
11	6.694	- 1260	3,736.4526	1.7334%	37,364.5	1.733%	BB	0.386	1,614.30	0.3312%
12	7.889		8,646.7754	4.0113%	86,467.8	4.011%	BB	0.512	2,816.79	0.5780%
13	8.930	- 1260	26,506.3223	12.2965%	265,063.2	12.296%	BB	0.483	9,143.57	1.8761%
14	10.473		24,004.7383	11.1360%	240,047.4	11.136%	BB	0.545	7,347.20	1.5075%
15	11.760		6,783.1001	3.1467%	67,831.0	3.147%	BB	0.593	1,907.65	0.3914%
16	13.834		3,952.8875	1.8338%	39,528.9	1.834%	BB	0.475	1,387.39	0.2847%

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA3\MAR21AC.CAL
Calibration file date: 3/21/95 10:13
Instrument: GC3 Column: OV101 10%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA3\032153AA.05R
Sample name: R013 PCB 3374 SOIL 9503-342-003
Injection Date: Mar 21, 1995 16:49:20
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	1.12	381	163.674	5.6081 MG/L
	1.12	381		
	1.58	232		
	2.40	15395		
	2.89	1466		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	2.40	15395	114.04	13.5367 MG/L
	2.40	15395		
	2.89	1466		
	4.33	2486		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.40	15395	123.905	5.3839 MG/L
	2.89	1466		
	4.33	2486		
	4.98	3521		
	5.80	3438		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1260	4.98	3521	61.162	4.2271 MG/L
	5.80	3438		
	6.69	1614		
	8.93	9144		

LOD = 15.48

$4 \times \frac{1}{.8452} = 5$

A1260 5

MD 3-22-95

Sequence file C:\DIRECT\DATA3\NEWCUR.SEQ Date = 03-09-1995 Time = 12:18:47

#	DATA FILE	SAMPLE NAME	METHOD	SAMPLE WEIGHT	AMT INJ	DIL FAC	INT STD AMT	CAL
1	030953A.01R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0
2	030953A.02R	A1242 GCA 483 0.02 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
3	030953A.03R	A1242 GCA 488 1.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
4	030953A.04R	A1242 GCA 487 1.00 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
5	030953A.05R	A1242 GCA 486 0.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
6	030953A.06R	A1242 GCA 485 0.25 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
7	030953A.07R	A1242 GCA 485 0.10 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
8	030953A.08R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0
9	030953A.09R	A1248 GCA 489 0.02 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
10	030953A.10R	A1248 GCA 494 1.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
11	030953A.11R	A1248 GCA 493 1.00 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
12	030953A.12R	A1248 GCA 492 0.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
13	030953A.13R	A1248 GCA 491 0.25 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
14	030953A.14R	A1248 GCA 490 0.10 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
15	030953A.15R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0
16	030953A.16R	A1254 GCA 495 0.02 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
17	030953A.17R	A1254 GCA 500 1.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
18	030953A.18R	A1254 GCA 499 1.00 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
19	030953A.19R	A1254 GCA 498 0.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
20	030953A.20R	A1254 GCA 497 0.25 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
21	030953A.21R	A1254 GCA 496 0.10 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
22	030953A.22R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0
23	030953A.23R	A1260 GCA 501 0.02 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
24	030953A.24R	A1260 GCA 506 1.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
25	030953A.25R	A1260 GCA 505 1.00 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
26	030953A.26R	A1260 GCA 504 0.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
27	030953A.27R	A1260 GCA 503 0.25 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
28	030953A.28R	A1260 GCA 502 0.10 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
29	030953A.29R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0

PCB Component #1 A1242 WINDOW size in minutes

LEVEL	AMOUNT	STD FILE	DATE & TIME	CAL. FACTOR
1	0.02	030953A.02A	3/9/09 10:06	1.517257E+05
2	1.5	030953A.03A	3/9/09 10:30	1.348816E+05
3	1.0	030953A.04A	3/9/09 10:54	1.355937E+05
4	0.5	030953A.05A	3/9/09 11:19	1.643474E+05
5	0.25	030953A.06A	3/9/09 11:43	1.593803E+05
6	0.1	030953A.07A	3/9/09 12:07	1.862825E+05

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT
1	1.043	+-0.3	0.743	to	1.343	1.0
2	1.274	+-0.3	0.974	to	1.574	1.0
3	1.589	+-0.3	1.289	to	1.889	1.0
4	2.631	+-0.3	2.331	to	2.931	1.0
5	2.916	+-0.3	2.616	to	3.216	1.0

Mean Calibration Factor = 1.553685E+05
Standard Deviation = 1.937223E+04
percent Relative Std. deviation = 12.47

PCB Calculator(c) Calibration File
3/10/95 10:07

Initial Calibration C:\DIRECT\DATA1\MAR093AC.CAM Version# = 3
Calibration file date = 3/10/95 9:16
Instrument: GC3 Column: OV101 10% Sample units: MG/L

PCB Component #2 A1248 WINDOW size in minutes

LEVEL	AMOUNT	STD FILE	DATE & TIME	CAL. FACTOR
1	0.02	030953A.09A	3/9/09 12:56	1.396153E+05
2	1.5	030953A.10A	3/9/09 13:20	1.251557E+05
3	1.0	030953A.11A	3/9/09 13:52	1.300415E+05
4	0.5	030953A.12A	3/9/09 14:10	1.289549E+05
5	0.25	030953A.13A	3/9/09 14:33	1.440384E+05
6	0.1	030953A.14A	3/9/09 15:09	1.665298E+05

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT
1	1.931	+-0.3	1.631	to	2.231	1.0
2	2.249	+-0.3	1.949	to	2.549	1.0
3	2.639	+-0.3	2.339	to	2.939	1.0
4	2.923	+-0.3	2.623	to	3.223	1.0
5	4.359	+-0.3	4.059	to	4.659	1.0

Mean Calibration Factor = 1.390559E+05
Standard Deviation = 1.520828E+04
percent Relative Std. deviation = 10.94

PCB Calculator(c) Calibration File
3/10/95 10:07

Initial Calibration C:\DIRECT\DATA1\MAR093AC.CAM Version# = 3
Calibration file date = 3/10/95 9:16
Instrument: GC3 Column: OV101 10% Sample units: MG/L

PCB Component #3 A1254 WINDOW size in minutes

LEVEL	AMOUNT	STD FILE	DATE & TIME	CAL. FACTOR
1	0.02	030753AA.16A	3/7/09 23:44	1.174539E+04
2	1.5	030753AA.17A	3/8/09 0:09	1.566051E+02
3	1.0	030753AA.18A	3/8/09 0:33	1.311663E+03
4	0.5	030753AA.19A	3/8/09 0:58	1.606375E+03
5	0.25	030753AA.20A	3/8/09 1:22	4.611835E+03
6	0.1	030753AA.21A	3/8/09 1:46	4.856634E+05

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT
1	2.644	+-0.3	2.344	to	2.944	1.0
2	3.050	+-0.3	2.750	to	3.350	1.0
3	4.349	+-0.3	4.049	to	4.649	1.0
4	5.019	+-0.3	4.719	to	5.319	1.0
5	5.847	+-0.3	5.547	to	6.147	1.0

Mean Calibration Factor = 8.418255E+04
Standard Deviation = 1.967294E+05
percent Relative Std. deviation = 2.336938E+02

PCB Calculator(c) Calibration File
3/10/95 10:07

Initial Calibration C:\DIRECT\DATA1\MAR093AC.CAM Version# = 3
Calibration file date = 3/10/95 9:16
Instrument: GC3 Column: OV101 10% Sample units: MG/L
Curve fit is Mean Calibration Factor

PCB Component #4 A1260 WINDOW size in minutes

LEVEL	AMOUNT	STD FILE	DATE & TIME	CAL. FACTOR
1	0.02	030953A.23A	3/10/09 9:40	2.111444E+05
2	1.5	030953A.24A	3/10/09 9:41	2.053149E+05
3	1.0	030953A.25A	3/10/09 9:43	2.081138E+05
4	0.5	030953A.26A	3/10/09 9:45	2.085255E+05
5	0.25	030953A.27A	3/10/09 9:47	2.417712E+05
6	0.1	030953A.28A	3/10/09 9:49	2.901153E+05

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT
1	5.033	+-0.3	4.733	to	5.333	1.0
2	5.850	+-0.3	5.550	to	6.150	1.0
3	6.636	+-0.3	6.336	to	6.936	1.0
4	7.564	+-0.3	7.264	to	7.864	1.0
5	8.997	+-0.3	8.697	to	9.297	1.0

Mean Calibration Factor = 2.274975E+05
Standard Deviation = 3.352575E+04
percent Relative Std. deviation = 14.74

Sequence file C:\DIRECT\DATA3\DAILY3A.SEQ Date = 03-21-1995 Time = 06:03:07

#	DATA FILE	SAMPLE NAME	METHOD	SAMPLE WEIGHT	AMT INJ	DIL FAC	INT STD AMT	CAL
1	032153A.01R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0
2	032153A.02R	A1242 GCA 486 0.50 PPM -2.47	...TART3.MET	1.00	1.00	1.00	0.00	0
3	032153A.03R	A1248 GCA 492 0.50 PPM -8.11	...TART3.MET	1.00	1.00	1.00	0.00	0
4	032153A.04R	A1254 GCA 498 0.50 PPM -8.65	...TART3.MET	1.00	1.00	1.00	0.00	0
5	032153A.05R	A1260 GCA 504 0.50 PPM -5.11	...TART3.MET	1.00	1.00	1.00	0.00	0
6	032153A.06R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0
7	032153A.07R	GCA 508 A1242 LCS .5PPM 1.12	...TART3.MET	1.00	1.00	1.00	0.00	0
8	032153A.08R	GCA 509 A1248 LCS .5PPM 1.08	...TART3.MET	1.00	1.00	1.00	0.00	0
9	032153A.09R	GCA 510 A1254 LCS .5PPM 1.10	...TART3.MET	1.00	1.00	1.00	0.00	0
10	032153A.10R	GCA 511 A1260 LCS .5PPM 1.19	...TART3.MET	1.00	1.00	1.00	0.00	0

to diff

cal factor

PCB Calculator(c) Calibration File
3/21/95 10:13

Continuing Calibration C:\DIRECT\DATA3\MAR21AC.CAM Version# = 24
Calibration file date = 3/21/95 10:13
Initial calibration file is C:\DIRECT\DATA3\MAR093AC.CAM
Instrument: GC3 Column: OV101 10% Sample units: MG/L
Curve fit is Mean Calibration Factor

PCB Component #1 A1242 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	032153A.02A	3/21/09 6:54

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	1.027	+-0.3	0.727	to	1.327	1.0	33694.379
2	1.255	+-0.3	0.955	to	1.555	1.0	28085.533
3	1.565	+-0.3	1.265	to	1.865	1.0	45808.703
4	2.594	+-0.3	2.294	to	2.894	1.0	36166.625
5	2.870	+-0.3	2.570	to	3.170	1.0	15447.834

Mean Calibration Factor = 1.553685E+05
Calibration Factor of 032153A.02A = 159203.078
percent Difference = -2.47

MD
3.21.95

PCB Calculator(c) Calibration File
3/21/95 10:13

Continuing Calibration C:\DIRECT\DATA3\MAR21AC.CAM Version# = 24
Calibration file date = 3/21/95 10:13
Initial calibration file is C:\DIRECT\DATA3\MAR093AC.CAM
Instrument: GC3 Column: OV101 10% Sample units: MG/L
Curve fit is Mean Calibration Factor

==========

PCB Component #3 A1254 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	032153A.04A	3/21/09 7:48

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	2.613	+-0.3	2.313	to	2.913	1.0	39356.648
2	3.019	+-0.3	2.719	to	3.319	1.0	47733.18
3	4.295	+-0.3	3.995	to	4.595	1.0	64849.512
4	4.962	+-0.3	4.662	to	5.262	1.0	50939.656
5	5.778	+-0.3	5.478	to	6.078	1.0	41434.426

Mean Calibration Factor = 2.248701E+05
Calibration Factor of 032153A.04A = 244313.422
percent Difference = -8.65

MP
3-21-95

PCB Calculator(c) Calibration File
3/21/95 10:13

Continuing Calibration C:\DIRECT\DATA3\MAR21AC.CAM Version# = 24
Calibration file date = 3/21/95 10:13
Initial calibration file is C:\DIRECT\DATA3\MAR09SAC.CAM
Instrument: GC3 Column: OV101 10% Sample units: MG/L
Curve fit is Mean Calibration Factor

PCB Component #2 A1248 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	032153A.03A	3/21/09 7:19

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	1.901	+-0.3	1.601	to	2.201	1.0	22001.695
2	2.214	+-0.3	1.914	to	2.514	1.0	17877.426
3	2.590	+-0.3	2.290	to	2.890	1.0	65690.742
4	2.877	+-0.3	2.577	to	3.177	1.0	26528.732
5	4.297	+-0.3	3.997	to	4.597	1.0	18251.621

Mean Calibration Factor = 1.390559E+05
Calibration Factor of 032153A.03A = 150330.219
percent Difference = -8.11

FD 3-21-95

PCB Calculator(c) Calibration File
3/21/95 10:13

Continuing Calibration C:\DIRECT\DATA3\MAR21AC.CAM Version# = 24
Calibration file date = 3/21/95 10:13
Initial calibration file is C:\DIRECT\DATA3\MAR093AC.CAM
Instrument: GC3 Column: OV101 10% Sample units: MG/L
Curve fit is Mean Calibration Factor

==========

PCB Component #4 A1260 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	032153A.05A	3/21/09 8:08

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	4.975	+-0.3	4.675	to	5.275	1.0	65113.344
2	5.778	+-0.3	5.478	to	6.078	1.0	45767.734
3	6.583	+-0.3	6.283	to	6.883	1.0	38517.195
4	7.480	+-0.3	7.180	to	7.780	1.0	29542.254
5	8.903	+-0.3	8.603	to	9.203	1.0	60174.711

Mean Calibration Factor = 2.274975E+05
Calibration Factor of 032153A.05A = 239115.234
percent Difference = -5.11

CD
3-21-95

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

RIEDEL ENVIRONMENTAL SERVICES, INC.
18207 EDISON AVENUE
CHESTERFIELD, MO 63005-3703

ATTN: KEN BRAIG

INVOICE # 31274
PROJECT # 8165, SAUGET LANDFILL

ANALYSIS REPORT

PCBs IN SOIL

SW-846 8080

LAB NO.	SAMPLE NO.	IDENTIFICATION	TOTAL ppm	TYPE
9503/522-001		LB35.2	<3	
METHOD BLANK				

3-B Analytical Results/QA/QC

Site Q

samples taken during removal

DATE COLLECTED : 3/31/95
DATE RECEIVED : 3/31/95 13:01
DATE ANALYZED : 4/01/95
ANALYST : C.D.

APRIL 3, 1995

WAYNE L. COOPER
LABORATORY DIRECTOR

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

RIEDEL ENVIRONMENTAL SERVICES, INC.
18207 EDISON AVENUE
CHESTERFIELD, MO 63005-3703

ATTN: KEN BRAIG

INVOICE # 31252
PROJECT # 8165, SAUGET LANDFILL SITE Q

ANALYSIS REPORT

PCBs IN SOIL

SW-846 8080

LAB NO.	SAMPLE NO.	IDENTIFICATION	TOTAL ppm	TYPE
9503/482-001		LB-35 LANDFILL	133	1254/1260
9503/482-002		LB-34 LANDFILL	<2	--
9503/482-004		LB-31 LANDFILL	24	1254/1260
9503/482-005		BF-01 LANDFILL	<2	--
METHOD BLANK		PCB-3393	<2	--

DATE COLLECTED : 3/29/95
DATE RECEIVED : 3/29/95 14:47
DATE ANALYZED : 3/30/95
ANALYST : C.D.

MARCH 30, 1995

WAYNE L. COOPER
LABORATORY DIRECTOR

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

RIEDEL ENVIRONMENTAL SERVICES, INC.
18207 EDISON AVENUE
CHESTERFIELD, MO 63005-3703

ATTN: KEN BRAIG

INVOICE # 31252
PROJECT # 8165, SAUGET LANDFILL SITE Q

ANALYSIS REPORT

PCBs IN SWABS

SW-846 8080

LAB NO.	SAMPLE NO.	IDENTIFICATION	TOTAL ug	TYPE
9503/482-003		2800LF TRECKHOE	26	1254/1260
METHOD BLANK		PCB-3394	<2	--
LCS		PCB-3394	42.6	1248

LABORATORY CONTROL SAMPLE 85% RECOVERY

All Values are ± 10%

DATE COLLECTED : 3/29/95
DATE RECEIVED : 3/29/95 14:47
DATE ANALYZED : 3/30/95
ANALYST : C.D.

MARCH 30, 1995

WAYNE L. COOPER
LABORATORY DIRECTOR

CASE NARRATIVE

REQUIREMENTS FOR ANY QA/QC LEVEL

Please Note: If a CLP Package or the USEPA QA/QC Reporting Package known as "Quality Assurance/Quality Control - Guidance for Removal Activities" is requested all QA/QC reporting documentation required in those documents takes precedence over these requirements.

- **General Requirements/Information** (Required for all QA/QC Levels)

1. Date sampled 03-29-95 Date received 03-29-95

2. Number of samples received 5

3. Sample description 4 soils, 1 wipe

4. Sample preparation date 03-29-95
   Date extracted (if applicable) 03-29-95

5. Date analyzed Soil - 03-30-95 wipe 03-30-95 Time analyzed soil - 12:24 - 13:37 wipe - 11:12
   Analyst CJD

6. Did Riedel indicate a specific method? Yes ___ No X

   a. If Yes, what was that method? N/A

7. Did Riedel specify additional QA/QC requirement beyond the minimum and mandatory items? Yes ___ No X If yes, please specify. N/A

   a. What QA/QC level was requested? N/A Used by lab? ___

   b. If lab used a different QA/QC level than requested by Riedel, an explanation must be supplied by lab. ___

- **QC Remarks** (Required as relates to QA/QC level requested)

1. Were holding times met? Yes X No ___ If No, why? ___

2. Test Methods

   a. Parameters PCB
   b. *Approved* Methods SW 846 8080
   c. Was a cleanup method requested *for Semi-Volatile Organic Analyses*?

      1. Yes ___ No X
      2. If No, what method was used and why? ___
      3. If Yes, identify method used? ___

3. Were peak resolutions *(i.e. Chromatograms)* requested? Yes ___ No X If Yes, please comment. _

4. Initial calibration (% Relative Standard Deviation) less than 20%

5. Has continuing calibration (% difference) been requested? If yes, indicate % difference. _____
less than 15%

6. Were all Matrix Spikes/Matrix Spike duplicates < 20% RSD? Yes ___ No X

   a. If Yes, indicate I.D. No. and %. _____
   b. If No, indicate I.D. No. and %, plus why the < 20% RSD was not obtained. _____
   Duplicate Sample & MS were done

7. Were surrogates run *for Organic Analyses*? Yes ___ No X

   a. If Yes, indicate type and recovery (Min. Recovery is 80%). _____
   b. If not, indicate why not. Pattern Recognition
   c. If min. recovery was not obtained, indicate why not? _____

8. Please provide the following as applicable.

   a. Minimum Detection Limits: < 2
   b. Estimated Quantitation Limits: 2
   c. Dilution Factor: Wipes = 100
   Soils = 100

9. Were *any other annomalies encountered during the analysis*? Yes ___ No X

   a. If Yes, type: _____
   b. If Yes, why were they observed? _____

10. Was this laboratory work performed under either "Minimum and Mandatory Contractual Terms for Analytical Laboratories not on the Pre-Approved Midwest/Great Lakes Region Acceptance List" or a "Master Subcontract" with your laboratory, specifically for ERCS Region V? Yes X No___

    a. If yes, Environmetrics states that the USEPA document known as "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures Interim Final EPA/540/G-90/004 April 1990" was utilized as guidance in the review and validation of all data for this project.

11. **WARNING!! NO DATA SHALL BE RELEASED** verbally, written, or otherwise to any authorized representative of Riedel Environmental Services, Inc. or their client that does not meet or exceed the QA/QC levels established in any written or verbal RFP for this project, or the requirements for any and all SW 846 Methods or EPA Methods utilized for this project.

Any incorrect data that is released to any authorized Riedel Environmental Services, Inc. representative or their client that causes improper site related work or disposal decisions to be made by Riedel Environmental Services, Inc. or their client, will cause Environmetrics to be completely liable for all costs associated with those decisions.

12. Reporting

a. Contact Person Name: _____ Phone No. _____

b. Reporting Party:

Signature: _____

Printed Name: _____

This Minimum and Mandatory Requirements for any QA/QC level must be completed and returned to the following within three (3) working days of data submittal to Riedel Project Manager.

Please submit as indicated below:

Yes	No	
X	___	Original to Riedel Project Manager at:
___	___	Copy to St. Louis District Office:
___	___	Copy to Chicago District Office:
___	___	Copy to Detroit District Office:

Original to Riedel Project Manager at:

_____
_____
_____
_____
_____

Copy to St. Louis District Office:

Riedel Environmental Services, Inc.
Attn: Daniel J. Wilson
18207 Edison Avenue
Chesterfield, MO 63005
Phone:(314) 532-7660
Fax:(314) 536-1655

Copy to Chicago District Office:

Riedel Environmental Services, Inc.
***Non-ERCS Projects: ___ Tony Price ___ Bruce Mack**
***ERCS Projects: ___ Mark Douglas ___ Todd Ritsema**
500 Eastern Avenue
Bensonville, IL 60106
Phone:(708) 238-1818
Fax:(708) 238-1838

Copy to Detroit District Office:

Riedel Environmental Services, Inc.
Attn: Charlie Klumb
28340 Goddard Road
Romulus, MI 48174
Phone:(313) 946-8640
Fax:(313) 946-8676

CONTINUATION SHEET
RIEDEL ENVIRONMENTAL SERVICES, INC.
CHAIN OF CUSTODY RECORD
18207 EDISON AVENUE
CHESTERFIELD, MO 63005
(314) 532-7660

Document Number from Page 1 _____
Page 1 of 1

Project Name: Sauget Landfill
Project Number: 8185
Results To: K. Braig
Telephone # 314-532-7660 Fax # 314-536-1655

Lab: Environmetrics

Special Instructions:
Special Detection Limits: NA
Analyze Each Phase of Sample _____
Analyze _____ Phase of Sample _____
Analyze Sample As Is, Dry Weight, Wet Weight _____

Lab ID #	Sample ID#	Sample Location	Matrix	Collection Date Time	Preservative	PCB 24hr turnaround -48hr								Notes/Special Request
	LB35.2	Sauget Landfill	Soil	3-31-95		X								24-48hr turnaround

Relinquished By: (Signature)	Date	Time AM/PM	Relinquished By: (Signature)	Date	Time AM/PM
[signature]	3-31-95	12:22	[signature]	3-31-95	12:22
Relinquished By: (Signature)	Date	Time AM/PM	Relinquished By: (Signature)	Date	Time AM/PM
Relinquished By: (Signature)	Date	Time AM/PM	Relinquished By: (Signature)	Date	Time AM/PM

Pink Copy = Client Yellow Copy = Manager White Copy = Lab

** 1 Day **

INTERNAL CUSTODY TRANSFER RECORD/LABORATORY WORK REQUEST

** 1 Day **

COC : 009062

Status: 1 Day

Company Name: Riedel Environmental Services Number: R013

Address: 18207 Edison Avenue

City/State/Zip: Chesterfield, Mo. 63017

Contact: Ken Braig

Date Received: 03/31/95

Date Logged: 03/31/95

Date Due (PM): 04/03/95

Date Due (Client): 04/03/95

Mode: Fax

Project No.: 8165

P.O. No.:

Quotation No.:

Sample Id. No.	Client Sample Name/Number	Matrix	Container	Preservative	Date Collected	Temp	Tests
9503000522-001-01	LB35.2 SAUGET LANDFILL	SOIL	1-250 ml GLASS	Cold	03/31/95		MODIFIED PCB-8080M

Special Instructions:

Items Transferred	Relinquished By	Date		Logged In By	Date	Time
1		03/31/95	PM Signature : Anne Morris, Client Services Rep.	Ann Quinlisk, Sample Login Specialist	03/31/95	13:01:55

** 1 Day **

** 1 Day **

** 1 Day **

INTERNAL CUSTODY TRANSFER RECORD/LABORATORY WORK REQUEST

** 1 Day **

COC : 009062
Company Name: Riedel Environmental Services Number: R013
Address: 18207 Edison Avenue
City/State/Zip: Chesterfield, Mo. 63017

Status: 1 Day
Contact: Ken Braig
Date Received: 03/31/95
Date Logged: 03/31/95

Date Due (PM): 04/03/95
Date Due (Client): 04/03/95
Mode: Fax

Project No.: 8165
P.O. No.:
Quotation No.:

Items Transferred	Relinquished By	Date	Time	Received By	Date	Time	Reason For Transfer
	[illegible]	3-31	1100	[illegible]	3-31-95	1:10	PCB

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

RIEDEL ENVIRONMENTAL SERVICES, INC.
18207 EDISON AVENUE
CHESTERFIELD, MO 63005-3703

ATTN: KEN BRAIG

INVOICE # 30761
PO # 32872
PROJECT # 273051, SAUGET LANDFILL
JOB # 8165

100% Confirmation

ANALYSIS REPORT

PCBs IN SOIL

SW-846 8080

LAB NO.	SAMPLE NO.	IDENTIFICATION	TOTAL ppm	TYPE
9502/397-001		4-B 2/22/95 15:30	<2	--
9502/397-002		9-B 2/22/95 15:40	2,245	1260
9502/397-003		12-B 2/22/95 15:50	693	1260
9502/397-004		18-B 2/22/95 16:00	613	1260
9502/397-005		19-B 2/22/95 16:10	63	1260
9502/397-006		22-B 2/22/95 16:20	<2	--
9502/397-007		B2 2/21/95 14:35	3,036	1260
9502/397-008		B3 2/21/95 14:35	14,587	1260

DATE COLLECTED : 2/21-22/95
DATE RECEIVED : 2/24/95 11:51
DATE ANALYZED : 2/24/95
ANALYST : C.J.

FEBRUARY 27, 1995

WAYNE L. COOPER
LABORATORY DIRECTOR

Sanger Verbals

SMITH
ENVIRONMENTAL TECHNOLOGIES CORPORATION

RIEDEL/SMITH ENVIRONMENTAL TECHNOLOGIES CORP.

18207 Edison Avenue
Chesterfield, MO 63005-3703
(314) 532-7660

Midwest/Great Lakes Regional Office
St. Louis District Office

Fax # (314) 536-1655

Facsimile Cover Page

Including this cover page, this transmission contains _____ pages.

TO: Sanny Sirhan

FAX #: _____

FROM: Ken Braig

DATE: _____

If you do not receive all pages correctly, please call (314) 532-7660 within the next ten (10) minutes.

NOTATION:

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

RIEDEL ENVIRONMENTAL SERVICES
18207 EDISON AVENUE
CHESTERFIELD, MO 63017

ATTN: KEN BRAIG

INVOICE # 30892
PO # 32872-1, ZT3051 TOS-9502-010

419467
658152
151
153

ANALYSIS RESULTS

PCBs IN SOIL

SW-846 8080

LAB NO.	SAMPLE IDENTIFICATION	TOTAL ppm	TYPE
9503/075-001	SEDIMENT/UPRIVER SD1 8:30	<2	--
9503/075-002	SEDIMENT/DOWNRIVER SD2 8:40	<2	--
9503/075-003	SEDIMENT/DOWNRIVER SD3 8:45	<3	--
9503/075-004	LANDFILL BANK #6 6-LB 12:10	440	1260
9503/075-005	LANDFILL BANK #20 20-LB 12:25	3	1254
9503/075-006	LANDFILL BANK #14 14-LB 12:40	<3	--
9503/075-007	BEACH AREA #15 15-B 9:00	<3	--
9503/075-008	BEACH AREA #11 11-B 9:30	<3	--
9503/075-009	BEACH AREA #14 14-B 9:45	84	1260
9503/075-010	BEACH AREA #10 10-B 10:30	26	1260

All Values are ± 10%

DATE COLLECTED : 2/26/95
DATE RECEIVED : 3/06/95 11:26
DATE ANALYZED : 3/6 & 7/95
ANALYST : C.D.

MARCH 8, 1995

WAYNE L. COOPER
LABORATORY DIRECTOR

SMITH ENVIRONMENTAL TECHNOLOGIES CORPORATION

ERCS REGION V

QA/QC DATA REVIEW

TO: Sam Borries - OSC USEPA REGION V
FROM: Mark Douglas - T and D Coordinator
THRU: DAN WILSON QA/QC Manager
PROJECT NAME: Sauget Land Fill
JOB NUMBER: 8168
LAB/SMITH SAMPLE REFERENCE: 9503/075-001 thru 010 : Sediment/Brook/Land Fill Bank
METHODS: 8080 Requested by T&D, 8080 Modified requested by site

The following two tier review is based on information outlined in OSWER Directive 9360.4-01 (April 1990), Data Validation Procedures. This document is intended for guidance in assessing and substantiating data for various users.

I. METALLIC INORGANIC PARAMETERS

A. Sample Holding Times: [Metals 6mo., cyanide 14 - mercury 28 days, chromium (+6) 24 hours]
Sample Date:_____ Extraction Date:_____ Analysis Date:_____

Acceptable
No Action
Action

B. Initial and Continuing Calibration Verification:
Range of 90-110% of mean value: Y___N___, except tin/mercury at 80-120%: Y__N__, and cyanide at 85-115%: Y__N__ , Calibration standard and blank analyzed at the beginning and after every 10 samples Y__N__, Any samples >110% of highest calibration standard:Y__N__

Acceptable
No Action
Action

C. Blanks:
Concentration of blanks fall below MDL:Y__N__, One method blank for each 20 samples Y__N__ _____

Acceptable
No Action
Action

D. ICP Interference Check Sample:
All ICP ICS results inside of control limits(+/- 20% of mean value) Y__ N__, Are Al, Ca, Fe, Mg lower in the sample than in ICS:Y__N__
Was ICS analyzed at the beginning an end of each run or at least every 8 hr., whichever is more frequent.: Y__N__ _____

Acceptable
No Action
Action

E. Error Determination (MS/MSD/Surrogates):
Percent Recovery MS____%, percent recovery MSD____%, Adjustment of sample value for bias (reciprocal value of % recovery: % bias____)
Determination of Precision: Was a minimum of eight replicates analyzed? Y__N__, Coefficient of variation(%RSD): False positive Y__N__, False negative Y__N_____

Acceptable
No Action
Action

IV. PCB's

A. Sample Holding time(water - 7 days to extraction, soil, sludge, sediment 14 days to extract, all analyze within 40 days after extraction) — **Acceptable** / **No Action** / **Action**

B. Instrument performance — **Acceptable** / **No Action** / **Action**
Standard chromatograms depict adequate quantitation peak resolution Y✓N__, raw data examined Y✓N__, spot check of surrogate compound retention times Y__N✓ Surrogates were not run
Lab used pattern recognition

C. Initial and continuing calibration verification: — **Acceptable** / **No Action** / **Action**
Aroclors of interest have been analyzed at a minimum of three different concentrations Y✓N__, the %RSD of the calibration factor for all aroclors is less than or equal to 10% for the initial linearity check Y__N✓, continuing calibration for each aroclor of interest was analyzed daily Y✓N__, Is the %D > 15% on the quantitation column or > 20% on the confirmation column Y__N✓ if yes, was the data flagged (J). Y__N✓ _____

D. Error Determination: — **Acceptable** / **No Action** / **Action**
Were matrix samples used? Y__N✓, were site background samples used? Y__N✓, were site action level samples used? Y__N✓
Determination of Bias: Percent recovery: were 8 spiked samples replicates for the matrix of interest analyzed at the required frequency Y__N✓, is the average recovery between 80-120%, adjustment for sample values of bias: Y__N✓% bias, determination of precision replicate analysis Y__N__, coefficient of variation (% RSD) Y✓N__ ___% _____

E. Blanks: — **Acceptable** / **No Action** / **Action**
Method blank analysis reported per matrix, per concentration level, at the proper frequency, for each GC system used to analyze samples, for each extraction batch Y✓N__, all blank analyses contain ≤ the required detection limits of any PCB or interfering peak Y✓N__ _____

F. Compound identification: — **Acceptable** / **No Action** / **Action**
Positive results identified using the correct retention time window, peak height ratio, and "fingerprint" pattern Y✓N__, dual column confirmation of positive results identify the same aroclor or that the lab performed GC/MS confirmation of PCB results that were > 10 ng/ul Y__N__ _____

G. Compound quantitation and reported detection limits: — **Acceptable** / **No Action** / **Action**
Reported values, both positive and non-detect, have been correctly adjusted Y✓N__ _____

H. Surrogate recovery: — **Acceptable** / **No Action** / **Action**
Recoveries within the control limits Y__N__, if recoveries are out of control limits, what criteria was used to determine the appropriate action?

Surrogates not run, PCB's by pattern Recognition

VI. Non-Metal Inorganic Parameters (i.e., pH, TOC, flash point) **Acceptable**

A. Refer to the appropriate reference, such as 40 CFR Part 136, SW846, EPA Methods and to QAPP for project. _____ **No Action**

Action

VII. Overall Assessment of the data:

Based upon the information provided, the data is considered **acceptable** ✓, **not acceptable** ___, for use as reported

Comments:

Chain of Custody does not reflect QA level nor QA Protocol

T and D Coordinator spelled out in subcontract methods and QA Protocal and QA Level

Lab has been instructed to not run 8080 modified unless SMITH Rep requests.

Any data problems caused by site requesting PCB's only and not PCB's/Pesticides.

Note: This data validation only involved the following and indicated QA Review form sections: ☐ **Metallic Inorganic Parameters,** ☐ **BNA's by GC/MS Analysis,** ☐ **VOA's by GC/MS Analysis,** ☒ **PCB's,** ☐ **GC Analysis (i.e., Herbicides, Organophosphate, Pesticides),** ☐ **Non-Metal inorganic Parameters (i.e., pH, TOC, flash point)**

[signature]
Reviewer

T&D Coordinator
Title

10-24-95
Date of Review

[signature]
Reviewer

QA Manager
Title

10/17/95
Date of Review

h:\QAREVIEW.DOC 08-22-95

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

October 16, 1995

Mr. Dan Wilson
Riedel/Smith Environmental
18207 Edison Avenue
Chesterfield, MO 63017

Dear Dan:

This letter is in response to our conversation on Friday October 13, 1995. During our conversation, you had mentioned that 'there is no copy of SW-846 8080 modified'. This seems to reflect on some confusion as to what exactly is meant by the word "modified". The word "modified" (or in some cases the letter "m") on a report does not mean the method was modified, it is merely Environmetrics' internal way to determine how the sample is to be analyzed and extracted, in accordance with the method, to meet the client's request for the exclusion of pesticides from the method, turnaround time, and concentration level of PCBs.

The method of analysis requested was method 8080. The only acceptable method applicable to poly-chlorinated biphenyls using electron capture detector is SW-846 8080 Final (Promulgated) Updates II & IIA third edition. Absolutely no modification was made to the method by Environmetrics concerning quality control and method criteria for PCBs. The modifications were the request of the client to analyze only for PCBs in the sample, and fast turnaround. Method SW-846 8080 includes pesticides along with PCBs. The quality control contained in method 8080 integrates specific criteria for data quality objectives directly related to the pesticide portion of the analysis. These data quality objectives cannot be applied when only analyzing for PCBs. All data quality objectives were in compliance with the portion of quality control that applies to PCBs. Further, a medium level extraction was done on each of the samples. This extraction is directly referred to on page 5-8080A as extraction method 3550 for soils. This extraction method was used because the expected concentration of PCB was in parts per million, and to expedite the sample extraction time by avoiding the concentration of the extract.

All data issued for PCBs has been completed in accordance with SW-846 and its applicable quality control standards. We therefore feel that the methodology was correctly applied and we firmly stand behind all data issued. If you have any questions, please call me at (314) 427-0550. Thank you.

Sincerely,

Anne Arnold
Project Manager

John Walsh
Organic Group Manager

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

SMITH ENVIRONMENTAL TECHNOLOGIES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: KEN BRAIG

INVOICE # 30892
PROJECT # 32872-1, ZT3051 TOS-9502-010

PCB ANALYSIS
METHOD SW-846 8080

SAMPLE ID: SEDIMENT/UPRIVER SD1 8:30
LAB ID: 9503/075-001

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	2.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	2.0	U
53469-21-9	PCB-1242	2.0	U
12672-29-6	PCB-1248	2.0	U
11097-69-1	PCB-1254	2.0	U
11096-82-5	PCB 1260	2.0	U

SAMPLE ID: SEDIMENT/UPRIVER SD2 8:40
LAB ID: 9503/075-002

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	2.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	2.0	U
53469-21-9	PCB-1242	2.0	U
12672-29-6	PCB-1248	2.0	U
11097-69-1	PCB-1254	2.0	U
11096-82-5	PCB 1260	2.0	U

SAMPLE ID: SEDIMENT/UPRIVER SD3 8:45
LAB ID: 9503/075-003

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	3.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	3.0	U
11141-16-5	PCB-1232	3.0	U
53469-21-9	PCB-1242	3.0	U
12672-29-6	PCB-1248	3.0	U
11097-69-1	PCB-1254	3.0	U
11096-82-5	PCB 1260	3.0	U

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

SMITH ENVIRONMENTAL TECHNOLOGIES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: KEN BRAIG

INVOICE # 30892
PROJECT # 32872-1, ZT3051 TOS-9502-010

PCB ANALYSIS
METHOD SW-846 8080

SAMPLE ID: LANDFILL BANK #6 6-LB 12:10
LAB ID: 9503/075-004

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	22 mg/kg	U mg/kg
1104-28-2	PCB-1221	22	U
11141-16-5	PCB-1232	22	U
53469-21-9	PCB-1242	22	U
12672-29-6	PCB-1248	22	U
11097-69-1	PCB-1254	22	U
11096-82-5	PCB 1260	22	440

SAMPLE ID: LANDFILL BANK #20 20-LB 12:25
LAB ID: 9503/075-005

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	2.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	2.0	U
53469-21-9	PCB-1242	2.0	U
12672-29-6	PCB-1248	2.0	U
11097-69-1	PCB-1254	2.0	3.0
11096-82-5	PCB 1260	2.0	U

SAMPLE ID: LANDFILL BANK #14 14-LB 12:40
LAB ID: 9503/075-006

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	3.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	3.0	U
11141-16-5	PCB-1232	3.0	U
53469-21-9	PCB-1242	3.0	U
12672-29-6	PCB-1248	3.0	U
11097-69-1	PCB-1254	3.0	U
11096-82-5	PCB 1260	3.0	U

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

SMITH ENVIRONMENTAL TECHNOLOGIES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: KEN BRAIG

INVOICE # 30892
PROJECT # 32872-1, ZT3051 TOS-9502-010

PCB ANALYSIS
METHOD SW-846 8080

SAMPLE ID: BEACH AREA #15 15-B 9:00
LAB ID: 9503/075-007

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	3.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	3.0	U
11141-16-5	PCB-1232	3.0	U
53469-21-9	PCB-1242	3.0	U
12672-29-6	PCB-1248	3.0	U
11097-69-1	PCB-1254	3.0	U
11096-82-5	PCB 1260	3.0	U

SAMPLE ID: BEACH AREA #11 11-B 9:30
LAB ID: 9503/075-008

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	3.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	3.0	U
11141-16-5	PCB-1232	3.0	U
53469-21-9	PCB-1242	3.0	U
12672-29-6	PCB-1248	3.0	U
11097-69-1	PCB-1254	3.0	U
11096-82-5	PCB 1260	3.0	U

SAMPLE ID: BEACH AREA #14 14-B 9:45
LAB ID: 9503/075-009

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	2.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	2.0	U
53469-21-9	PCB-1242	2.0	U
12672-29-6	PCB-1248	2.0	U
11097-69-1	PCB-1254	2.0	U
11096-82-5	PCB 1260	2.0	84

ENVIRONMETRICS
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(314) 427-0550

SMITH ENVIRONMENTAL TECHNOLOGIES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: KEN BRAIG

INVOICE # 30892
PROJECT # 32872-1, ZT3051 TOS-9502-010

PCB ANALYSIS
METHOD SW-846 8080

SAMPLE ID: BEACH AREA #10 10-B 10:30
LAB ID: 9503/075-010

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	2.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	2.0	U
53469-21-9	PCB-1242	2.0	U
12672-29-6	PCB-1248	2.0	U
11097-69-1	PCB-1254	2.0	U
11096-82-5	PCB 1260	2.0	26

U = UNDETECTED
B = PRESENT IN BLANK
J = DETECTED, BUT BELOW PRACTICAL QUANTITATION LIMIT

DATE COLLECTED : 2/26/95
DATE RECEIVED : 3/06/95 11:26
DATE ANALYZED : 3/6-7/95
ANALYST : C.D.

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
ZT305'	TOS-9502-010

SAMPLERS: *(Signature)* [illegible]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS							REMARKS
SD1	02/26	0830		X	Sediment / upgrade	1	✓						
SD2	02/26	0840		X	Sediment / downgrade	1	✓						
SD3	02/26	0845		X	Sediment / downgrade	1	✓						
6-LB	02/26	1210		X	Landfill Bank # 6	1							
20-LB	02/26	1225		X	Landfill Bank # 20	1							
14-LB	02/26	1240		X	Landfill Bank # 14	1							
15-B	02/26	0900		X	Beach Area # 15	1							
11-B	02/26	0930		X	Beach Area # 11	1							
14-B	02/26	0945		X	Beach Area # 14	1							
10-B	02/26	1030		X	Beach Area # 10	1							
X	X	X	X	X	X X X X X X X X	X	X	X	X	X	X	X	X
					SHIPPMENT	5	[illegible]						

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
[illegible]	[illegible]	[illegible]			
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	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5 10722

CASE NARRATIVE

REQUIREMENTS FOR ANY QA/QC LEVEL

Please Note: If a CLP Package or the USEPA QA/QC Reporting Package known as "Quality Assurance/Quality Control - Guidance for Removal Activities" is requested all QA/QC reporting documentation required in those documents takes precedence over these requirements.

- **General Requirements/Information** (Required for all QA/QC Levels)

1. Date sampled 02-26-95 Date received 03-06-95
2. Number of samples received 10
3. Sample description 10 Soil (Grab) samples
4. Sample preparation date 03-06-95
   Date extracted (if applicable) 03-06-95
5. Date analyzed See attached Time analyzed _____
   Analyst _____ case narrative
6. Did Riedel indicate a specific method? Yes ___ No X
   a. If Yes, what was that method? N/A
7. Did Riedel specify additional QA/QC requirement beyond the minimum and mandatory items? Yes ___ No X If yes, please specify. N/A
   a. What QA/QC level was requested? N/A Used by lab? _____
      QA-5
   b. If lab used a different QA/QC level than requested by Riedel, an explanation must be supplied by lab. _____

- **QC Remarks** (Required as relates to QA/QC level requested)

1. Were holding times met? Yes X No ___ If No, why? _____
2. Test Methods
   a. Parameters PCB
   b. *Approved* Methods SW-846 8080
   c. Was a cleanup method requested *for Semi-Volatile Organic Analyses*?
      1. Yes ~~X~~ No X
      2. If No, what method was used and why? Florosil, Mercury, Sulfuric Acid
      3. If Yes, identify method used? _____

3. Were peak resolutions *(i.e. Chromatograms)* requested? Yes ___ No X If Yes, please comment. _

4. Initial calibration (% Relative Standard Deviation) less than 20%

5. Has continuing calibration (% difference) been requested? If yes, indicate % difference. _____
less than 15%

6. Were all Matrix Spikes/Matrix Spike duplicates < 20% RSD? Yes ___ No X
Matrix Spike not done on these samples
   a. If Yes, indicate I.D. No. and %. _____
   b. If No, indicate I.D. No. and %, plus why the < 20% RSD was not obtained. _____

7. Were surrogates run *for Organic Analyses*? Yes ___ No X Not Applicable
   a. If Yes, indicate type and recovery (Min. Recovery is 80%). _____
   b. If not, indicate why not. PCB is Pattern Recognition
   c. If min. recovery was not obtained, indicate why not? _____

8. Please provide the following as applicable.
   a. Minimum Detection Limits: 2 mg/kg
   b. Estimated Quantitation Limits: 2 mg/kg
   c. Dilution Factor:

9. Were *any other annomalies encountered during the analysis*? Yes ___ No X
   a. If Yes, type: _____
   b. If Yes, why were they observed? _____

10. Was this laboratory work performed under either "Minimum and Mandatory Contractual Terms for Analytical Laboratories not on the Pre-Approved Midwest/Great Lakes Region Acceptance List" or a "Master Subcontract" with your laboratory, specifically for ERCS Region V? Yes X No___
   a. If yes, Environmetrics, Inc. states that the USEPA document known as "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures Interim Final EPA/540/G-90/004 April 1990" was utilized as guidance in the review and validation of all data for this project.

11. **WARNING!! NO DATA SHALL BE RELEASED** verbally, written, or otherwise to any authorized representative of Riedel Environmental Services, Inc. or their client that does not meet or exceed the QA/QC levels established in any written or verbal RFP for this project, or the requirements for any and all SW 846 Methods or EPA Methods utilized for this project.

Any incorrect data that is released to any authorized Riedel Environmental Services, Inc. representative or their client that causes improper site related work or disposal decisions to be made by Riedel Environmental Services, Inc. or their client, will cause Environmetrics to be completely liable for all costs associated with those decisions.

12. Reporting

a. Contact Person Name: _____ Phone No. _____

b. Reporting Party:

Signature: _____

Printed Name: _____

This Minimum and Mandatory Requirements for any QA/QC level must be completed and returned to the following within three (3) working days of data submittal to Riedel Project Manager.

Please submit as indicated below:

Yes	No	
X	___	Original to Riedel Project Manager at:

Riedel Environmental Services
18207 Edison Avenue
Chesterfield MO 63017

___ ___ Copy to St. Louis District Office:

Not signed

Riedel Environmental Services, Inc.
Attn: Daniel J. Wilson
18207 Edison Avenue
Chesterfield, MO 63005
Phone:(314) 532-7660
Fax:(314) 536-1655

___ ___ Copy to Chicago District Office:

Riedel Environmental Services, Inc.
***Non-ERCS Projects: ___ Tony Price ___ Bruce Mack**
***ERCS Projects: ___ Mark Douglas ___ Todd Ritsema**
500 Eastern Avenue
Bensonville, IL 60106
Phone:(708) 238-1818
Fax:(708) 238-1838

___ ___ Copy to Detroit District Office:

Riedel Environmental Services, Inc.
Attn: Charlie Klumb
28340 Goddard Road
Romulus, MI 48174
Phone:(313) 946-8640
Fax:(313) 946-8676

Date Due 3/7/95

ENVIRONMETRICS PCB in SOIL EXTRACTION RECORD

PCB 3356

SER#

DATE 3/6/95 ANALYST K. Drimm METHOD SW846-3550 Extraction Solvent Lot # 942525

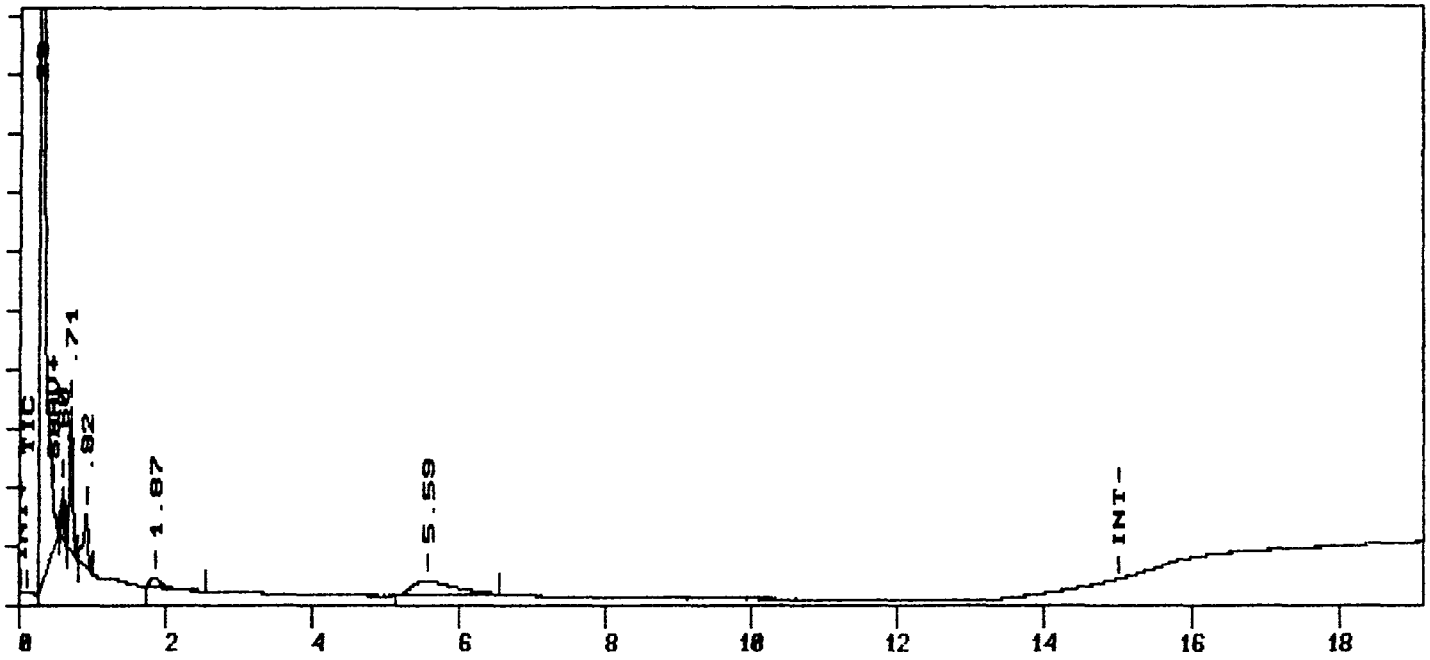
1st = 1.0mL sample extract diluted to 10.0mL
2nd = 100 µl 1st diluted to 10.0mL.
10% = 1.0mL 1st diluted to 10.0mL.
3rd = 100 µl 2nd diluted to 10.0mL.

#	Customer	Sample Number	Site ID.	Description	Sample Weight	Ext Vol	1st	10%	2nd	3rd	Cleanup S	Cleanup Flo	Cleanup Hg	% LOD
1		M. Blank	PCB 3356	Method Reagent	—	100mL	X	X			X	X		
2		LCS	↓	↓	—									
3	R013	9503-75-001	Sediment upriver 501	Brown mud w/ Rocks	10.0g								X	
4		9503-75-002	Sediment Down River 502	Sandy Solid										
5		9503-75-003	Sediment Down River 503	Brown mud w/ Rocks										
6		9503-75-004	Landfill Bank #6	Sandy Solid w/ Rocks										
7		9503-75-005	Landfill Bank #20 20-1A	Brown clay										
8		-006	Landfill Bank #4 14-1B	gray clay										
9		-007	Beach Area #5 15-B	↓										
10		-008	Beach Area #11 11-B	Sandy gray clay										
11		-009	Beach Area #14 14-B	Brown Soil w/ large Rocks										
12	↓	-010	Beach Area #10 10-B	Sandy Solid w/ Rocks	↓	↓	↓	↓			↓	↓	↓	

Spike Isomer A1248 | Standard # OPS 301-A | Standard Conc. 1002 µg/mL | Volume used 0.5 mL

Ext. Trans.	Relinquished By	Date	Time	Transfer To	COMMENTS
1-212	K. Drimm	3/6/95	350P	[illegible]	

File=C:\DIRECT\DATA1\020651AA.03R Date printed=03-06-1995 Time= 16:41:52
Sample Name=R013 PCB 3356 SOIL 9503-075-001
0.0 to 19.16 min. Low Y=-1.171 High Y=48.829 mv Span=50.0



210 13 MIN 15oC/MIN 250 3.5 MIN 250 INJ 300 DET 26.5 MLS/M
Data file = C:\DIRECT\DATA1\020651AA.03R
Date stamp = 03/06/95 Time = 16:41:38
Sample name = R013 PCB 3356 SOIL 9503-075-001
Collected on Mar 6, 1995 16:41:38 from port # 1
Operator =
Sequence file = 030651AA.SEQ #3
Instrument = V3400--DET 1A
Method name = C:\DIRECT\DATA1\START1.MET version # 644
Date method last modified = 03/06/95 Time = 10:28:20
Calibration file = C:\DIRECT\DATA1\MAR06AC.CAL version # 2
Date cal file last modified = 03/06/95 Time = 10:28:54
Run time = 19.16 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 10000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-06-1995 Time = 16:42:55

1090

MD 3-7-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.294		%1,171,294.8750	90.2352%	1,171,294.9	90.235%	BB	0.027	731,397.13	96.9798%
2	0.602		10,615.7324	0.8178%	10,615.7	0.818%	BB	0.041	4,267.54	0.5659%
3	0.710		37,959.6875	2.9244%	37,959.7	2.924%	BB	0.053	11,971.61	1.5874%
4	0.925 - 1242		20,617.0898	1.5883%	20,617.1	1.588%	BB	0.077	4,479.65	0.5940%
5	1.866 - 1242, 48		8,947.7363	0.6893%	8,947.7	0.689%	BB	0.181	823.23	0.1092%
6	5.590 - 1254, 60		48,611.6367	3.7450%	48,611.6	3.745%	BB	0.656	1,235.26	0.1638%

Total area = 1298047 Total amount = 1298047 Sample units = Ug,Mg/Kg,L Total height = 754174.4

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA1\MAR06AC.CAL
Calibration file date: 3/6/95 10:24
Instrument: GC1 Column: OV101 3%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA1\020651AA.03R
Sample name: R013 PCB 3356 SOIL 9503-075-001
Injection Date: Mar 6, 1995 16:41:38
Dilution: 10000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	0.92	4480	25.393	81.7224 MG/L
	0.92	4480		
	1.87	823		

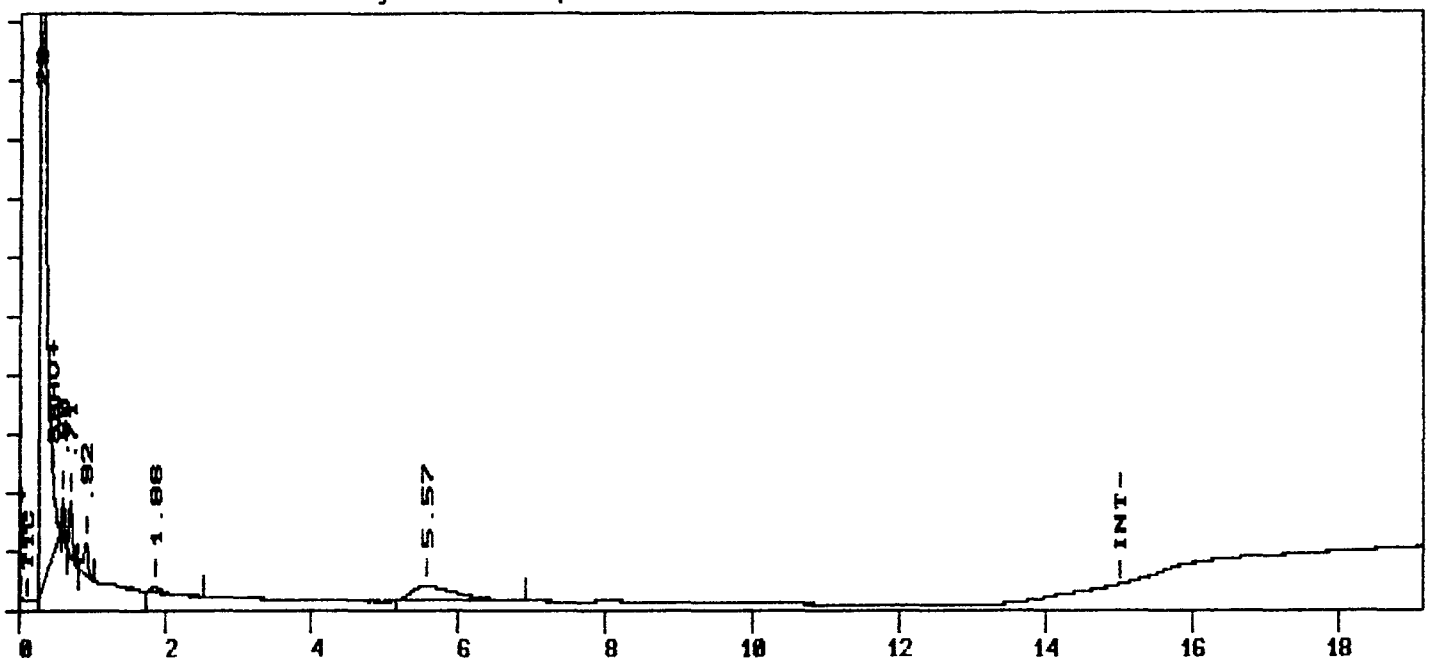
PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	0.92	4480	0.0	96.6205 MG/L
	1.87	823		

A1254 was not detected.

A1260 was not detected.

MD 3-7-95

File=C:\DIRECT\DATA1\020651AA.04R Date printed=03-06-1995 Time= 17:05:46
Sample Name=R013 PCB 3356 SOIL 9503-075-002
0.0 to 19.16 min. Low Y=-1.108 High Y=48.892 mv Span=50.0



210 13 MIN 15oC/MIN 250 3.5 MIN 250 INJ 300 DET 26.5 MLS/M
Data file = C:\DIRECT\DATA1\020651AA.04R
Date stamp = 03/06/95 Time = 17:04:10
Sample name = R013 PCB 3356 SOIL 9503-075-002
Collected on Mar 6, 1995 17:04:11 from port # 1
Operator =
Sequence file = 030651AA.SEQ #4
Instrument = V3400--DET 1A
Method name = C:\DIRECT\DATA1\START1.MET version # 644
Date method last modified = 03/06/95 Time = 10:28:20
Calibration file = C:\DIRECT\DATA1\MAR06AC.CAL version # 2
Date cal file last modified = 03/06/95 Time = 10:28:54
Run time = 19.16 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 10000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-06-1995 Time = 17:06:49

MP 3-7-95

10%

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.293		%1,515,014.7500	94.2915%	1,515,014.8	94.291%	BB	0.029	874,084.88	98.6126%
2	0.602		8,469.2568	0.5271%	8,469.3	0.527%	BB	0.042	3,398.54	0.3834%
3	0.711		13,790.6875	0.8583%	13,790.7	0.858%	BB	0.050	4,592.21	0.5181%
4	0.924	- 1242	12,268.1738	0.7635%	12,268.2	0.764%	BB	0.077	2,641.07	0.2980%
5	1.860	- 1242, 48	5,951.2964	0.3704%	5,951.3	0.370%	BB	0.206	481.44	0.0543%
6	5.573	- 1254, 60	51,241.7578	3.1892%	51,241.8	3.189%	BB	0.721	1,183.98	0.1336%

Total area = 1606736 Total amount = 1606736 Sample units = Ug,Mg/Kg,L Total height = 886382.1

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA1\MAR06AC.CAL
Calibration file date: 3/6/95 10:24
Instrument: GC1 Column: OV101 3%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA1\020651AA.04R
Sample name: R013 PCB 3356 SOIL 9503-075-002
Injection Date: Mar 6, 1995 17:04:11
Dilution: 10000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	0.92	2641	25.666	48.1484 MG/L
	0.92	2641		
	1.86	481		

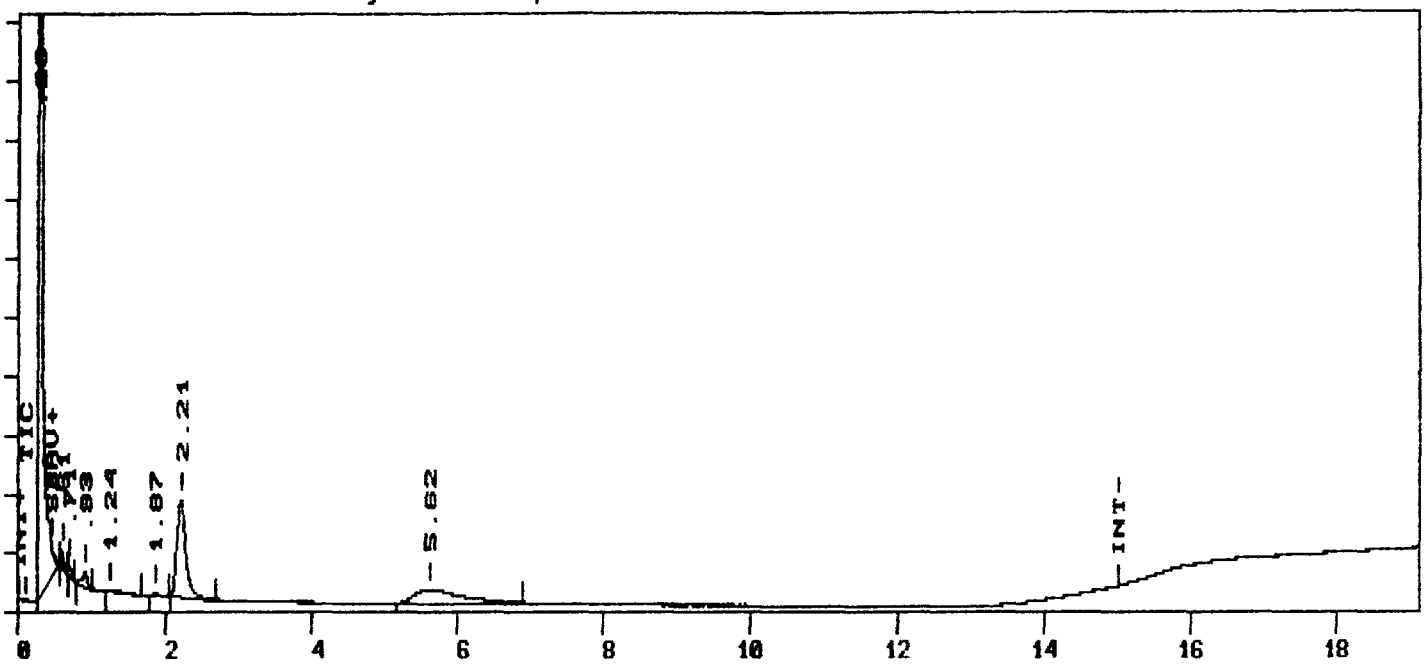
PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	0.92	2641	0.0	56.8933 MG/L
	1.86	481		

A1254 was not detected.

A1260 was not detected.

MD 3-7-95

File=C:\DIRECT\DATA1\020651AA.05R Date printed=03-06-1995 Time= 17:26:54
Sample Name=R013 PCB 3356 SOIL 9503-075-003
0.0 to 19.16 min. Low Y=-1.14 High Y=48.86 mv Span=50.0



210 13 MIN 15oC/MIN 250 3.5 MIN 250 INJ 300 DET 26.5 MLS/M
Data file = C:\DIRECT\DATA1\020651AA.05R
Date stamp = 03/06/95 Time = 17:26:40
Sample name = R013 PCB 3356 SOIL 9503-075-003
Collected on Mar 6, 1995 17:26:40 from port # 1
Operator =
Sequence file = 030651AA.SEQ #5
Instrument = V3400--DET 1A
Method name = C:\DIRECT\DATA1\START1.MET version # 644
Date method last modified = 03/06/95 Time = 10:28:20
Calibration file = C:\DIRECT\DATA1\MAR06AC.CAL version # 2
Date cal file last modified = 03/06/95 Time = 10:28:54
Run time = 19.16 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000 Regular sample. MD 3-7-95
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-06-1995 Time = 17:27:57

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.293		760,507.5000	85.0290%	760,507.5	85.029%	BB	0.024	528,680.94	97.5636%
2	0.607		3,794.5894	0.4243%	3,794.6	0.424%	BB	0.046	1,367.44	0.2523%
3	0.712		2,216.9534	0.2479%	2,217.0	0.248%	BB	0.042	870.70	0.1607%
4	0.928	- 1242	5,681.1719	0.6352%	5,681.2	0.635%	BB	0.081	1,162.31	0.2145%
5	1.244	- 1242, 48	3,542.7944	0.3961%	3,542.8	0.396%	BB	0.236	249.80	0.0461%
6	1.873	- 1242, 48	1,786.1315	0.1997%	1,786.1	0.200%	BB	0.143	208.42	0.0385%
7	2.211	- 1242, 48, 54	69,092.9453	7.7250%	69,092.9	7.725%	BB	0.140	8,236.04	1.5199%
8	5.618		47,787.9688	5.3430%	47,788.0	5.343%	BB	0.719	1,107.47	0.2044%

Total area = 894410 Total amount = 894410 Sample units = Ug,Mg/Kg,L Total height = 541883.2

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA1\MAR06AC.CAL
Calibration file date: 3/6/95 10:24
Instrument: GC1 Column: OV101 3%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

109 - 1000

****
Data file: C:\DIRECT\DATA1\020651AA.05R
Sample name: R013 PCB 3356 SOIL 9503-075-003
Injection Date: Mar 6, 1995 17:26:40
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	0.93	1162	171.698	36.4904 MG/L
	1.24	250		
	1.24	250		
	1.87	208		
	2.21	8236		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	1.24	250	155.607	44.8789 MG/L
	1.24	250		
	1.87	208		
	2.21	8236		

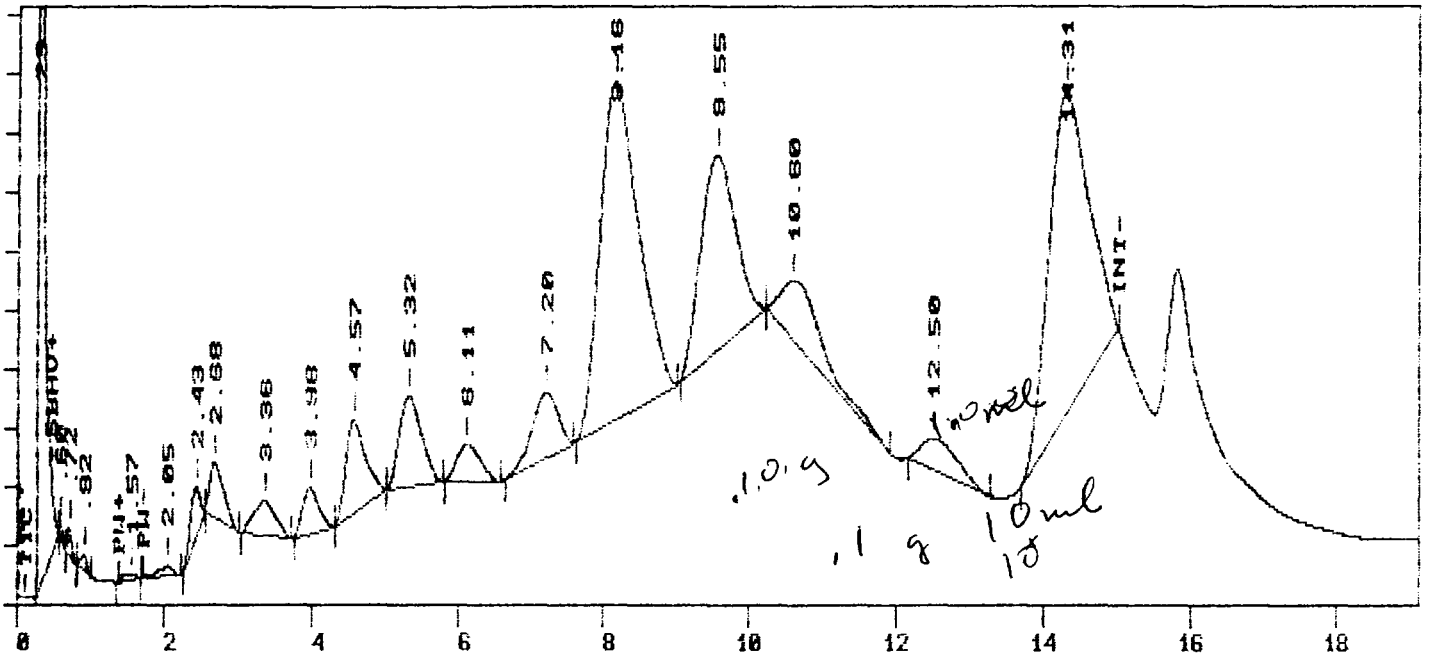
PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.21	8236	0.0	139.3228 MG/L

A1260 was not detected.

LOD = 25.85
1 - .2585 = .7415
2 x 1/.7415 = 2.7
L3 CP

CP 3.1.95

File=C:\DIRECT\DATA1\030751AA.04R Date printed=03-07-1995 Time= 18:34:37
Sample Name=R013 PCB 3356 SOIL 9502-075-004 10%
0.0 to 19.16 min. Low Y=-0.843 High Y=49.157 mv Span=50.0



210 13 MIN 15oC/MIN 250 3.5 MIN 250 INJ 300 DET 26.5 MLS/M
Data file = C:\DIRECT\DATA1\030751AA.04R
Date stamp = 03/07/95 Time = 18:32:44
Sample name = R013 PCB 3356 SOIL 9502-075-004 10%
Collected on Mar 7, 1995 18:32:45 from port # 1
Operator =
Sequence file = 030751AA.SEQ #4
Instrument = V3400--DET 1A
Method name = C:\DIRECT\DATA1\START1.MET version # 651
Date method last modified = 03/07/95 Time = 18:09:58
Calibration file = C:\DIRECT\DATA1\MAR07AC.CAL version # 2
Date cal file last modified = 03/07/95 Time = 18:10:22
Run time = 19.16 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 10000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-07-1995 Time = 18:35:41

2
3.8.95
440

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.294		%1,547,984.6250	29.9463%	1,547,984.6	29.946%	BB	0.029	896,366.75	87.7970%
2	0.599		3,216.1733	0.0622%	3,216.2	0.062%	BB	0.046	1,170.22	0.1146%
3	0.715		9,365.7246	0.1812%	9,365.7	0.181%	BB	0.061	2,559.54	0.2507%
4	0.923	- 1242	7,853.9404	0.1519%	7,853.9	0.152%	BB	0.088	1,492.83	0.1462%
5	1.569	- 1242, 48	6,155.0269	0.1191%	6,155.0	0.119%	BB	0.198	519.27	0.0509%
6	2.050		13,531.2314	0.2618%	13,531.2	0.262%	BB	0.242	931.52	0.0912%
7	2.431	- 1242, 48, 54	34,938.9570	0.6759%	34,939.0	0.676%	BB	0.146	3,975.90	0.3894%
8	2.676	- 1242, 48, 54	60,018.9297	1.1611%	60,018.9	1.161%	BB	0.220	4,545.80	0.4453%
9	3.364		61,524.7891	1.1902%	61,524.8	1.190%	BB	0.340	3,018.58	0.2957%
10	3.977	- 1254	57,911.1758	1.1203%	57,911.2	1.120%	BB	0.252	3,830.91	0.3752%
11	4.570	- 1254, 60	144,196.9844	2.7895%	144,197.0	2.790%	BB	0.312	7,710.01	0.7552%
12	5.321	- 1254, 60	159,431.6094	3.0843%	159,431.6	3.084%	BB	0.352	7,540.82	0.7386%
13	6.111	- 1260	72,276.4844	1.3982%	72,276.5	1.398%	BB	0.380	3,166.46	0.3101%
14	7.199		137,416.3281	2.6584%	137,416.3	2.658%	BB	0.418	5,484.45	0.5372%
15	8.157	- 1260	%1,026,985.8125	19.8674%	1,026,985.8	19.867%	BB	0.608	28,130.12	2.7553%
16	9.550		533,860.3750	10.3277%	533,860.4	10.328%	BB	0.547	16,256.86	1.5923%

19	14.311	996,163.6675	19.2711%	996,163.7	19.271%	BB	0.623	26,630.52	2.6064%

Total area = 5169210 Total amount = 5169210 Sample units = Ug,Mg/Kg,L Total height = 1020953

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA1\MAR07AC.CAL
Calibration file date: 3/7/95 18:11
Instrument: GC1 Column: OV101 3%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA1\030751AA.04R
Sample name: R013 PCB 3356 SOIL 9502-075-004 10%
Injection Date: Mar 7, 1995 18:32:45
Dilution: 10000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	0.92	1493	94.588	74.6082 MG/L
	0.92	1493		
	1.57	519		
	2.05	932		
	2.43	3976		
	2.68	4546		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	0.92	1493	90.461	67.2956 MG/L
	1.57	519		
	1.57	519		
	2.43	3976		
	2.68	4546		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.43	3976	44.912	160.9211 MG/L
	2.68	4546		
	3.98	3831		
	4.57	7710		
	5.32	7541		

PCB Calculator(c) - Automatic Resulting Sample Report

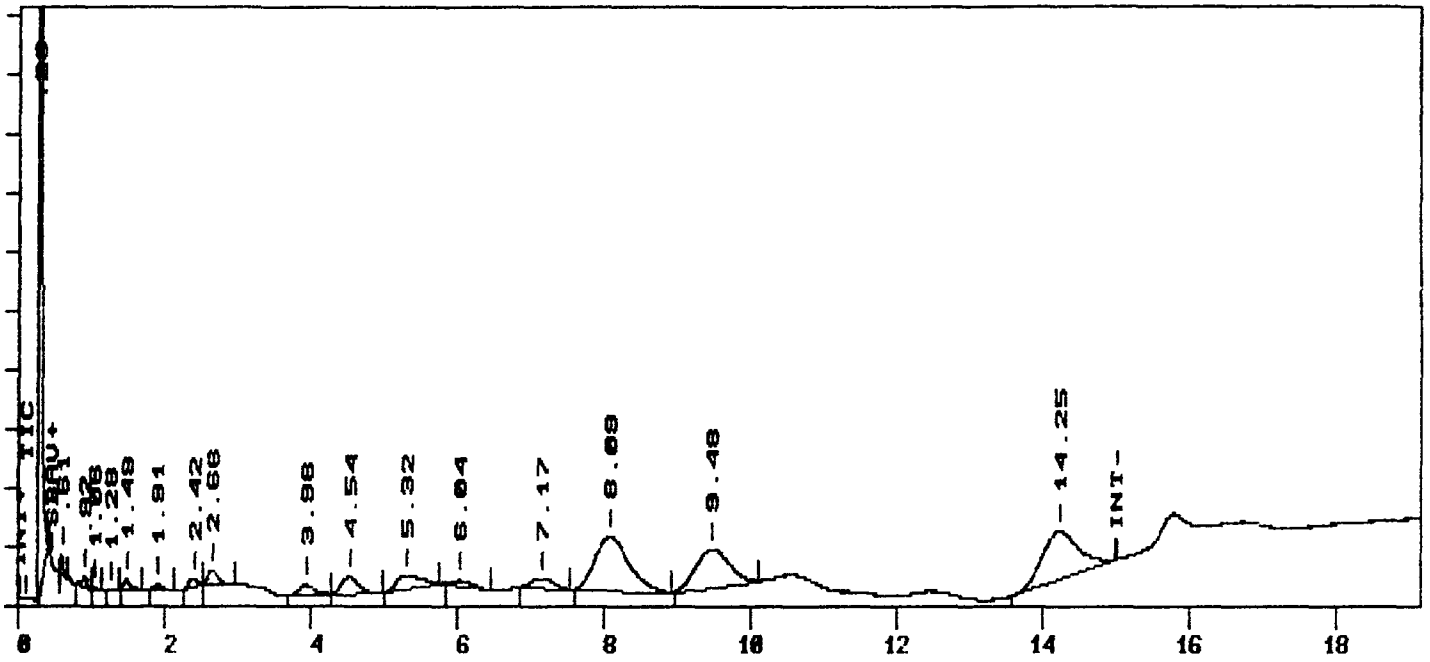
Sample continued from previous page
Data file: C:\DIRECT\DATA1\030751AA.04R Injection Date:
Mar 7, 1995 18:32:45

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1260	4.57	7710	52.277	~~325.5829 MG/L~~
	5.32	7541		
	6.11	3166		
	8.16	28130		

LOD = 9.64

440

File=C:\DIRECT\DATA1\020651AA.07R Date printed=03-06-1995 Time= 18:12:18
Sample Name=R013 PCB 3356 SOIL 9503-075-005
0.0 to 19.16 min. Low Y=-0.813 High Y=49.187 mv Span=50.0



210 13 MIN 15oC/MIN 250 3.5 MIN 250 INJ 300 DET 26.5 MLS/M
Data file = C:\DIRECT\DATA1\020651AA.07R
Date stamp = 03/06/95 Time = 18:12:00
Sample name = R013 PCB 3356 SOIL 9503-075-005
Collected on Mar 6, 1995 18:12:00 from port # 1
Operator =
Sequence file = 030651AA.SEQ #7
Instrument = V3400--DET 1A
Method name = C:\DIRECT\DATA1\START1.MET version # 644
Date method last modified = 03/06/95 Time = 10:28:20
Calibration file = C:\DIRECT\DATA1\MAR06AC.CAL version # 2
Date cal file last modified = 03/06/95 Time = 10:28:54
Run time = 19.16 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-06-1995 Time = 18:13:21

MD 3-7-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.293		51,793.2617	50.3745%	517,932.6	50.375%	BB	0.021	407,156.91	94.6976%
2	0.607		443.0058	0.4309%	4,430.1	0.431%	BB	0.047	1,569.54	0.3650%
3	0.924	- 1242	469.8797	0.4570%	4,698.8	0.457%	BB	0.083	946.07	0.2200%
4	1.061		97.9236	0.0952%	979.2	0.095%	BB	0.060	271.73	0.0632%
5	1.276	- 1242, 48	67.9106	0.0661%	679.1	0.066%	BB	0.069	163.05	0.0379%
6	1.489	- 1242, 48	631.3193	0.6140%	6,313.2	0.614%	BB	0.115	918.46	0.2136%
7	1.913	- 1242, 48	346.4861	0.3370%	3,464.9	0.337%	BB	0.154	375.23	0.0873%
8	2.418	- 1242, 48, 54	676.9733	0.6584%	6,769.7	0.658%	BB	0.136	827.38	0.1924%
9	2.661	- 1242, 48, 54	1,176.4675	1.1442%	11,764.7	1.144%	BB	0.155	1,261.95	0.2935%
10	3.955	- 1254	1,229.9724	1.1963%	12,299.7	1.196%	BB	0.250	819.23	0.1905%
11	4.545	- 1254, 60	2,363.2837	2.2985%	23,632.8	2.299%	BB	0.273	1,442.39	0.3355%
12	5.317	- 1254, 60	2,718.9910	2.6445%	27,189.9	2.645%	BB	0.387	1,171.45	0.2725%
13	6.039	- 1260	849.7705	0.8265%	8,497.7	0.826%	BB	0.329	431.05	0.1003%
14	7.173		1,816.9412	1.7672%	18,169.4	1.767%	BB	0.354	855.93	0.1991%
15	8.092	- 1260	14,322.5918	13.9303%	143,225.9	13.930%	BB	0.526	4,537.34	1.0553%
16	9.481		9,987.5742	9.7140%	99,875.7	9.714%	BB	0.527	3,156.14	0.7341%

Total area = 1028164 Total amount = 102816.4 Sample units = Ug,Mg/Kg,L Total height = 429954.9

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA1\MAR06AC.CAL
Calibration file date: 3/6/95 10:24
Instrument: GC1 Column: OV101 3%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA1\020651AA.07R
Sample name: R013 PCB 3356 SOIL 9503-075-005
Injection Date: Mar 6, 1995 18:12:00
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	0.92	946	90.02	1.5065 MG/L
	1.28	163		
	1.49	918		
	1.91	375		
	2.42	827		
	2.66	1262		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	1.28	163	76.926	1.5273 MG/L
	1.49	918		
	1.91	375		
	2.42	827		
	2.66	1262		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.42	827	30.541	2.2236 MG/L
	2.66	1262		
	3.96	819		
	4.54	1442		
	5.32	1171		

LOD = 18.37
1 - .1837

MD
$2 \times \frac{1}{.8163} = 2.5 = 3$

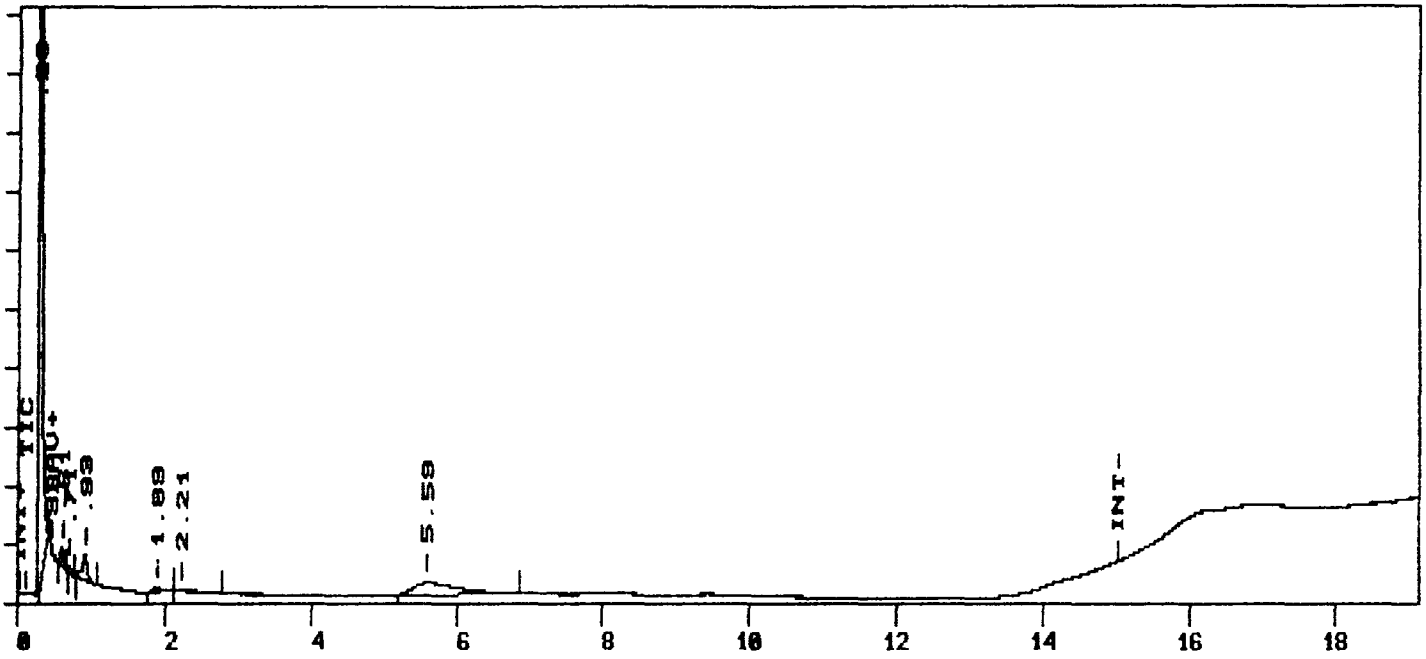
PCB Calculator(c) - Automatic Resulting Sample Report

Sample continued from previous page
Data file: C:\DIRECT\DATA1\020651AA.07R Injection Date:
Mar 6, 1995 18:12:00

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1260	4.54	1442	56.757	3.5858 MG/L
	5.32	1171		
	6.04	431		
	8.09	4537		

RJD
3-7-95

File=C:\DIRECT\DATA1\020651AA.08R Date printed=03-06-1995 Time= 18:34:44
Sample Name=R013 PCB 3356 SOIL 9503-075-006
0.0 to 19.16 min. Low Y=-1.017 High Y=48.983 mv Span=50.0



210 13 MIN 15oC/MIN 250 3.5 MIN 250 INJ 300 DET 26.5 MLS/M
Data file = C:\DIRECT\DATA1\020651AA.08R
Date stamp = 03/06/95 Time = 18:34:30
Sample name = R013 PCB 3356 SOIL 9503-075-006
Collected on Mar 6, 1995 18:34:30 from port # 1
Operator =
Sequence file = 030651AA.SEQ #8
Instrument = V3400--DET 1A
Method name = C:\DIRECT\DATA1\START1.MET version # 644
Date method last modified = 03/06/95 Time = 10:28:20
Calibration file = C:\DIRECT\DATA1\MAR06AC.CAL version # 2
Date cal file last modified = 03/06/95 Time = 10:28:54
Run time = 19.16 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-06-1995 Time = 18:35:47

PKD 3-7-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.293		56,877.0703	89.8746%	568,770.7	89.875%	BB	0.022	439,950.44	98.7048%
2	0.606		463.9594	0.7331%	4,639.6	0.733%	BB	0.052	1,483.05	0.3327%
3	0.707		164.0252	0.2592%	1,640.3	0.259%	BB	0.043	629.77	0.1413%
4	0.926	- 1242	1,095.4746	1.7310%	10,954.7	1.731%	BB	0.084	2,173.03	0.4875%
5	1.887	- 1242, 48	309.0981	0.4884%	3,091.0	0.488%	BB	0.159	323.68	0.0726%
6	2.214	- 1242, 48, 54	181.5936	0.2869%	1,815.9	0.287%	BB	0.173	174.70	0.0392%
7	5.591	- 1254, 60	4,193.7256	6.6267%	41,937.3	6.627%	BB	0.707	988.95	0.2219%

Total area = 632849.5 Total amount = 63284.95 Sample units = Ug,Mg/Kg,L Total height = 445723.7

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA1\MAR06AC.CAL
Calibration file date: 3/6/95 10:24
Instrument: GC1 Column: OV101 3%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA1\020651AA.08R
Sample name: R013 PCB 3356 SOIL 9503-075-006
Injection Date: Mar 6, 1995 18:34:30
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	0.93	2173	67.196	2.9552 MG/L
	0.93	2173		
	1.89	324		
	2.21	175		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	0.93	2173	141.55	1.9952 MG/L
	1.89	324		
	2.21	175		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.21	175	0.0	0.2955 MG/L

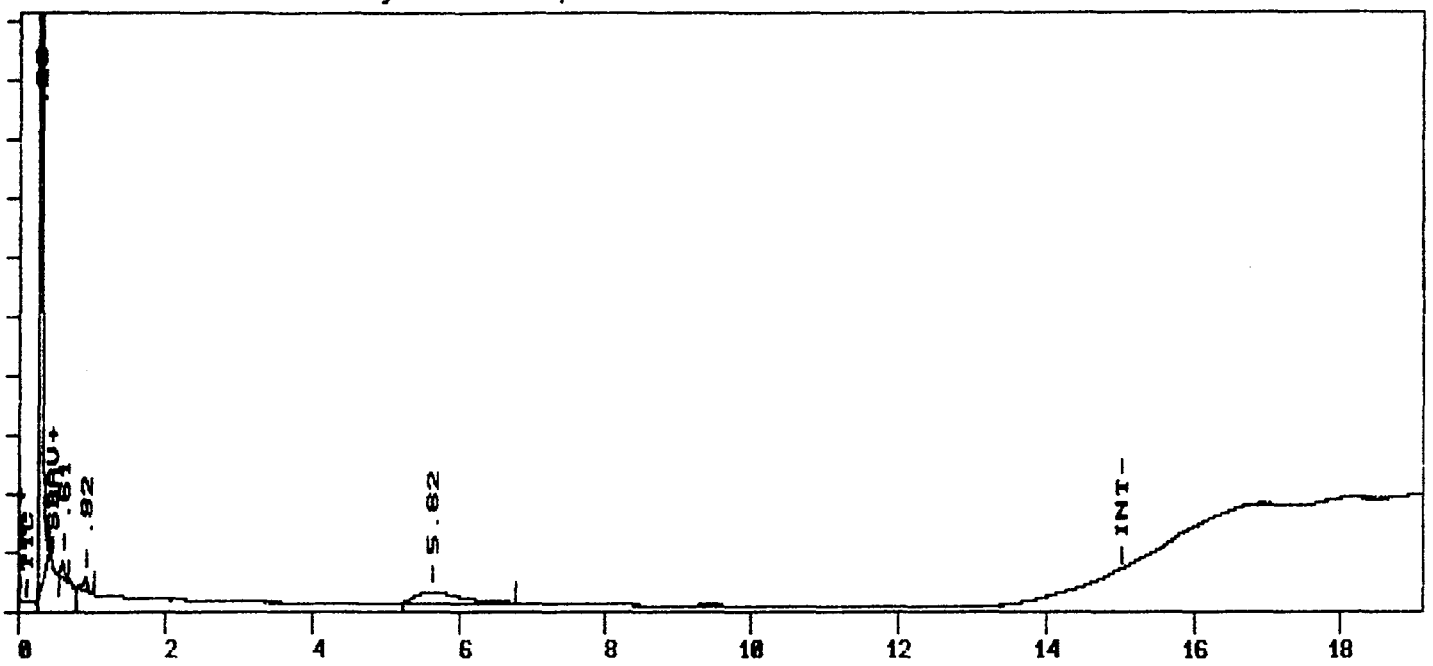
A1260 was not detected.

LOD = 28.32
1 - .2832 = .7168

1/.7168 x 2 = 2.8 ≈ 3

MP 3.7.95

File=C:\DIRECT\DATA1\020651AA.09R Date printed=03-06-1995 Time= 18:56:59
Sample Name=R013 PCB 3356 SOIL 9503-075-007
0.0 to 19.16 min. Low Y=-1.087 High Y=48.913 mv Span=50.0



210 13 MIN 15oC/MIN 250 3.5 MIN 250 INJ 300 DET 26.5 MLS/M
Data file = C:\DIRECT\DATA1\020651AA.09R
Date stamp = 03/06/95 Time = 18:56:46
Sample name = R013 PCB 3356 SOIL 9503-075-007
Collected on Mar 6, 1995 18:56:46 from port # 1
Operator =
Sequence file = 030651AA.SEQ #9
Instrument = V3400--DET 1A
Method name = C:\DIRECT\DATA1\START1.MET version # 644
Date method last modified = 03/06/95 Time = 10:28:20
Calibration file = C:\DIRECT\DATA1\MAR06AC.CAL version # 2
Date cal file last modified = 03/06/95 Time = 10:28:54
Run time = 19.16 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-06-1995 Time = 18:58:02

MD
3-17-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.292		50,504.5898	91.6863%	505,045.9	91.686%	BB	0.020	411,439.81	99.1787%
2	0.606		396.4030	0.7196%	3,964.0	0.720%	BB	0.050	1,330.12	0.3206%
3	0.921 - 1242		597.0838	1.0839%	5,970.8	1.084%	BB	0.083	1,200.21	0.2893%
4	5.618		3,586.0266	6.5101%	35,860.3	6.510%	BB	0.682	876.90	0.2114%

Total area = 550841.1 Total amount = 55084.1 Sample units = Ug,Mg/Kg,L Total height = 414847.1

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA1\MAR06AC.CAL
Calibration file date: 3/6/95 10:24
Instrument: GC1 Column: OV101 3%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA1\020651AA.09R
Sample name: R013 PCB 3356 SOIL 9503-075-007
Injection Date: Mar 6, 1995 18:56:46
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	0.92	1200	0.0	2.2329 MG/L
	0.92	1200		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	0.92	1200	0.0	4.9756 MG/L

A1254 was not detected.

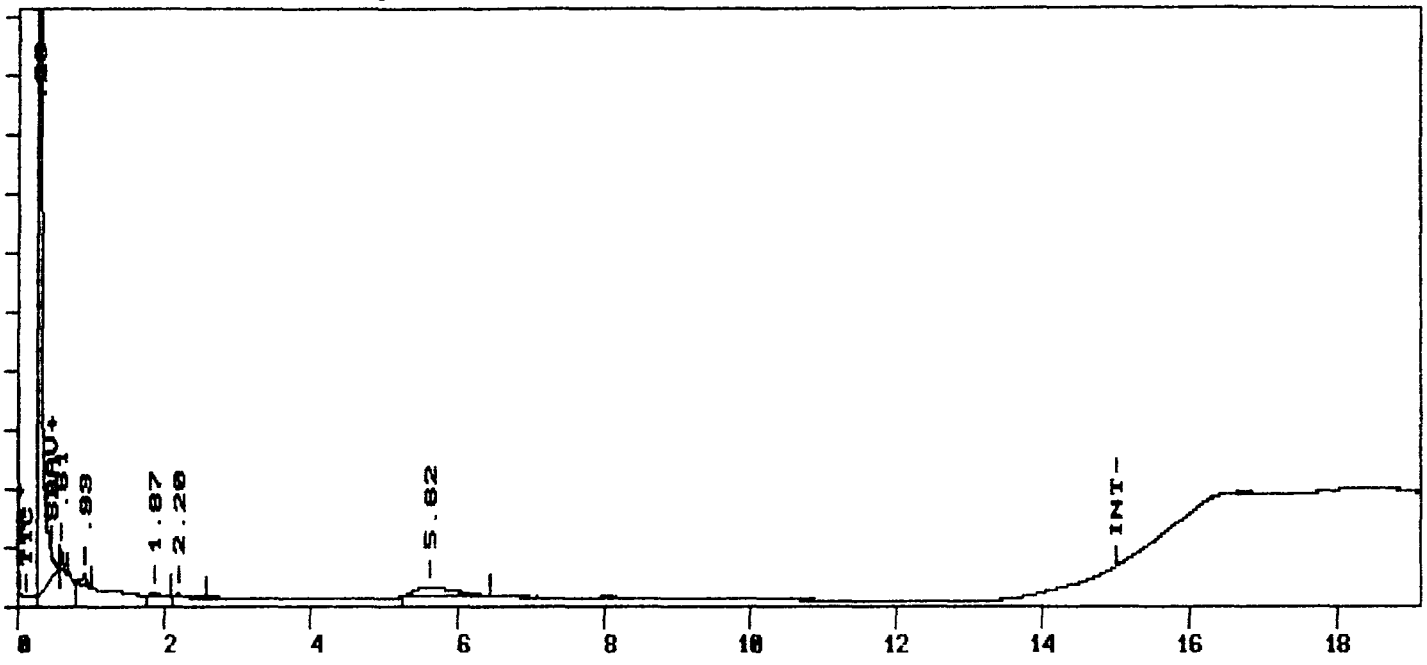
A1260 was not detected.

LOD = 36.02
1 - .3602 = .6398

2 x 1/.6398 = 3.1

<3
CLD
3-7-95

File=C:\DIRECT\DATA1\020651AA.10R Date printed=03-06-1995 Time= 19:19:32
Sample Name=R013 PCB 3356 SOIL 9503-075-008
0.0 to 19.16 min. Low Y=-1.095 High Y=48.905 mv Span=50.0



210 13 MIN 15oC/MIN 250 3.5 MIN 250 INJ 300 DET 26.5 MLS/M
Data file = C:\DIRECT\DATA1\020651AA.10R
Date stamp = 03/06/95 Time = 19:19:18
Sample name = R013 PCB 3356 SOIL 9503-075-008
Collected on Mar 6, 1995 19:19:19 from port # 1
Operator =
Sequence file = 030651AA.SEQ #1
Instrument = V3400--DET 1A
Method name = C:\DIRECT\DATA1\START1.MET version # 644
Date method last modified = 03/06/95 Time = 10:28:20
Calibration file = C:\DIRECT\DATA1\MAR06AC.CAL version # 2
Date cal file last modified = 03/06/95 Time = 10:28:54
Run time = 19.16 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-06-1995 Time = 19:20:35

MD 3-7-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.293		64,726.1055	94.1517%	647,261.1	94.152%	BB	0.023	467,797.28	99.2434%
2	0.605		458.9270	0.6676%	4,589.3	0.668%	BB	0.047	1,629.12	0.3456%
3	0.925	- 1242	402.7859	0.5859%	4,027.9	0.586%	BB	0.081	832.96	0.1767%
4	1.871	- 1242, 48	130.3297	0.1896%	1,303.3	0.190%	BB	0.147	147.32	0.0313%
5	2.204	- 1242, 48, 54	157.7066	0.2294%	1,577.1	0.229%	BB	0.159	165.36	0.0351%
6	5.617		2,870.7505	4.1758%	28,707.5	4.176%	BB	0.605	791.38	0.1679%

Total area = 687466.1 Total amount = 68746.6 Sample units = Ug,Mg/Kg,L Total height = 471363.4

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA1\MAR06AC.CAL
Calibration file date: 3/6/95 10:24
Instrument: GC1 Column: OV101 3%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA1\020651AA.10R
Sample name: R013 PCB 3356 SOIL 9503-075-008
Injection Date: Mar 6, 1995 19:19:19
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	0.93	833	53.178	1.207 MG/L
	0.93	833		
	1.87	147		
	2.20	165		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	0.93	833	130.399	0.8556 MG/L
	1.87	147		
	2.20	165		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.20	165	0.0	0.2797 MG/L

A1260 was not detected.

LOD = 24.97

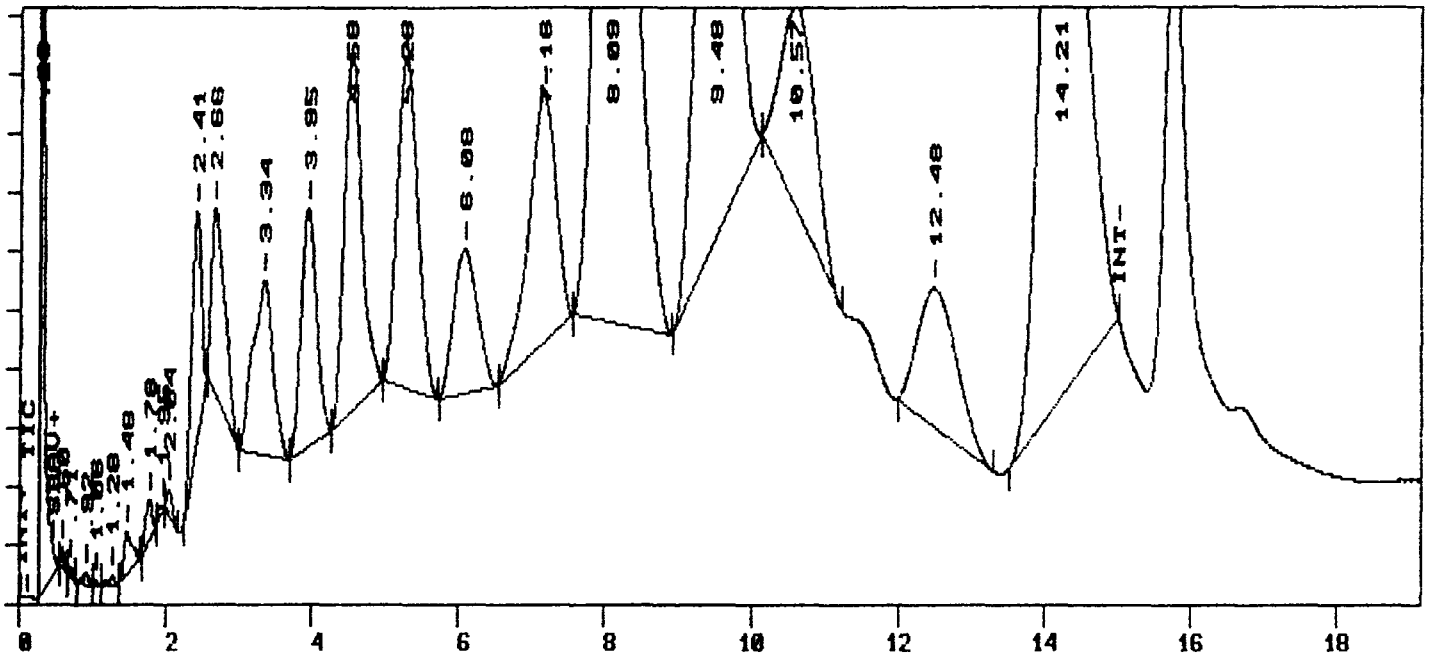
1 - .2497 = .7503

1/.7503 x 2 = 2.7

<3 ppb

3.7.95

File=C:\DIRECT\DATA1\020651AA.13R Date printed=03-06-1995 Time= 20:27:17
Sample Name=R013 PCB 3356 SOIL 9503-075-009
0.0 to 19.16 min. Low Y=-0.719 High Y=49.281 mv Span=50.0



210 13 MIN 15oC/MIN 250 3.5 MIN 250 INJ 300 DET 26.5 MLS/M
Data file = C:\DIRECT\DATA1\020651AA.13R
Date stamp = 03/06/95 Time = 20:26:56
Sample name = R013 PCB 3356 SOIL 9503-075-009
Collected on Mar 6, 1995 20:26:57 from port # 1
Operator =
Sequence file = 030651AA.SEQ #1
Instrument = V3400--DET 1A
Method name = C:\DIRECT\DATA1\START1.MET version # 644
Date method last modified = 03/06/95 Time = 10:28:20
Calibration file = C:\DIRECT\DATA1\MAR06AC.CAL version # 2
Date cal file last modified = 03/06/95 Time = 10:28:54
Run time = 19.16 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-06-1995 Time = 20:28:21

AID 3-7-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.292		74,365.4922	6.0923%	743,654.9	6.092%	BB	0.024	510,880.47	54.0211%
2	0.604		456.2432	0.0374%	4,562.4	0.037%	BB	0.047	1,610.46	0.1703%
3	0.709		225.5498	0.0185%	2,255.5	0.018%	BB	0.045	829.41	0.0877%
4	0.922	- 1242	526.8678	0.0432%	5,268.7	0.043%	BB	0.082	1,076.09	0.1138%
5	1.057		122.7321	0.0101%	1,227.3	0.010%	BB	0.051	403.56	0.0427%
6	1.281	- 1242, 48	464.7323	0.0381%	4,647.3	0.038%	BB	0.105	740.01	0.0782%
7	1.476	- 1242, 48	2,838.8208	0.2326%	28,388.2	0.233%	BB	0.135	3,505.19	0.3706%
8	1.777	- 1242, 48	2,110.7561	0.1729%	21,107.6	0.173%	BB	0.107	3,288.76	0.3478%
9	1.946		270.6705	0.0222%	2,706.7	0.022%	BB	0.088	514.42	0.0544%
10	2.041		1,121.0177	0.0918%	11,210.2	0.092%	BB	0.091	2,054.35	0.2172%
11	2.413	- 1242, 48, 54	16,509.4355	1.3525%	165,094.4	1.353%	BB	0.146	18,834.96	1.9916%
12	2.664	- 1242, 48, 54	20,502.6875	1.6796%	205,026.9	1.680%	BB	0.220	15,541.53	1.6434%
13	3.344		27,808.9746	2.2782%	278,089.8	2.278%	BB	0.319	14,535.45	1.5370%
14	3.946	- 1254	28,895.3398	2.3672%	288,953.4	2.367%	BB	0.243	19,846.59	2.0986%
15	4.535	- 1254, 60	50,043.9492	4.0998%	500,439.5	4.100%	BB	0.276	30,234.31	3.1970%
16	5.278	- 1254, 60	53,616.2305	4.3924%	536,162.3	4.392%	BB	0.324	27,550.79	2.9133%

18	7.156	53,629.1953	4.3935%	536,291.9	4.393%	BB	0.431	20,722.74	2.1912%
19	8.085 - 1260	279,328.2813	22.8835%	2,793,282.8	22.883%	BB	0.523	89,065.08	9.4179%
20	9.484	185,843.7188	15.2249%	1,858,437.3	15.225%	BB	0.524	59,077.68	6.2469%
21	10.574	55,769.5313	4.5688%	557,695.3	4.569%	BB	0.546	17,038.19	1.8016%
22	12.479	43,251.7656	3.5433%	432,517.7	3.543%	BB	0.625	11,531.02	1.2193%
23	14.214	295,874.0000	24.2389%	2,958,740.0	24.239%	BB	0.581	84,803.45	8.9672%

Total area = 1.220655E+07 Total amount = 1220655 Sample units = Ug,Mg/Kg,L Total height = 945704.8

MD
3.7.95

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA1\MAR06AC.CAL
Calibration file date: 3/6/95 10:24
Instrument: GC1 Column: OV101 3%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA1\020651AA.13R
Sample name: R013 PCB 3356 SOIL 9503-075-009
Injection Date: Mar 6, 1995 20:26:57
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	0.92	1076	116.59	14.4165 MG/L
	1.28	740		
	1.48	3505		
	1.78	3289		
	2.41	18835		
	2.66	15542		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	1.28	740	100.028	18.0512 MG/L
	1.48	3505		
	1.78	3289		
	2.41	18835		
	2.66	15542		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.41	18835	36.781	45.1004 MG/L
	2.66	15542		
	3.95	19847		
	4.53	30234		
	5.28	27551		

RPD 3-7-95

PCB Calculator(c) - Automatic Resulting Sample Report

Sample continued from previous page
Data file: C:\DIRECT\DATA1\020651AA.13R Injection Date:
Mar 6, 1995 20:26:57

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1260	4.53	30234	44.858	75.1329 MG/L
	5.28	27551		
	6.08	12020		
	8.09	89065		

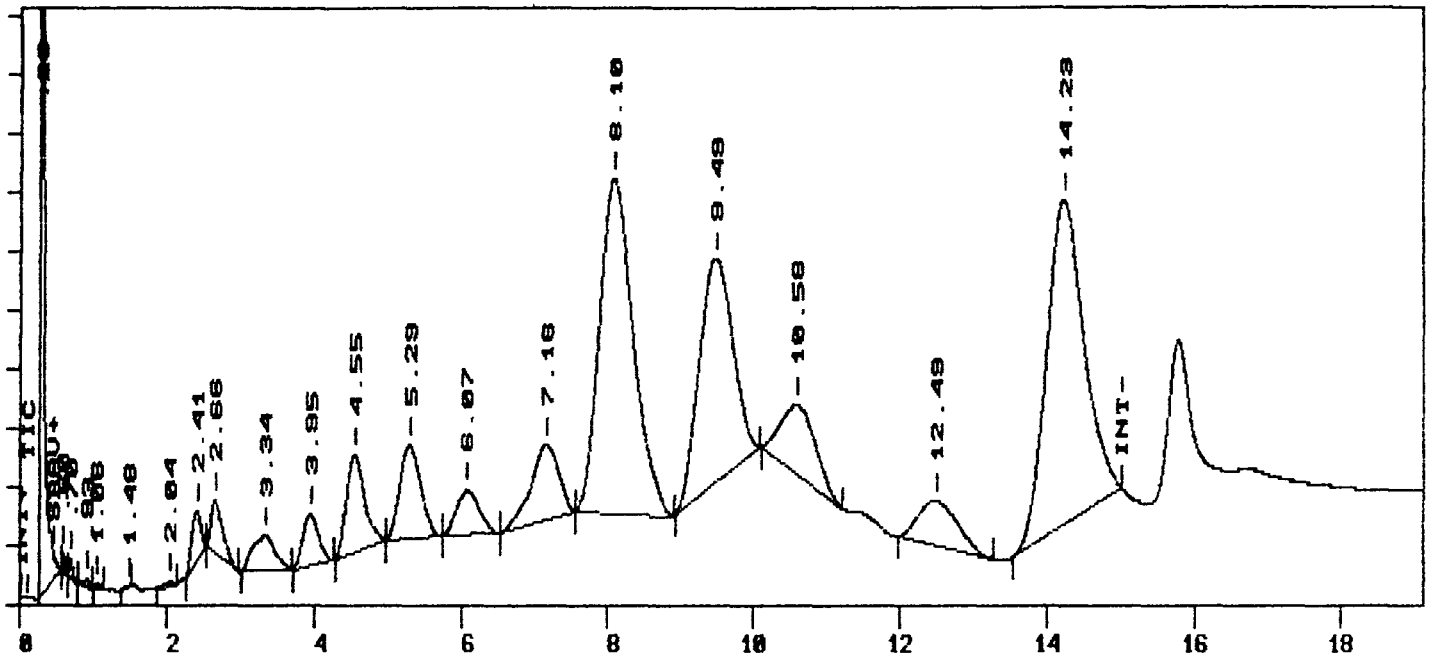
LOD 11.11

1 - .1111 = .8883

75 x 1/.8883 = 84

CJD
3-7-95

File=C:\DIRECT\DATA1\020651AA.14R Date printed=03-06-1995 Time= 20:49:53
Sample Name=R013 PCB 3356 SOIL 9503-075-010
0.0 to 19.16 min. Low Y=-0.742 High Y=49.258 mv Span=50.0



210 13 MIN 15oC/MIN 250 3.5 MIN 250 INJ 300 DET 26.5 MLS/M
Data file = C:\DIRECT\DATA1\020651AA.14R
Date stamp = 03/06/95 Time = 20:49:34
Sample name = R013 PCB 3356 SOIL 9503-075-010
Collected on Mar 6, 1995 20:49:34 from port # 1
Operator =
Sequence file = 030651AA.SEQ #1
Instrument = V3400--DET 1A
Method name = C:\DIRECT\DATA1\START1.MET version # 644
Date method last modified = 03/06/95 Time = 10:28:20
Calibration file = C:\DIRECT\DATA1\MAR06AC.CAL version # 2
Date cal file last modified = 03/06/95 Time = 10:28:54
Run time = 19.16 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-06-1995 Time = 20:50:57

MD 3-15-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.293		67,977.6406	16.1508%	679,776.4	16.151%	BB	0.024	480,747.31	78.7789%
2	0.605		339.0875	0.0806%	3,390.9	0.081%	BB	0.044	1,292.31	0.2118%
3	0.705		450.6403	0.1071%	4,506.4	0.107%	BB	0.046	1,626.58	0.2665%
4	0.927	- 1242	366.1504	0.0870%	3,661.5	0.087%	BB	0.077	796.98	0.1306%
5	1.059	- 1242, 48	177.5196	0.0422%	1,775.2	0.042%	BB	0.057	520.59	0.0853%
6	1.484	- 1242, 48	101.0830	0.0240%	1,010.8	0.024%	BB	0.087	193.45	0.0317%
7	2.043	- 1242, 48	317.5464	0.0754%	3,175.5	0.075%	BB	0.142	373.46	0.0612%
8	2.408	- 1242, 48, 54	3,582.3333	0.8511%	35,823.3	0.851%	BB	0.140	4,263.60	0.6987%
9	2.657	- 1242, 48, 54	4,875.1450	1.1583%	48,751.4	1.158%	BB	0.185	4,393.07	0.7199%
10	3.343		6,187.1260	1.4700%	61,871.3	1.470%	BB	0.349	2,954.00	0.4841%
11	3.947	- 1254	6,255.3877	1.4862%	62,553.9	1.486%	BB	0.242	4,314.06	0.7069%
12	4.547	- 1254, 60	13,831.8730	3.2863%	138,318.7	3.286%	BB	0.282	8,162.45	1.3376%
13	5.286	- 1254, 60	15,321.4395	3.6402%	153,214.4	3.640%	BB	0.327	7,811.60	1.2801%
14	6.073	- 1260	8,274.6299	1.9660%	82,746.3	1.966%	BB	0.370	3,724.60	0.6103%
15	7.164		16,465.6211	3.9121%	164,656.2	3.912%	BB	0.438	6,267.82	1.0271%
16	8.097	- 1260	88,420.4219	21.0477%	884,204.2	21.048%	BB	0.537	27,758.06	4.5486%

18	10.580	18,637.1992	4.4280%	186,372.0	4.428%	BB	0.552	5,626.44	0.9220%
19	12.494	14,166.5986	3.3658%	141,666.0	3.366%	BB	0.623	3,788.56	0.6208%
20	14.230	94,869.0781	22.5399%	948,690.8	22.540%	BB	0.585	27,043.01	4.4315%

Total area = 4208943 Total amount = 420894.3 Sample units = Ug,Mg/Kg,L Total height = 610248.5

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA1\MAR06AC.CAL
Calibration file date: 3/6/95 10:24
Instrument: GC1 Column: OV101 3%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA1\020651AA.14R
Sample name: R013 PCB 3356 SOIL 9503-075-010
Injection Date: Mar 6, 1995 20:49:34
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	0.93	797	132.785	3.5352 MG/L
	1.06	521		
	1.48	193		
	2.04	373		
	2.41	4264		
	2.66	4393		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	1.06	521	118.648	4.1969 MG/L
	1.48	193		
	2.04	373		
	2.41	4264		
	2.66	4393		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.41	4264	44.151	11.6547 MG/L
	2.66	4393		
	3.95	4314		
	4.55	8162		
	5.29	7812		

PCB Calculator(c) - Automatic Resulting Sample Report

Sample continued from previous page
Data file: C:\DIRECT\DATA1\020651AA.14R Injection Date:
Mar 6, 1995 20:49:34

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1260	4.55	8162	48.927	22.4432 MG/L
	5.29	7812		
	6.07	3725		
	8.10	27758		

LOD 16.24

1 - .1624 = .8376

1/.8376 x 22 = 26

AJD
3-7-95

Sequence File: [illegible] Date: 02-13-1995 Time: [illegible]

#	DATA FILE	SAMPLE NAME	METHOD	SAMPLE WEIGHT	INT INJ	DIL FACT	INT STD	AMT	DIL
1	021051A.01R	mix	...TART1.MET	1.00	1.00	1.00	[illegible]	[illegible]	0
2	021051A.02R	HEXANE BLANK	...TART1.MET	1.00	1.00	1.00	0.00		0
3	021051A.03R	A1242 GCA 483B 0.02 PPM 14.9 % RSD	...TART1.MET	1.00	1.00	1.00	0.00		0
4	021051A.04R	A1242 GCA 488A 1.50 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
5	021051A.05R	A1242 GCA 487A 1.00 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
6	021051A.06R	A1242 GCA 486A 0.50 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
7	021051A.07R	A1242 GCA 485A 0.25 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
8	021051A.08R	A1242 GCA 484B 0.10 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
9	021051A.09R	HEXANE BLANK	...TART1.MET	1.00	1.00	1.00	0.00		0
10	021051A.10R	A1248 GCA 489B 0.02 PPM 14.5 % RSD	...TART1.MET	1.00	1.00	1.00	0.00		0
11	021051A.11R	A1248 GCA 494A 1.50 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
12	021051A.12R	A1248 GCA 493A 1.00 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
13	021051A.13R	A1248 GCA 492A 0.50 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
14	021051A.14R	A1248 GCA 491A 0.25 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
15	021051A.15R	A1248 GCA 490B 0.10 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
16	021051A.16R	HEXANE BLANK	...TART1.MET	1.00	1.00	1.00	0.00		0
17	021051A.17R	A1254 GCA 498B 0.02 PPM 16.5 % RSD	...TART1.MET	1.00	1.00	1.00	0.00		0
18	021051A.18R	A1254 GCA 504A 1.50 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
19	021051A.19R	A1254 GCA 499A 1.00 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
20	021051A.20R	A1254 GCA 498A 0.50 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
21	021051A.21R	A1254 GCA 497A 0.25 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
22	021051A.22R	A1254 GCA 496B 0.10 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
23	021051A.23R	HEXANE BLANK	...TART1.MET	1.00	1.00	1.00	0.00		
24	021051A.24R	A1260 GCA 503B 0.02 PPM 13.8 % RSD	...TART1.MET	1.00	1.00	1.00	0.00		0
25	021051A.25R	A1260 GCA 508A 1.50 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
26	021051A.26R	A1260 GCA 505A 1.00 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
27	021051A.27R	A1260 GCA 504A 0.50 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
28	021051A.28R	A1260 GCA 503A 0.25 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
29	021051A.29R	A1260 GCA 502B 0.10 PPM	...TART1.MET	1.00	1.00	1.00	0.00		0
30	021051A.30R	HEXANE BLANK	...TART1.MET	1.00	1.00	1.00	0.00		0
31	021051A.31R	PCB 3320 WIPE METHOD BLANK	...TART1.MET	1.00	1.00	1.00	0.00		0
32	021051A.32R	PCB 3330 SOIL METHOD BLANK	...TART1.MET	1.00	1.00	1.00	0.00		0
33	021051A.33R	0005 PCB3329 WIPE 9502140001	...TART1.MET	1.00	1.00	100.00	0.00		0
34	021051A.34R	0005 PCB3329 WIPE 9502140002	...TART1.MET	1.00	1.00	100.00	0.00		0
35	021051A.35R	0005 PCB3329 WIPE 9502140003	...TART1.MET	1.00	1.00	100.00	0.00		0
36	021051A.36R	0005 PCB3329 WIPE 9502140004	...TART1.MET	1.00	1.00	100.00	0.00		0
37	021051A.37R	E028 PCB3330 SOIL 9502160001	...TART1.MET	10.00	1.00	%1000.00	0.00		0
38	021051A.38R	E028 PCB3330 SOIL 9502160002	...TART1.MET	10.00	1.00	%1000.00	0.00		0
39	021051A.39R	E024 PCB3328 OIL 9502880001	...TART1.MET	1.00	1.00	115.00	0.00		0
40	021051A.40R	A1260 GCA 504B CHECK STANDARD	...TART1.MET	1.00	1.00	1.00	0.00		0
41	021051A.41R	HEXANE BLANK	...TART1.MET	1.00	1.00	1.00	0.00		0
42	021051A.42R	E024 PCB 3328 OIL 9502880004	...TART1.MET	1.00	1.00	115.00	0.00		0
43	021051A.43R	PCB 3329 WIPE LCS	...TART1.MET	1.00	1.00	1.00	0.00		0

Sequence file C:\DIRECT\DATA1\DAILY1C.SEQ Date = 03-06-1995 Time = 06:17:57

#	DATA FILE	SAMPLE NAME	METHOD	SAMPLE WEIGHT	AMT INJ	DIL FAC	INT STD AMT	CAL
1	030651A.01R	HEXANE BLANK	...TART1.MET	1.00	1.00	1.00	0.00	0
2	030651A.02R	A1242 GCA-486B 0.50 PPM CCC -6.86 % diff	...TART1.MET	1.00	1.00	1.00	0.00	0
3	030651A.03R	A1248 GCA-492B 0.50 PPM CCC -5.52 % diff	...TART1.MET	1.00	1.00	1.00	0.00	0
4	030651A.04R	A1254 GCA-498B 0.50 PPM CCC -3.23 % diff	...TART1.MET	1.00	1.00	1.00	0.00	0
5	030651A.05R	A1260 GCA-504B 0.50 PPM CCC -7.12 % diff	...TART1.MET	1.00	1.00	1.00	0.00	0
6	030651A.06R	HEXANE BLANK	...TART1.MET	1.00	1.00	1.00	0.00	0
7	030651A.07R	A1242 GCA 508 LCS OIL 0.5 PPM .85 oil factor	...TART1.MET	1.00	1.00	1.00	0.00	0
8	030651A.08R	A1248 GCA 509 LCS OIL 0.5 PPM .89	...TART1.MET	1.00	1.00	1.00	0.00	0
9	030651A.09R	A1254 GCA 510 LCS OIL 0.5 PPM .86	...TART1.MET	1.00	1.00	1.00	0.00	0
10	030651A.10R	A1260 GCA 511 LCS OIL 0.5 PPM .84	...TART1.MET	1.00	1.00	1.00	0.00	0

PCB Calculator(c) Calibration File
3/6/95 10:24

Continuing Calibration C:\DIRECT\DATA1\MAR06AC.CAM Version# = 23
Calibration file date = 3/6/95 10:24
Initial calibration file is C:\DIRECT\DATA1\FEB10AC.CAM
Instrument: GC1 Column: OV101 3% Sample units: MG/L
Curve fit is Mean Calibration Factor

==========

PCB Component #1 A1242 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	030651A.02A	3/6/09 9:11

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	0.984	+-0.3	0.684	to	1.284	1.0	32174.512
2	1.190	+-0.3	0.890	to	1.490	1.0	21576.672
3	1.477	+-0.3	1.177	to	1.777	1.0	56515.719
4	1.773	+-0.3	1.473	to	2.073	1.0	6101.006
5	2.412	+-0.3	2.112	to	2.712	1.0	22112.064
6	2.665	+-0.3	2.365	to	2.965	1.0	10608.077

Mean Calibration Factor = 1.395126E+05
Calibration Factor of 030651A.02A = 149088.047
percent Difference = -6.86

MP 3-6-95

PCB Calculator(c) Calibration File
3/6/95 10:24

Continuing Calibration C:\DIRECT\DATA1\MAR06AC.CAM Version# = 23
Calibration file date = 3/6/95 10:24
Initial calibration file is C:\DIRECT\DATA1\FEB10AC.CAM
Instrument: GC1 Column: OV101 3% Sample units: MG/L
Curve fit is Mean Calibration Factor

PCB Component #2 A1248 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	030651A.03A	3/6/09 9:33

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	1.186	+-0.3	0.886	to	1.486	1.0	12060.885
2	1.475	+-0.3	1.175	to	1.775	1.0	32699.176
3	1.779	+-0.3	1.479	to	2.079	1.0	15380.893
4	2.411	+-0.3	2.111	to	2.711	1.0	39505.586
5	2.665	+-0.3	2.365	to	2.965	1.0	16440.92

Mean Calibration Factor = 1.100172E+05
Calibration Factor of 030651A.03A = 116087.461
percent Difference = -5.52

BD 3-6-95

PCB Calculator(c) Calibration File
3/6/95 10:24

Continuing Calibration C:\DIRECT\DATA1\MAR06AC.CAM Version# = 23
Calibration file date = 3/6/95 10:24
Initial calibration file is C:\DIRECT\DATA1\FEB10AC.CAM
Instrument: GC1 Column: OV101 3% Sample units: MG/L
Curve fit is Mean Calibration Factor

==========

PCB Component #3 A1254 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	030651A.04A	3/6/09 9:56

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	2.425	+-0.3	2.125	to	2.725	1.0	29557.377
2	2.779	+-0.3	2.479	to	3.079	1.0	26158.08
3	3.944	+-0.3	3.644	to	4.244	1.0	23681.047
4	4.537	+-0.3	4.237	to	4.837	1.0	23683.281
5	5.287	+-0.3	4.987	to	5.587	1.0	21096.74

Mean Calibration Factor = 1.202883E+05
Calibration Factor of 030651A.04A = 124176.523
percent Difference = -3.23

CD 3/6/95

PCB Calculator(c) Calibration File
3/6/95 10:24

Continuing Calibration C:\DIRECT\DATA1\MAR06AC.CAM Version# = 23
Calibration file date = 3/6/95 10:24
Initial calibration file is C:\DIRECT\DATA1\FEB10AC.CAM
Instrument: GC1 Column: OV101 3% Sample units: MG/L
Curve fit is Mean Calibration Factor

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PCB Component #4 A1260 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	030651A.05A	3/6/09 10:18

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	4.552	+-0.3	4.252	to	4.852	1.0	24050.07
2	5.285	+-0.3	4.985	to	5.585	1.0	22386.021
3	6.019	+-0.3	5.719	to	6.319	1.0	17433.104
4	6.824	+-0.3	6.524	to	7.124	1.0	13632.778
5	8.119	+-0.3	7.819	to	8.419	1.0	41857.156

Mean Calibration Factor = 1.114296E+05
Calibration Factor of 030651A.05A = 119359.133
percent Difference = -7.12

MD 3.6.95

Sequence File [illegible]DIRECT.DATA[illegible]030751AA.SEQ Date [illegible]

	DATA FILE	SAMPLE NAME	METHOD	SAMPLE WEIGHT	AMT IN.	DIL FAC	INT STD	AMT	DAL
1	[illegible]751AA.[illegible]R	HEXANE BLANK	...TART1.MET	1.00	1.00	1.00	0.00	0	
2	[illegible]751AA.[illegible]R	R013 PCB 3356 SOIL 9503-075-001	...TART1.MET	10.00	1.00	[illegible]	[illegible]	[illegible]	
3	[illegible]751AA.03R	R013 PCB 3356 SOIL 9503-075-002	...TART1.MET	10.00	1.00	[illegible]	[illegible]	[illegible]	
4	030751AA.04R	R012 PCB 3356 SOIL 9502-075-004 10%	...TART1.MET	10.00	1.00	[illegible]	[illegible]	0.00	0
5	[illegible]751AA.05R	W026 PCB 3357 OIL 9503-076-003	...TART1.MET	1.00	1.00	115.00	0.00	0	
6	030751AA.06R	W026 PCB 3357 OIL 9503-076-004	...TART1.MET	1.00	1.00	115.00	0.00	0	
7	030751AA.07R	W026 PCB 3357 OIL 9503-076-005	...TART1.MET	1.00	1.00	115.00	0.00	0	
8	030751AA.08R	W026 PCB 3357 OIL 9503-076-006	...TART1.MET	1.00	1.00	115.00	0.00	0	
9	030751AA.09R	W026 PCB 3357 OIL 9503-076-007	...TART1.MET	1.00	1.00	115.00	0.00	0	
10	030751AA.10R	W026 PCB 3357 OIL 9503-076-008	...TART1.MET	1.00	1.00	115.00	0.00	0	
11	030751AA.11R	A1260 8CA 504B .50PPM CK STD	...TART1.MET	1.00	1.00	1.00	0.00	0	
12	030751AA.12R	HEXANE BLANK	...TART1.MET	1.00	1.00	1.00	0.00	0	
13	030751AA.13R	W026 PCB 3357 OIL 9503-076-009	...TART1.MET	1.00	1.00	115.00	0.00	0	
14	030751AA.14R	W026 PCB 3357 OIL 9503-076-010	...TART1.MET	1.00	1.00	115.00	0.00	0	
15	030751AA.15R	PCB 3357 OIL LCS	...TART1.MET	1.00	1.00	1.00	0.00	0	
16	030751AA.16R	HEXANE BLANK	...TART1.MET	1.00	1.00	1.00	0.00	0	
17	030751AA.17R	PCB 3358 WIPE METHOD BLANK	...TART1.MET	1.00	1.00	1.00	0.00	0	
18	030751AA.18R	P038 PCB 3358 WIPE 9503-088-001	...TART1.MET	1.00	1.00	100.00	0.00	0	
19	030751AA.19R	P038 PCB 3358 WIPE 9503-088-002	...TART1.MET	1.00	1.00	100.00	0.00	0	
20	030751AA.20R	P038 PCB 3358 WIPE 9503-088-003	...TART1.MET	1.00	1.00	100.00	0.00	0	
21	030751AA.21R	PCB 3358 WIPE LCS	...TART1.MET	1.00	1.00	1.00	0.00	0	
22	030751AA.22R	A1254 498B .50 PPM CK STD	...TART1.MET	1.00	1.00	1.00	0.00	0	
23	030751AA.23R	HEXANE BLANK	...TART1.MET	1.00	1.00	1.00	0.00	0	
24	030751AA.23R	P038 PCB 3358 WIPE 9503-088-004	...TART1.MET	1.00	1.00	100.00	0.00	0	
25	030751AA.25R	P038 PCB 3358 WIPE 9503-088-005	...TART1.MET	1.00	1.00	100.00	0.00	0	
26	030751AA.26R	P038 PCB 3358 WIPE 9503-088-006	...TART1.MET	1.00	1.00	100.00	0.00	0	
27	030751AA.27R	P038 PCB 3358 WIPE 9503-088-007	...TART1.MET	1.00	1.00	100.00	0.00	0	
28	030751AA.28R	P038 PCB 3358 WIPE 9503-088-008	...TART1.MET	1.00	1.00	100.00	0.00	0	
29	030751AA.29R	P038 PCB 3358 WIPE 9503-088-009	...TART1.MET	1.00	1.00	100.00	0.00	0	
30	030751AA.30R	P038 PCB 3358 WIPE 9503-088-010	...TART1.MET	1.00	1.00	100.00	0.00	0	

PCB Calculator(c) Calibration File
3/7/95 18:05

Continuing Calibration C:\DIRECT\DATA1\MAR06AC.CAM Version# = 24
Calibration file date = 3/7/95 14:20
Initial calibration file is C:\DIRECT\DATA1\FEB10AC.CAM
Instrument: GC1 Column: OV101 3% Sample units: MG/L
Curve fit is Mean Calibration Factor

==========

PCB Component #1 A1242 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	030751A.02A	3/7/09 17:37

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	0.988	+-0.3	0.688	to	1.288	1.0	20581.545
2	1.201	+-0.3	0.901	to	1.501	1.0	9563.852
3	1.492	+-0.3	1.192	to	1.792	1.0	37164.781
4	1.955	+-0.3	1.655	to	2.255	1.0	1807.337
5	2.437	+-0.3	2.137	to	2.737	1.0	11950.974
6	2.671	+-0.3	2.371	to	2.971	1.0	5772.74

Mean Calibration Factor = 1.395126E+05
Calibration Factor of 030751A.02A = 86841.227
percent Difference = 37.75

PCB Calculator(c) Calibration File
3/7/95 18:05

Continuing Calibration C:\DIRECT\DATA1\MAR06AC.CAM Version# = 24
Calibration file date = 3/7/95 14:20
Initial calibration file is C:\DIRECT\DATA1\FEB10AC.CAM
Instrument: GC1 Column: OV101 3% Sample units: MG/L
Curve fit is Mean Calibration Factor

PCB Component #2 A1248 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	030751A.03A	3/7/09 17:39

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	1.187	+-0.3	0.887	to	1.487	1.0	8146.301
2	1.481	+-0.3	1.181	to	1.781	1.0	23692.635
3	1.784	+-0.3	1.484	to	2.084	1.0	10778.617
4	2.423	+-0.3	2.123	to	2.723	1.0	27375.072
5	2.670	+-0.3	2.370	to	2.970	1.0	12130.594

Mean Calibration Factor = 1.100172E+05
Calibration Factor of 030751A.03A = 82123.219
percent Difference = 25.35

PCB Calculator(c) Calibration File
3/7/95 18:05

Continuing Calibration C:\DIRECT\DATA1\MAR06AC.CAM Version# = 24
Calibration file date = 3/7/95 14:20
Initial calibration file is C:\DIRECT\DATA1\FEB10AC.CAM
Instrument: GC1 Column: OV101 3% Sample units: MG/L
Curve fit is Mean Calibration Factor

PCB Component #3 A1254 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	030751A.04A	3/7/09 17:41

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	2.445	+-0.3	2.145	to	2.745	1.0	20251.779
2	2.802	+-0.3	2.502	to	3.102	1.0	18717.719
3	3.971	+-0.3	3.671	to	4.271	1.0	16030.153
4	4.576	+-0.3	4.276	to	4.876	1.0	16208.993
5	5.330	+-0.3	5.030	to	5.630	1.0	14558.538

Mean Calibration Factor = 1.202883E+05
Calibration Factor of 030751A.04A = 85766.992
percent Difference = 28.7

PCB Calculator(c) Calibration File
3/7/95 18:05

Continuing Calibration C:\DIRECT\DATA1\MAR06AC.CAM Version# = 24
Calibration file date = 3/7/95 14:20
Initial calibration file is C:\DIRECT\DATA1\FEB10AC.CAM
Instrument: GC1 Column: OV101 3% Sample units: MG/L
Curve fit is Mean Calibration Factor

PCB Component #4 A1260 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	030751A.05A	3/7/09 17:43

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	4.571	+-0.3	4.271	to	4.871	1.0	15287.47
2	5.294	+-0.3	4.994	to	5.594	1.0	15318.595
3	6.048	+-0.3	5.748	to	6.348	1.0	11711.217
4	6.846	+-0.3	6.546	to	7.146	1.0	8553.687
5	8.141	+-0.3	7.841	to	8.441	1.0	29165.914

Mean Calibration Factor = 1.114296E+05
Calibration Factor of 030751A.05A = 80036.883
percent Difference = 24.17

SMITH ENVIRONMENTAL TECHNOLOGIES CORPORATION

ERCS REGION V

QA/QC DATA REVIEW

TO: Sam Borries - OSC USEPA Region V
FROM: Mark Douglas - Tend D Coordinator
THRU: DAN Wilson - QA/QC Manager
PROJECT NAME: Sauget Landfill
JOB NUMBER: 8168
LAB/SMITH SAMPLE REFERENCE: 9503/482-001 thru 005 / Landfill, Trackhoe
METHODS: ~~[illegible]~~ DAW 8080 / site requested 8080 modified

The following two tier review is based on information outlined in OSWER Directive 9360.4-01 (April 1990), Data Validation Procedures. This document is intended for guidance in assessing and substantiating data for various users.

I. METALLIC INORGANIC PARAMETERS

A. Sample Holding Times: [Metals 6mo., cyanide 14 - mercury 28 days, chromium (+6) 24 hours]
Sample Date:_____ Extraction Date:_____ Analysis Date:_____
_____

Acceptable
No Action
Action

B. Initial and Continuing Calibration Verification:
Range of 90-110% of mean value: Y___N___, except tin/mercury at 80-120%: Y__N__, and cyanide at 85-115%: Y__N__ , Calibration standard and blank analyzed at the beginning and after every 10 samples Y__N__, Any samples >110% of highest calibration standard:Y__N__
_____

Acceptable
No Action
Action

C. Blanks:
Concentration of blanks fall below MDL:Y__N__, One method blank for each 20 samples Y__N__ _____
_____

Acceptable
No Action
Action

D. ICP Interference Check Sample:
All ICP ICS results inside of control limits(+/- 20% of mean value) Y__ N__, Are Al, Ca, Fe, Mg lower in the sample than in ICS:Y__N__
Was ICS analyzed at the beginning an end of each run or at least every 8 hr., whichever is more frequent.: Y__N__ _____
_____

Acceptable
No Action
Action

E. Error Determination (MS/MSD/Surrogates):
Percent Recovery MS____%, percent recovery MSD____%, Adjustment of sample value for bias (reciprocal value of % recovery: % bias____)
Determination of Precision: Was a minimum of eight replicates analyzed? Y__N__, Coefficient of variation(%RSD): False positive Y__N__, False negative Y__N_____
_____

Acceptable
No Action
Action

IV. PCB's

A. Sample Holding time(water - 7 days to extraction, soil, sludge, sediment 14 days to extract, all analyze within 40 days after extraction) — **Acceptable** / **No Action** / **Action**

B. Instrument performance — **Acceptable** / **No Action** / **Action**
Standard chromatograms depict adequate quantitation peak resolution Y__N__, raw data examined Y__N__, spot check of surrogate compound retention times Y__N__
Surrogates Not Run - Pattern Recognition used.

C. Initial and continuing calibration verification: — **Acceptable** / **No Action** / **Action**
Aroclors of interest have been analyzed at a minimum of three different concentrations Y__N__, the %RSD of the calibration factor for all aroclors is less than or equal to 10% for the initial linearity check Y__N__, continuing calibration for each aroclor of interest was analyzed daily Y__N__, Is the %D > 15% on the quantitation column or > 20% on the confirmation column Y__N__ if yes, was the data flagged (J). Y__N__
~~10.94~~ DJW -7.52, -12.02, -9.92, -8.12

D. Error Determination: — **Acceptable** / **No Action** / **Action**
Were matrix samples used? Y__N__ were site background samples used? Y__N__, were site action level samples used? Y__N__
Determination of Bias: Percent recovery: were 8 spiked samples replicates for the matrix of interest analyzed at the required frequency Y__N__, is the average recovery between 80-120%, adjustment for sample values of bias: Y__N__ % bias, determination of precision replicate analysis Y__N__, coefficient of variation (% RSD) Y__N__ ___%

E. Blanks: — **Acceptable** / **No Action** / **Action**
Method blank analysis reported per matrix, per concentration level, at the proper frequency, for each GC system used to analyze samples, for each extraction batch Y__N__, all blank analyses contain < the required detection limits of any PCB or interfering peak Y__N__

F. Compound identification: — **Acceptable** / **No Action** / **Action**
Positive results identified using the correct retention time window, peak height ratio, and "fingerprint" pattern Y__N__, dual column confirmation of positive results identify the same aroclor or that the lab performed GC/MS confirmation of PCB results that were > 10 ng/ul Y__N__

G. Compound quantitation and reported detection limits: — **Acceptable** / **No Action** / **Action**
Reported values, both positive and non-detect, have been correctly adjusted Y__N__

H. Surrogate recovery: — **Acceptable** / **No Action** / **Action**
Recoveries within the control limits Y__N__, if recoveries are out of control limits, what criteria was used to determine the appropriate action?
Surrogates not run. Pattern recognition used.

VI. Non-Metal Inorganic Parameters (i.e., pH, TOC, flash point) **Acceptable**

A. Refer to the appropriate reference, such as 40 CFR Part 136, SW846, EPA Methods and to QAPP for project. _____ **No Action**

_____ **Action**

_____

_____

_____

VII. Overall Assessment of the data:

Based upon the information provided, the data is considered **acceptable** ___, **not acceptable** ___, for use as reported

Comments:

_____

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Note: This data validation only involved the following and indicated QA Review form sections: ☐ **Metallic Inorganic Parameters,** ☐ **BNA's by GC/MS Analysis,** ☐ **VOA's by GC/MS Analysis,** ☑ **PCB's,** ☐ **GC Analysis (i.e., Herbicides, Organophosphate, Pesticides),** ☐ **Non-Metal inorganic Parameters (i.e., pH, TOC, flash point)**

Mel SD
Reviewer

Daniel J Wilson
Reviewer

TSD Coordinator
Title

QA Manager
Title

10-24-95
Date of Review

10/17/95
Date of Review

h:\QAREVIEW.DOC 08-22-95

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

October 16, 1995

Mr. Dan Wilson
Riedel/Smith Environmental
18207 Edison Avenue
Chesterfield, MO 63017

Dear Dan:

This letter is in response to our conversation on Friday October 13, 1995. During our conversation, you had mentioned that 'there is no copy of SW-846 8080 modified'. This seems to reflect on some confusion as to what exactly is meant by the word "modified". The word "modified" (or in some cases the letter "m") on a report does not mean the method was modified, it is merely Environmetrics' internal way to determine how the sample is to be analyzed and extracted, in accordance with the method, to meet the client's request for the exclusion of pesticides from the method, turnaround time, and concentration level of PCBs.

The method of analysis requested was method 8080. The only acceptable method applicable to poly-chlorinated biphenyls using electron capture detector is SW-846 8080 Final (Promulgated) Updates II & IIA third edition. Absolutely no modification was made to the method by Environmetrics concerning quality control and method criteria for PCBs. The modifications were the request of the client to analyze only for PCBs in the sample, and fast turnaround. Method SW-846 8080 includes pesticides along with PCBs. The quality control contained in method 8080 integrates specific criteria for data quality objectives directly related to the pesticide portion of the analysis. These data quality objectives cannot be applied when only analyzing for PCBs. All data quality objectives were in compliance with the portion of quality control that applies to PCBs. Further, a medium level extraction was done on each of the samples. This extraction is directly referred to on page 5-8080A as extraction method 3550 for soils. This extraction method was used because the expected concentration of PCB was in parts per million, and to expedite the sample extraction time by avoiding the concentration of the extract.

All data issued for PCBs has been completed in accordance with SW-846 and its applicable quality control standards. We therefore feel that the methodology was correctly applied and we firmly stand behind all data issued. If you have any questions, please call me at (314) 427-0550. Thank you.

Sincerely,

Anne Arnold
Project Manager

John Walsh
Organic Group Manager

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

SMITH ENVIRONMENTAL TECHNOLOGIES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: KEN BRAIG

INVOICE # 31252
PROJECT # 8168, SAUGET LANDFILL SITE Q

PCB ANALYSIS
METHOD SW-846 8080

SAMPLE ID: LB-35 LANDFILL
LAB ID: 9503/482-001

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	2.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	2.0	U
53469-21-9	PCB-1242	2.0	U
12672-29-6	PCB-1248	2.0	U
11097-69-1	PCB-1254	2.0	42
11096-82-5	PCB 1260	2.0	69

SAMPLE ID: LB-34 LANDFILL
LAB ID: 9503/482-002

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	2.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	2.0	U
53469-21-9	PCB-1242	2.0	U
12672-29-6	PCB-1248	2.0	U
11097-69-1	PCB-1254	2.0	U
11096-82-5	PCB 1260	2.0	U

SAMPLE ID: LB-31 LANDFILL
LAB ID: 9503/482-004

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	2.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	2.0	U
53469-21-9	PCB-1242	2.0	U
12672-29-6	PCB-1248	2.0	U
11097-69-1	PCB-1254	2.0	8.0
11096-82-5	PCB 1260	2.0	12

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

SMITH ENVIRONMENTAL TECHNOLOGIES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: KEN BRAIG

INVOICE # 31252
PROJECT # 8168, SAUGET LANDFILL SITE Q

PCB ANALYSIS
METHOD SW-846 8080

SAMPLE ID: BF-01 LANDFILL
LAB ID: 9503/482-005

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	2.0 mg/kg	U mg/kg
1104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	2.0	U
53469-21-9	PCB-1242	2.0	U
12672-29-6	PCB-1248	2.0	U
11097-69-1	PCB-1254	2.0	U
11096-82-5	PCB 1260	2.0	U

U = UNDECTED
B = DETECTED IN BLANK
J = DETECTED, BUT BELOW PRACTICAL QUANTITATION LIMIT

DATE COLLECTED : 3/29/95
DATE RECEIVED : 3/29/95 14:47
DATE ANALYZED : 3/30/95
ANALYST : C.D.

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

SMITH ENVIRONMENTAL TECHNOLOGIES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: KEN BRAIG

INVOICE # 31252
PROJECT # 8168, SAUGET LANDFILL SITE Q

PCB ANALYSIS
METHOD SW-846 8080

SAMPLE ID: 2800LF TRECKHOE
LAB ID: 9503/482-003

CAS#	PARAMETER	PRACTICAL QUANTITATION LIMIT	RESULTS
12674-11-2	PCB-1016	2.0 µg	U µg
1104-28-2	PCB-1221	2.0	U
11141-16-5	PCB-1232	2.0	U
53469-21-9	PCB-1242	2.0	U
12672-29-6	PCB-1248	2.0	U
11097-69-1	PCB-1254	2.0	10
11096-82-5	PCB 1260	2.0	16

U = UNDECTED
B = DETECTED IN BLANK
J = DETECTED, BUT BELOW PRACTICAL QUANTITATION LIMIT

DATE COLLECTED : 3/29/95
DATE RECEIVED : 3/29/95 14:47
DATE ANALYZED : 3/30/95
ANALYST : C.D.

** 1 Day ** **INTERNAL CUSTODY TRANSFER RECORD/LABORATORY WORK REQUEST** ** 1 Day **

COC : 009045 Status: 1 Day

Company Name: Riedel Environmental Services Number: R013 Contact: Ken Braig Date Due (PM): 03/30/95 Project No.: 8165

Address: 18207 Edison Avenue Date Received: 03/29/95 Date Due (Client): 03/30/95 P.O. No.: ---

City/State/Zip: Chesterfield, Mo. 63017 Date Logged: 03/29/95 Mode: Fax Quotation No.:

Sample Id. No.	Client Sample Name/Number	Matrix	Container	Preservative	Date Collected	Temp	Tests
9503000482-001-01	LB-35 LANDFILL Special Instructions:	SOIL	1-250 ml GLASS	Cold	03/29/95		MODIFIED PCB-8080M
9503000482-002-01	LB-34 LANDFILL Special Instructions:	SOIL	1-250 ml GLASS	Cold	03/29/95		MODIFIED PCB-8080M
9503000482-003-01	2800LF Special Instructions:	WIPE	1-250 ml GLASS	Cold	03/29/95		MODIFIED PCB-8080M
9503000482-004-01	LB-31 LAND FILL Special Instructions:	SOIL	1-250 ml GLASS	Cold	03/29/95		MODIFIED PCB-8080M
9503000482-005-01	BF-01 LAND FILL Special Instructions:	SOIL	1-250 ml GLASS	Cold	03/29/95		MODIFIED PCB-8080M

Items Transferred	Relinquished By	Date		Logged In By	Date	Time
5		03/29/95	PM Signature : Anne Morris Client Services Rep.	Ann Quinlisk Sample Login Specialist	03/29/95	14:47:40

** 1 Day ** ** 1 Day **

Anne Morris ACM KC

** 1 Day **

INTERNAL CUSTODY TRANSFER RECORD/LABORATORY WORK REQUEST

** 1 Day **

COC : 009045
Company Name: Riedel Environmental Services Number: R013
Address: 18207 Edison Avenue
City/State/Zip: Chesterfield, Mo. 63017

Status: 1 Day
Contact: Ken Braig
Date Received: 03/29/95
Date Logged: 03/29/95

Date Due (PM): 03/30/95
Date Due (Client): 03/30/95
Mode: Fax

Project No.: 8165
P.O. No.: ---
Quotation No.:

Items Transferred	Relinquished By	Date	Time	Received By	Date	Time	Reason For Transfer
1 → 5	[illegible]	3-29	300	K. Drinim	3/29/95	300P	PCB

CASE NARRATIVE

REQUIREMENTS FOR ANY QA/QC LEVEL

Please Note: If a CLP Package or the USEPA QA/QC Reporting Package known as "Quality Assurance/Quality Control - Guidance for Removal Activities" is requested all QA/QC reporting documentation required in those documents takes precedence over these requirements.

- **General Requirements/Information** (Required for all QA/QC Levels)

1. Date sampled 03-29-95 Date received 03-29-95

2. Number of samples received 5

3. Sample description 4 soils, 1 wipe

4. Sample preparation date 03-29-95
   Date extracted (if applicable) 03-29-95

5. Date analyzed Soil - 03-30-95 wipe 03-30-95 Time analyzed soil - 12:24 - 13:37 wipe - 11:12
   Analyst CJD

6. Did Riedel indicate a specific method? Yes ___ No X

   a. If Yes, what was that method? N/A

7. Did Riedel specify additional QA/QC requirement beyond the minimum and mandatory items? Yes ___ No X If yes, please specify. N/A

   a. What QA/QC level was requested? N/A Used by lab? ___

   b. If lab used a different QA/QC level than requested by Riedel, an explanation must be supplied by lab. ___

- **QC Remarks** (Required as relates to QA/QC level requested)

1. Were holding times met? Yes X No ___ If No, why? ___

2. Test Methods

   a. Parameters PCB
   b. *Approved* Methods SW 846 8080
   c. Was a cleanup method requested *for Semi-Volatile Organic Analyses*?

      1. Yes ___ No X
      2. If No, what method was used and why? ___
      3. If Yes, identify method used? ___

3. Were peak resolutions *(i.e. Chromatograms)* requested? Yes ___ No X If Yes, please comment. _

4. Initial calibration (% Relative Standard Deviation) less than 20%

5. Has continuing calibration (% difference) been requested? If yes, indicate % difference. _____
less than 15%

6. Were all Matrix Spikes/Matrix Spike duplicates < 20% RSD? Yes ___ No X

   a. If Yes, indicate I.D. No. and %. _____
   b. If No, indicate I.D. No. and %, plus why the < 20% RSD was not obtained. _____
   Duplicate Sample & MS were done

7. Were surrogates run *for Organic Analyses*? Yes ___ No X

   a. If Yes, indicate type and recovery (Min. Recovery is 80%). _____
   b. If not, indicate why not. Pattern Recognition
   c. If min. recovery was not obtained, indicate why not? _____

8. Please provide the following as applicable.

   a. Minimum Detection Limits: < 2
   b. Estimated Quantitation Limits: 2
   c. Dilution Factor: Wipes = 100
   Soils = 100

9. Were *any other annomalies encountered during the analysis*? Yes ___ No X

   a. If Yes, type: _____
   b. If Yes, why were they observed? _____

10. Was this laboratory work performed under either "Minimum and Mandatory Contractual Terms for Analytical Laboratories not on the Pre-Approved Midwest/Great Lakes Region Acceptance List" or a "Master Subcontract" with your laboratory, specifically for ERCS Region V? Yes X No___

    a. If yes, Environmetrics states that the USEPA document known as "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures Interim Final EPA/540/G-90/004 April 1990" was utilized as guidance in the review and validation of all data for this project.

11. **WARNING!! NO DATA SHALL BE RELEASED** verbally, written, or otherwise to any authorized representative of Riedel Environmental Services, Inc. or their client that does not meet or exceed the QA/QC levels established in any written or verbal RFP for this project, or the requirements for any and all SW 846 Methods or EPA Methods utilized for this project.

Any incorrect data that is released to any authorized Riedel Environmental Services, Inc. representative or their client that causes improper site related work or disposal decisions to be made by Riedel Environmental Services, Inc. or their client, will cause Environmetrics to be completely liable for all costs associated with those decisions.

12. Reporting

a. Contact Person Name: _____ Phone No. _____

b. Reporting Party:

Signature: Anne Moms

Printed Name: Anne Moms

This Minimum and Mandatory Requirements for any QA/QC level must be completed and returned to the following within three (3) working days of data submittal to Riedel Project Manager.

Please submit as indicated below:

Yes	No	
X	___	Original to Riedel Project Manager at:
___	___	Copy to St. Louis District Office:
___	___	Copy to Chicago District Office:
___	___	Copy to Detroit District Office:

Riedel Environmental Services, Inc.
Attn: Daniel J. Wilson
18207 Edison Avenue
Chesterfield, MO 63005
Phone:(314) 532-7660
Fax:(314) 536-1655

Riedel Environmental Services, Inc.
*Non-ERCS Projects: ___ Tony Price ___ Bruce Mack
*ERCS Projects: ___ Mark Douglas ___ Todd Ritsema
500 Eastern Avenue
Bensonville, IL 60106
Phone:(708) 238-1818
Fax:(708) 238-1838

Riedel Environmental Services, Inc.
Attn: Charlie Klumb
28340 Goddard Road
Romulus, MI 48174
Phone:(313) 946-8640
Fax:(313) 946-8676

ENVIRONMETRICS PCB in SOIL EXTRACTION RECORD

Date Due 3/30/95

PCB 3393

SER#

DATE 3/29/95 ANALYST K. Grimm METHOD SW846-3550 Extraction Solvent Lot # 951712

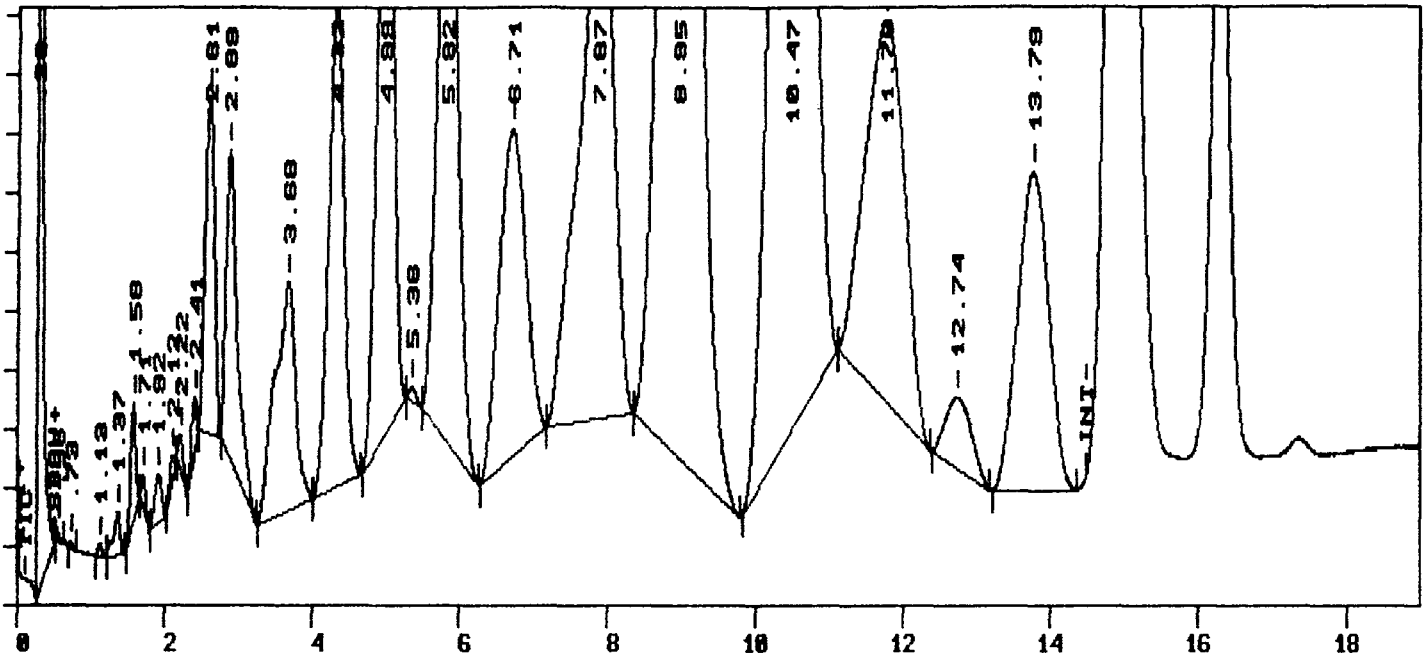
1st = 1.0mL sample extract diluted to 10.0mL
2nd = 100 µl 1st diluted to 10.0mL.
10% = 1.0mL 1st diluted to 10.0mL.
3rd = 100 µl 2nd diluted to 10.0mL.

#	Customer	Sample Number	Site ID.	Description	Sample Weight	Ext Vol	1st	10%	2nd	3rd	Cleanup S	Cleanup Flo	Cleanup Hg	% LOD
1		M. Blank	PCB 3393	method Reagent	—	10mL	X				X	X		
2	RO13	9503-482-001	LB-35 Landfill	Sandy clay/soil w/ grass, roots, rocks	10.0g									
3		-002	LB-34 Landfill	brown clay										
4		-004	LB-31 Landfill	Sandy clay w/ rocks										
5		-005	BF-01 Landfill	Brown soil										
6														
7														
8														
9														
10														
11														
12														

Spike Isomer	Standard #	Standard Conc.	Volume used

Ext. Trans.	Relinquished By	Date	Time	Transfer To	COMMENTS
1→5	K. Grimm	3/29/95	410P	[illegible]	PCB

File=C:\DIRECT\DATA3\033053AA.06R Date printed=03-30-1995 Time= 12:26:14
Sample Name=R013 PCB 3393 SOIL 9503-482-001
0.0 to 19.0 min. Low Y=-3.771 High Y=46.229 mv Span=50.0



210 13 MIN 15oC/MIN 250 4 MIN 250 INJ 300 DET 24 MLS/MIN
Data file = C:\DIRECT\DATA3\033053AA.06R
Date stamp = 03/30/95 Time = 12:24:54
Sample name = R013 PCB 3393 SOIL 9503-482-001
Collected on Mar 30, 1995 12:24:55 from port # 3
Operator = CJ
Sequence file = 033053AA.SEQ #6
Instrument = V3700--DET 3A
Method name = C:\DIRECT\DATA3\START3.MET version # 67
Date method last modified = 03/30/95 Time = 08:05:28
Calibration file = C:\DIRECT\DATA3\MAR30AC.CAL version # 2
Date cal file last modified = 03/30/95 Time = 08:06:16
Run time = 19.00 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-30-1995 Time = 12:27:19

MD 3-30-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.285		70,409.6172	4.0965%	704,096.2	4.097%	BB	0.038	311,466.81	31.3859%
2	0.556		232.1450	0.0135%	2,321.4	0.014%	BB	0.035	1,091.77	0.1100%
3	0.734		173.0641	0.0101%	1,730.6	0.010%	BB	0.044	649.96	0.0655%
4	1.128	- 1242	364.5844	0.0212%	3,645.8	0.021%	BB	0.058	1,043.95	0.1052%
5	1.373	- 1242, 48	2,108.8823	0.1227%	21,088.8	0.123%	BB	0.099	3,539.48	0.3567%
6	1.578	- 1242, 48	4,631.9155	0.2695%	46,319.2	0.269%	BB	0.079	9,798.23	0.9873%
7	1.713		1,212.1241	0.0705%	12,121.2	0.071%	BB	0.071	2,843.40	0.2865%
8	1.923	- 1248	2,638.2979	0.1535%	26,383.0	0.153%	BB	0.108	4,081.38	0.4113%
9	2.120		773.0147	0.0450%	7,730.1	0.045%	BB	0.090	1,425.49	0.1436%
10	2.220		1,603.4636	0.0933%	16,034.6	0.093%	BB	0.080	3,337.51	0.3363%
11	2.409		2,245.4509	0.1306%	22,454.5	0.131%	BB	0.079	4,750.86	0.4787%
12	2.607	- 1242, 48, 54	24,226.4961	1.4095%	242,265.0	1.410%	BB	0.144	28,066.70	2.8282%
13	2.886	- 1242, 48, 54	27,808.1445	1.6179%	278,081.4	1.618%	BB	0.180	25,804.13	2.6002%
14	3.683		36,763.9766	2.1390%	367,639.8	2.139%	BB	0.323	18,949.06	1.9095%
15	4.320	- 1254	59,123.3633	3.4399%	591,233.6	3.440%	BB	0.240	41,122.98	4.1439%
16	4.986	- 1254	86,074.4609	5.0079%	860,744.6	5.008%	BB	0.249	57,610.04	5.8053%

18	5.815 - 1254, 60	104,072.7578	6.0551%	1,040,727.5	6.055%	BB	0.514	33,272.34	3.3697%
19	6.707 - 1260	67,243.3906	3.9123%	672,433.9	3.912%	BB	0.413	27,157.74	2.7366%
20	7.871 - 1260	147,579.9063	8.5864%	1,475,799.0	8.586%	BB	0.514	47,813.30	4.8181%
21	8.953 - 1260	460,627.5625	26.8000%	4,606,275.5	26.800%	BB	0.492	156,180.56	15.7380%
22	10.474	406,600.9688	23.6566%	4,066,009.8	23.657%	BB	0.542	124,933.97	12.5894%
23	11.762	118,862.8594	6.9156%	1,188,628.6	6.916%	BB	0.626	31,662.91	3.1906%
24	12.743	14,774.1797	0.8596%	147,741.8	0.860%	BB	0.416	5,920.89	0.5966%
25	13.786	77,722.3047	4.5220%	777,223.1	4.522%	BB	0.489	26,494.23	2.6698%

Total area = 1.718761E+07 Total amount = 1718761 Sample units = Ug,Mg/Kg,L Total height = 992376.9

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA3\MAR30AC.CAL
Calibration file date: 3/30/95 8:03
Instrument: GC3 Column: OV101 10%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA3\033053AA.06R
Sample name: R013 PCB 3393 SOIL 9503-482-001
Injection Date: Mar 30, 1995 12:24:55
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	1.13	1044	124.698	20.4291 MG/L
	1.37	3539		
	1.58	9798		
	2.61	28067		
	2.89	25804		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	1.92	4081	108.117	32.8724 MG/L
	2.22	3338		
	2.61	28067		
	2.89	25804		
	4.32	41123		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.61	28067	38.697	42.0495 MG/L
	2.89	25804		
	4.32	41123		
	4.99	57610		
	5.82	55272		

CJD
3.30.95

PCB Calculator(c) - Automatic Resulting Sample Report

Sample continued from previous page
Data file: C:\DIRECT\DATA3\033053AA.06R Injection Date:
Mar 30, 1995 12:24:55

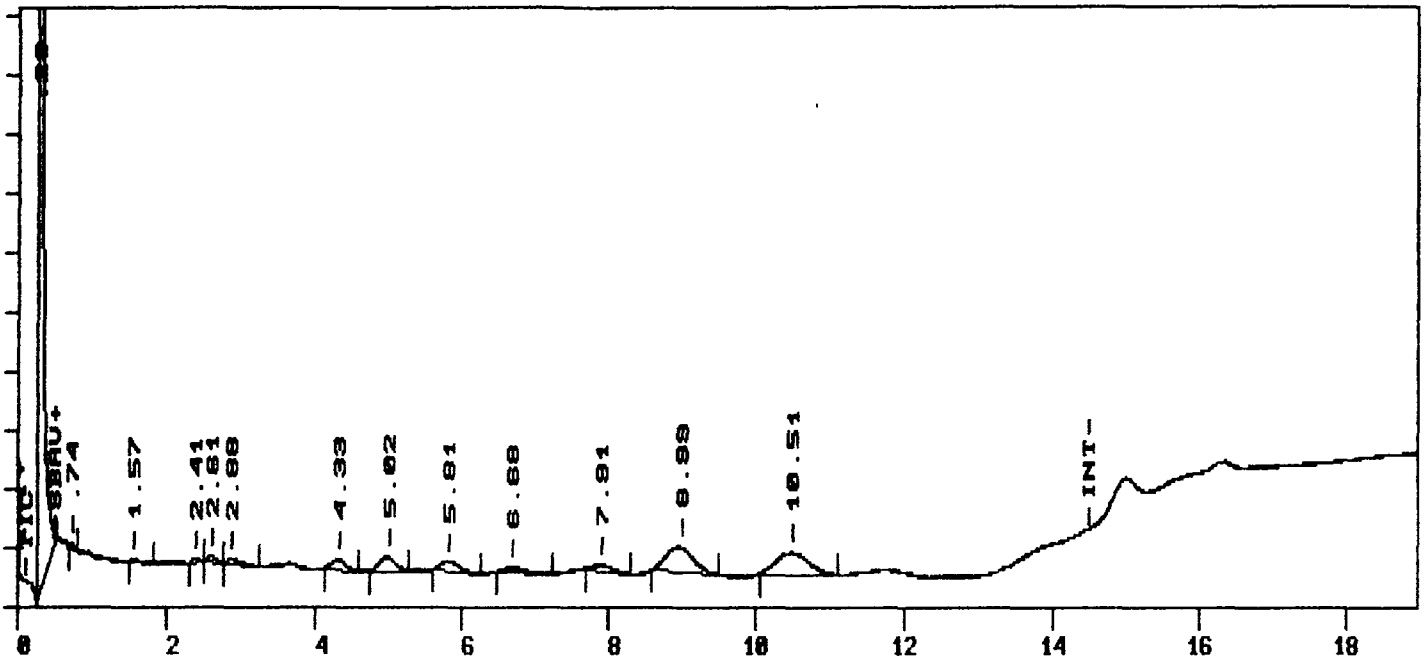
PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1260	4.99	57610	63.421	68.7257 MG/L
	5.82	55272		
	6.71	27158		
	8.95	156181		

LOD 16.47

A1254 42
A1260 69
111

1/.8353 x 111 = 133

File=C:\DIRECT\DATA3\033053AA.07R Date printed=03-30-1995 Time= 12:51:01
Sample Name=R013 PCB 3393 SOIL 9503-482-002
0.0 to 19.0 min. Low Y=-3.847 High Y=46.153 mv Span=50.0



210 13 MIN 15oC/MIN 250 4 MIN 250 INJ 300 DET 24 MLS/MIN
Data file = C:\DIRECT\DATA3\033053AA.07R
Date stamp = 03/30/95 Time = 12:49:12
Sample name = R013 PCB 3393 SOIL 9503-482-002
Collected on Mar 30, 1995 12:49:12 from port # 3
Operator = CJ
Sequence file = 033053AA.SEQ #7
Instrument = V3700--DET 3A
Method name = C:\DIRECT\DATA3\START3.MET version # 67
Date method last modified = 03/30/95 Time = 08:05:28
Calibration file = C:\DIRECT\DATA3\MAR30AC.CAL version # 2
Date cal file last modified = 03/30/95 Time = 08:06:16
Run time = 19.00 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-30-1995 Time = 12:52:11

CP 3.30.95 ✓

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.285		67,092.1953	76.9429%	670,921.9	76.943%	BB	0.037	302,211.00	96.5802%
2	0.736		117.5881	0.1349%	1,175.9	0.135%	BB	0.047	414.20	0.1324%
3	1.574	- 1242, 48	291.7524	0.3346%	2,917.5	0.335%	BB	0.143	340.55	0.1088%
4	2.407		260.3151	0.2985%	2,603.2	0.299%	BB	0.089	489.11	0.1563%
5	2.614	- 1242, 48, 54	478.5609	0.5488%	4,785.6	0.549%	BB	0.127	627.35	0.2005%
6	2.884	- 1242, 48, 54	826.3296	0.9477%	8,263.3	0.948%	BB	0.224	615.11	0.1966%
7	4.327	- 1254	1,175.9207	1.3486%	11,759.2	1.349%	BB	0.213	919.77	0.2939%
8	5.017	- 1254	1,849.5325	2.1211%	18,495.3	2.121%	BB	0.248	1,243.54	0.3974%
9	5.813	- 1254, 60	1,689.4762	1.9375%	16,894.8	1.938%	BB	0.292	964.01	0.3081%
10	6.680	- 1260	1,055.7677	1.2108%	10,557.7	1.211%	BB	0.360	489.17	0.1563%
11	7.910		1,039.3885	1.1920%	10,393.9	1.192%	BB	0.318	544.54	0.1740%
12	8.990	- 1260	5,608.1479	6.4316%	56,081.5	6.432%	BB	0.435	2,150.32	0.6872%
13	10.510		5,712.4331	6.5512%	57,124.3	6.551%	BB	0.500	1,903.41	0.6083%

Total area = 871974 Total amount = 87197.4 Sample units = Ug,Mg/Kg,L Total height = 312912

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA3\MAR30AC.CAL
Calibration file date: 3/30/95 8:03
Instrument: GC3 Column: OV101 10%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA3\033053AA.07R
Sample name: R013 PCB 3393 SOIL 9503-482-002
Injection Date: Mar 30, 1995 12:49:12
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	0.74	414	79.192	0.7191 MG/L
	1.57	341		
	2.61	627		
	2.88	615		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	2.41	489	60.596	1.0091 MG/L
	2.61	627		
	2.88	615		
	4.33	920		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.61	627	28.749	0.8839 MG/L
	2.88	615		
	4.33	920		
	5.02	1244		
	5.81	964		

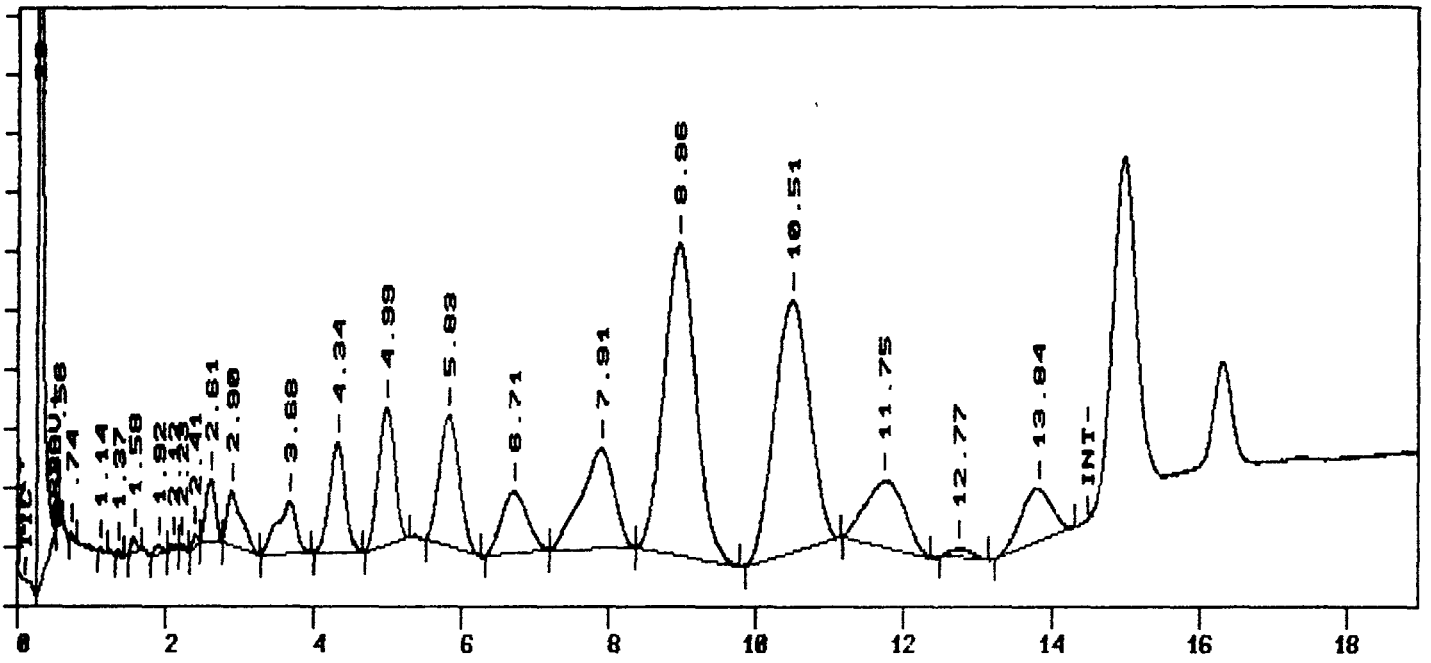
PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1260	5.02	1244	43.756	1.1246 MG/L
	5.81	964		
	6.68	489		
	8.99	2150		

LOD 16.59

$\frac{1}{.8341} = 2.4$

L2

File=C:\DIRECT\DATA3\033053AA.08R Date printed=03-30-1995 Time= 13:13:50
Sample Name=R013 PCB 3393 SOIL 9503-482-004
0.0 to 19.0 min. Low Y=-3.777 High Y=46.223 mv Span=50.0



210 13 MIN 15oC/MIN 250 4 MIN 250 INJ 300 DET 24 MLS/MIN
Data file = C:\DIRECT\DATA3\033053AA.08R
Date stamp = 03/30/95 Time = 13:13:30
Sample name = R013 PCB 3393 SOIL 9503-482-004
Collected on Mar 30, 1995 13:13:30 from port # 3
Operator = CJ
Sequence file = 033053AA.SEQ #8
Instrument = V3700--DET 3A
Method name = C:\DIRECT\DATA3\START3.MET version # 67
Date method last modified = 03/30/95 Time = 08:05:28
Calibration file = C:\DIRECT\DATA3\MAR30AC.CAL version # 2
Date cal file last modified = 03/30/95 Time = 08:06:16
Run time = 19.00 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-30-1995 Time = 13:14:55

CJD 3.30.95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.286		71,878.6094	19.6871%	718,786.1	19.687%	BB	0.038	311,324.66	71.1452%
2	0.555		965.2694	0.2644%	9,652.7	0.264%	BB	0.032	5,089.01	1.1630%
3	0.740		155.3507	0.0425%	1,553.5	0.043%	BB	0.050	522.42	0.1194%
4	1.137	- 1242	116.3729	0.0319%	1,163.7	0.032%	BB	0.057	343.19	0.0784%
5	1.370	- 1242, 48	117.8917	0.0323%	1,178.9	0.032%	BB	0.057	346.97	0.0793%
6	1.583	- 1242, 48	611.3746	0.1675%	6,113.7	0.167%	BB	0.083	1,226.88	0.2804%
7	1.924	- 1248	516.5056	0.1415%	5,165.1	0.141%	BB	0.112	766.26	0.1751%
8	2.116		211.0329	0.0578%	2,110.3	0.058%	BB	0.088	401.74	0.0918%
9	2.230		191.6350	0.0525%	1,916.3	0.052%	BB	0.067	474.61	0.1085%
10	2.407		376.6473	0.1032%	3,766.5	0.103%	BB	0.073	864.70	0.1976%
11	2.614	- 1242, 48, 54	4,438.5073	1.2157%	44,385.1	1.216%	BB	0.143	5,162.77	1.1798%
12	2.903	- 1242, 48, 54	6,084.7876	1.6666%	60,847.9	1.667%	BB	0.226	4,487.40	1.0255%
13	3.684		7,805.2085	2.1378%	78,052.1	2.138%	BB	0.306	4,253.55	0.9720%
14	4.336	- 1254	13,243.4199	3.6273%	132,434.2	3.627%	BB	0.243	9,091.99	2.0777%
15	4.990	- 1254	17,324.4453	4.7450%	173,244.5	4.745%	BB	0.252	11,435.67	2.6133%
16	5.826	- 1254, 60	20,404.8594	5.5887%	204,048.6	5.589%	BB	0.311	10,918.75	2.4952%

18	7.910		26,189.8223	7.1732%	261,898.2	7.173%	BB	0.526	8,298.88	1.6980%
19	8.963	- 1260	78,032.2500	21.3725%	780,322.5	21.372%	BB	0.501	25,934.38	5.9266%
20	10.506		68,940.4531	18.8823%	689,404.5	18.882%	BB	0.551	20,841.35	4.7627%
21	11.753		20,568.0098	5.6334%	205,680.1	5.633%	BB	0.624	5,495.87	1.2559%
22	12.770		1,634.1169	0.4476%	16,341.2	0.448%	BB	0.341	798.76	0.1825%
23	13.843		12,901.7686	3.5337%	129,017.7	3.534%	BB	0.486	4,425.90	1.0114%

Total area = 3651061 Total amount = 365106 Sample units = Ug,Mg/Kg,L Total height = 437590.8

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA3\MAR30AC.CAL
Calibration file date: 3/30/95 8:03
Instrument: GC3 Column: OV101 10%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA3\033053AA.08R
Sample name: R013 PCB 3393 SOIL 9503-482-004
Injection Date: Mar 30, 1995 13:13:30
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	1.14	343	129.413	3.4611 MG/L
	1.14	343		
	1.58	1227		
	2.61	5163		
	2.90	4487		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	1.92	766	121.691	6.4141 MG/L
	2.23	475		
	2.61	5163		
	2.90	4487		
	4.34	9092		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.61	5163	40.508	8.3131 MG/L
	2.90	4487		
	4.34	9092		
	4.99	11436		
	5.83	10919		

CP 3-30-95

PCB Calculator(c) - Automatic Resulting Sample Report

Sample continued from previous page
Data file: C:\DIRECT\DATA3\033053AA.08R Injection Date:
Mar 30, 1995 13:13:30

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1260	4.99	11436	53.823	12.3837 MG/L
	5.83	10919		
	6.71	5087		
	8.96	25934		

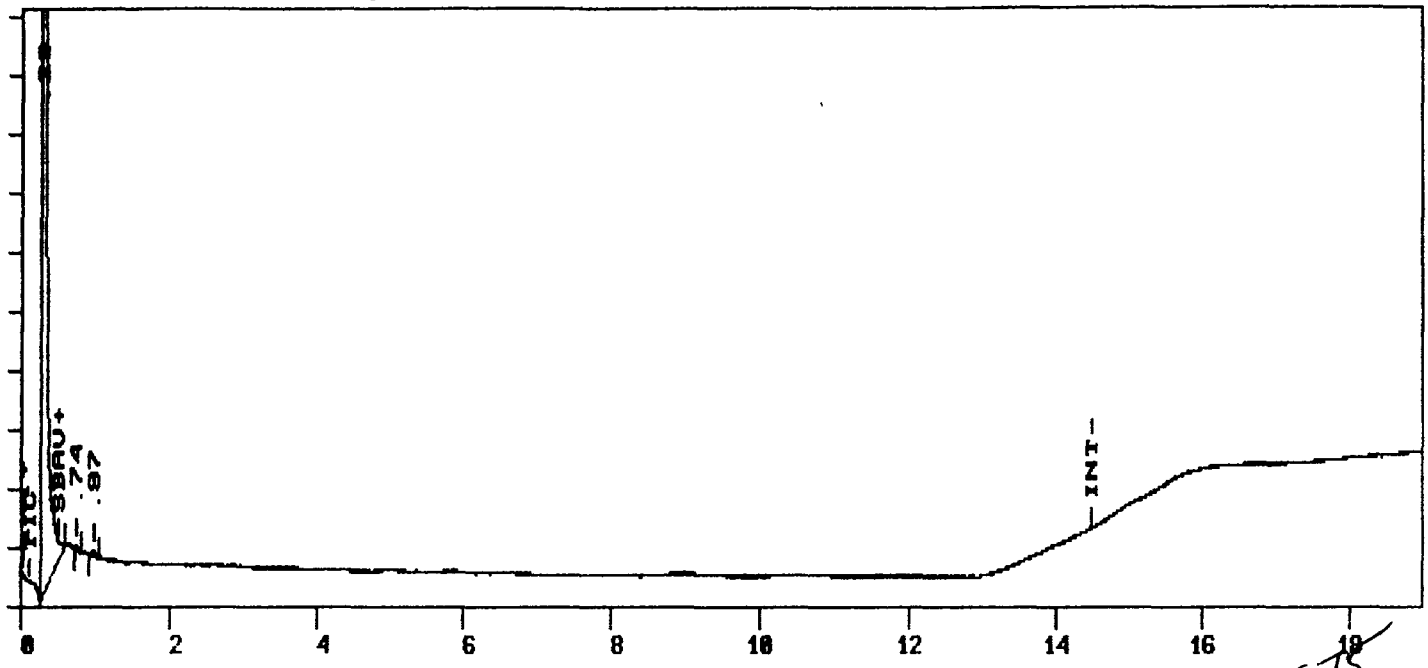
LOD 15.22

8 A1254
12 A1260
20

1/.8478 x 20 = 24

CJD 3-30-95

File=C:\DIRECT\DATA3\033053AA.09R Date printed=03-30-1995 Time= 13:38:05
Sample Name=R013 PCB 3393 SOIL 9503-482-005
0.0 to 19.0 min. Low Y=-3.663 High Y=46.337 mv Span=50.0



LOD 15.75

210 13 MIN 15oC/MIN 250 4 MIN 250 INJ 300 DET 24 MLS/MIN
Data file = C:\DIRECT\DATA3\033053AA.09R
Date stamp = 03/30/95 Time = 13:37:50
Sample name = R013 PCB 3393 SOIL 9503-482-005
Collected on Mar 30, 1995 13:37:50 from port # 3
Operator = CJ
Sequence file = 033053AA.SEQ #9
Instrument = V3700--DET 3A
Method name = C:\DIRECT\DATA3\START3.MET version # 67
Date method last modified = 03/30/95 Time = 08:05:28
Calibration file = C:\DIRECT\DATA3\MAR30AC.CAL version # 2
Date cal file last modified = 03/30/95 Time = 08:06:16
Run time = 19.00 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 1000
Sample Weight = 10 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-30-1995 Time = 13:39:09

CJD 3.30.95

L2

1/.8425 +2

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.286		63,304.0078	99.6465%	633,040.1	99.646%	BB	0.038	278,534.34	99.7511%
2	0.744		102.3047	0.1610%	1,023.0	0.161%	BB	0.048	354.17	0.1268%
3	0.970 - 1242		122.2727	0.1925%	1,222.7	0.192%	BB	0.060	340.72	0.1220%

Total area = 635285.9 Total amount = 63528.59 Sample units = Ug,Mg/Kg,L Total height = 279229.2

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA3\MAR30AC.CAL
Calibration file date: 3/30/95 8:03
Instrument: GC3 Column: OV101 10%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA3\033053AA.09R
Sample name: R013 PCB 3393 SOIL 9503-482-005
Injection Date: Mar 30, 1995 13:37:50
Dilution: 1000.0 Sample Weight: 10.0
Amount injected: 1.0

A1242	was not detected.
A1248	was not detected.
A1254	was not detected.
A1260	was not detected.

Date Due 3/30/95

ENVIRONMETRICS PCB in WIPES EXTRACTION RECORD

PCB 3394

SER#

DATE 3/29/95 ANALYST K. Drinnan METHOD Environmetrics SOP OP-03 Extraction Solvent Lot # 942525

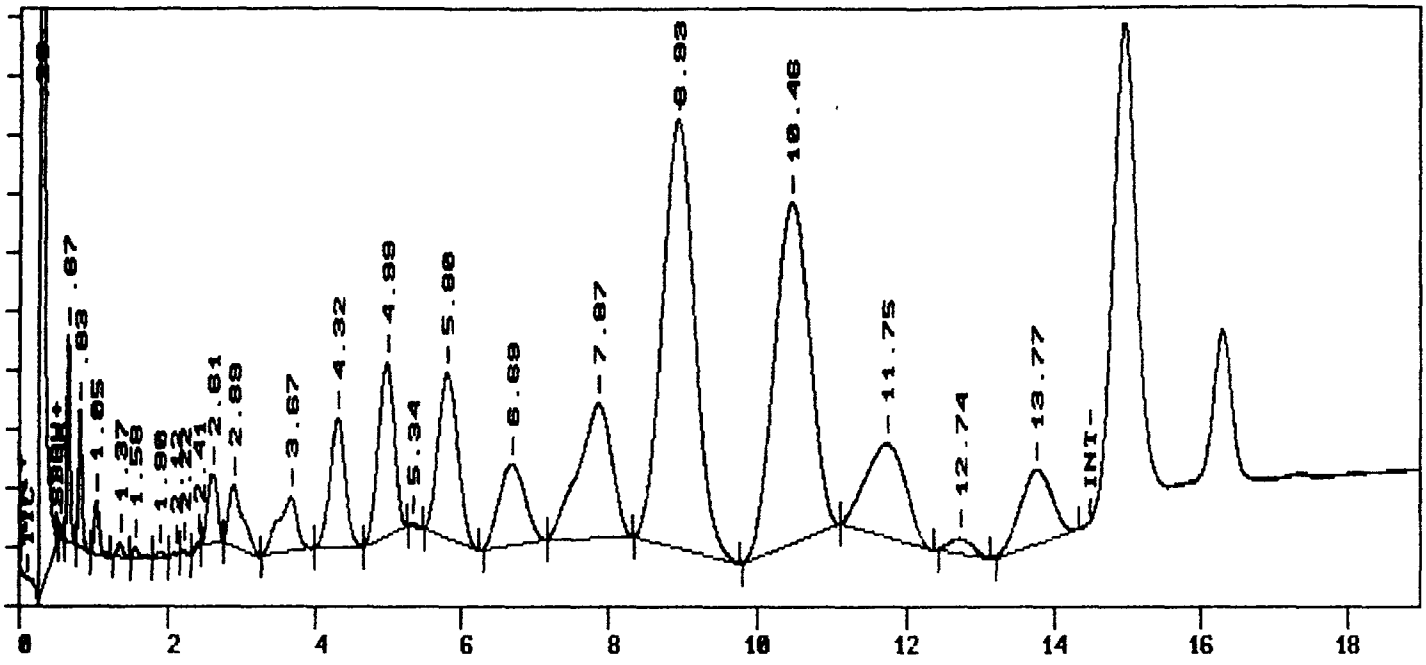
1st = 100mL sample extract
2nd = 100 µl 1st diluted to 10.0mL.
10% = 1.0mL 1st diluted to 10.0mL
3rd = 100 µl 2nd diluted to 10.0mL.

#	Customer	Sample Number	Site ID.	Description	Sample Volume	1st	10%	2nd	3rd	Cleanup S	Cleanup Flo	Cleanup Hg
1		M. Blank	PCB 3349	Method Reagent	100mL	X				X	X	
2		LCS	↓	↓	↓	↓				↓	↓	
3	R013	9503-482-003	2800LF	Dirty Wipe	↓	↓				↓	↓	
4												
5												
6												
7												
8												
9												
10												
11												
12												

Spike Isomer A1248 | Standard # OPS 293-1 | Standard Conc. 100.0 µg/mL | Volume used 0.5mL

Ext. Trans.	Relinquished By	Date	Time	Transfer To	COMMENTS
1→3	K. Drinnan	3/29/95	410p	[illegible]	PCB

File=C:\DIRECT\DATA3\033053AA.03R Date printed=03-30-1995 Time= 11:12:24
Sample Name=R013 PCB 3394 WIPE 9503-482-003
0.0 to 19.0 min. Low Y=-2.789 High Y=47.211 mv Span=50.0



210 13 MIN 15oC/MIN 250 4 MIN 250 INJ 300 DET 24 MLS/MIN
Data file = C:\DIRECT\DATA3\033053AA.03R
Date stamp = 03/30/95 Time = 11:12:06
Sample name = R013 PCB 3394 WIPE 9503-482-003
Collected on Mar 30, 1995 11:12:06 from port # 3
Operator = CJ
Sequence file = 033053AA.SEQ #3
Instrument = V3700--DET 3A
Method name = C:\DIRECT\DATA3\START3.MET version # 67
Date method last modified = 03/30/95 Time = 08:05:28
Calibration file = C:\DIRECT\DATA3\MAR30AC.CAL version # 2
Date cal file last modified = 03/30/95 Time = 08:06:16
Run time = 19.00 minutes Area reject = 100
Amount injected = 1 Dilution Factor = 100
Sample Weight = 1 Internal Standard Amount = 0
Sampling rate = 5 per second
Peak detect threshold = 3 Starting peak width = .04 minutes
Chrom-Perfect Software Serial # 15784 Version = 6.07 For Environmetrics
Today's date = 03-30-1995 Time = 11:13:28

CJP 3-30-95

PK	Ret Time	Name	Amount	Amount %	Area	Area %	Type	Width	Height	Height %
1	0.285		74,645.7969	15.7249%	746,457.9	15.725%	BB	0.038	331,691.31	63.5465%
2	0.557		273.7622	0.0577%	2,737.6	0.058%	BB	0.035	1,309.45	0.2509%
3	0.670		4,830.7490	1.0176%	48,307.5	1.018%	BB	0.047	17,079.06	3.2721%
4	0.829		3,896.6736	0.8209%	38,966.7	0.821%	BB	0.057	11,459.42	2.1954%
5	1.052	- 1242	2,081.3535	0.4385%	20,813.5	0.438%	BB	0.077	4,512.98	0.8646%
6	1.369	- 1242, 48	654.3116	0.1378%	6,543.1	0.138%	BB	0.086	1,267.47	0.2428%
7	1.577	- 1242, 48	604.3104	0.1273%	6,043.1	0.127%	BB	0.110	913.17	0.1749%
8	1.900	- 1248	377.1809	0.0795%	3,771.8	0.079%	BB	0.119	530.19	0.1016%
9	2.117		117.6016	0.0248%	1,176.0	0.025%	BB	0.085	230.49	0.0442%
10	2.217		133.6508	0.0282%	1,336.5	0.028%	BB	0.066	336.45	0.0645%
11	2.410		217.6475	0.0458%	2,176.5	0.046%	BB	0.079	461.94	0.0885%
12	2.611	- 1242, 48, 54	5,090.8145	1.0724%	50,908.1	1.072%	BB	0.147	5,782.45	1.1078%
13	2.890	- 1242, 48, 54	6,658.6587	1.4027%	66,586.6	1.403%	BB	0.221	5,020.06	0.9618%
14	3.673		8,314.4336	1.7515%	83,144.3	1.752%	BB	0.304	4,556.89	0.8730%
15	4.319	- 1254	15,613.7861	3.2892%	156,137.9	3.289%	BB	0.240	10,822.06	2.0733%
16	4.986	- 1254	21,657.9629	4.5625%	216,579.6	4.562%	BB	0.252	14,338.22	2.7470%

18	5.800 - 1254, 60	25,645.7344	5.4025%	256,457.3	5.403%	BB	0.312	13,700.20	2.6247%
19	6.686 - 1260	16,776.5195	3.5341%	167,765.2	3.534%	BB	0.409	6,831.14	1.3087%
20	7.870 - 1260	35,385.5938	7.4543%	353,855.9	7.454%	BB	0.527	11,184.97	2.1429%
21	8.934 - 1260	107,369.0938	22.6184%	1,073,690.9	22.618%	BB	0.501	35,732.38	6.8457%
22	10.460	93,680.0625	19.7347%	936,800.7	19.735%	BB	0.548	28,491.16	5.4584%
23	11.747	29,404.7813	6.1944%	294,047.8	6.194%	BB	0.625	7,841.71	1.5023%
24	12.737	2,826.6011	0.5955%	28,266.0	0.595%	BB	0.366	1,288.49	0.2469%
25	13.767	18,196.0410	3.8332%	181,960.4	3.833%	BB	0.487	6,224.60	1.1925%

Total area = 4746977 Total amount = 474697.7 Sample units = Ug,Mg/Kg,L Total height = 521966.7

PCB Calculator(c) - Automatic Resulting Sample Report

Continuing calibration file: C:\DIRECT\DATA3\MAR30AC.CAL
Calibration file date: 3/30/95 8:03
Instrument: GC3 Column: OV101 10%
Sample units: MG/L
Curve fitting is Mean Calibration Factor

****
Data file: C:\DIRECT\DATA3\033053AA.03R
Sample name: R013 PCB 3394 WIPE 9503-482-003
Injection Date: Mar 30, 1995 11:12:06
Dilution: 100.0 Sample Weight: 1.0
Amount injected: 1.0

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1242	1.05	4513	91.317	5.2369 MG/L
	1.37	1267		
	1.58	913		
	2.61	5782		
	2.89	5020		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1248	1.90	530	130.918	7.2192 MG/L
	2.22	336		
	2.61	5782		
	2.89	5020		
	4.32	10822		

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1254	2.61	5782	45.452	10.0459 MG/L
	2.89	5020		
	4.32	10822		
	4.99	14338		
	5.80	13700		

CYP
3-30-95

PCB Calculator(c) - Automatic Resulting Sample Report

Sample continued from previous page
Data file: C:\DIRECT\DATA3\033053AA.03R Injection Date:
Mar 30, 1995 11:12:06

PCB Components	RT(min)	Height	PkRatio %RSD	Result
A1260	4.99	14338	58.007	16.3803 MG/L
	5.80	13700		
	6.69	6831		
	8.93	35732		

10 A1254
16 A1260
26

CLD
3-30-95

Sequence file C:\DIRECT\DATA3\NEWCUR.SEQ Date = 03-09-1995 Time = 12:18:47

#	DATA FILE	SAMPLE NAME	METHOD	SAMPLE WEIGHT	AMT INJ	DIL FAC	INT STD AMT	CAL
1	030953A.01R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0
2	030953A.02R	A1242 GCA 483 0.02 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
3	030953A.03R	A1242 GCA 488 1.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
4	030953A.04R	A1242 GCA 487 1.00 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
5	030953A.05R	A1242 GCA 486 0.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
6	030953A.06R	A1242 GCA 485 0.25 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
7	030953A.07R	A1242 GCA 485 0.10 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
8	030953A.08R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0
9	030953A.09R	A1248 GCA 489 0.02 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
10	030953A.10R	A1248 GCA 494 1.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
11	030953A.11R	A1248 GCA 493 1.00 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
12	030953A.12R	A1248 GCA 492 0.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
13	030953A.13R	A1248 GCA 491 0.25 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
14	030953A.14R	A1248 GCA 490 0.10 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
15	030953A.15R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0
16	030953A.16R	A1254 GCA 495 0.02 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
17	030953A.17R	A1254 GCA 500 1.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
18	030953A.18R	A1254 GCA 499 1.00 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
19	030953A.19R	A1254 GCA 498 0.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
20	030953A.20R	A1254 GCA 497 0.25 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
21	030953A.21R	A1254 GCA 496 0.10 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
22	030953A.22R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0
23	030953A.23R	A1260 GCA 501 0.02 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
24	030953A.24R	A1260 GCA 506 1.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
25	030953A.25R	A1260 GCA 505 1.00 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
26	030953A.26R	A1260 GCA 504 0.50 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
27	030953A.27R	A1260 GCA 503 0.25 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
28	030953A.28R	A1260 GCA 502 0.10 PPM	...TART3.MET	1.00	1.00	1.00	0.00	0
29	030953A.29R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0

PCB Component #1 A1242 WINDOW size in minutes

LEVEL	AMOUNT	STD FILE	DATE & TIME	CAL. FACTOR
1	0.02	030953A.02A	3/9/09 10:06	1.517257E+05
2	1.5	030953A.03A	3/9/09 10:30	1.348816E+05
3	1.0	030953A.04A	3/9/09 10:54	1.355937E+05
4	0.5	030953A.05A	3/9/09 11:19	1.643474E+05
5	0.25	030953A.06A	3/9/09 11:43	1.593803E+05
6	0.1	030953A.07A	3/9/09 12:07	1.862825E+05

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT
1	1.043	+-0.3	0.743	to	1.343	1.0
2	1.274	+-0.3	0.974	to	1.574	1.0
3	1.589	+-0.3	1.289	to	1.889	1.0
4	2.631	+-0.3	2.331	to	2.931	1.0
5	2.916	+-0.3	2.616	to	3.216	1.0

Mean Calibration Factor = 1.553685E+05
Standard Deviation = 1.937223E+04
percent Relative Std. deviation = 12.47

PCB Calculator(c) Calibration File
3/10/95 10:07

Initial Calibration C:\DIRECT\DATA1\MAR093AC.CAM Version# = 3
Calibration file date = 3/10/95 9:16
Instrument: GC3 Column: OV101 10% Sample units: MG/L

PCB Component #2 A1248 WINDOW size in minutes

LEVEL	AMOUNT	STD FILE	DATE & TIME	CAL. FACTOR
1	0.02	030953A.09A	3/9/09 12:56	1.396153E+05
2	1.5	030953A.10A	3/9/09 13:20	1.251557E+05
3	1.0	030953A.11A	3/9/09 13:52	1.300415E+05
4	0.5	030953A.12A	3/9/09 14:10	1.289549E+05
5	0.25	030953A.13A	3/9/09 14:33	1.440384E+05
6	0.1	030953A.14A	3/9/09 15:09	1.665298E+05

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT
1	1.931	+-0.3	1.631	to	2.231	1.0
2	2.249	+-0.3	1.949	to	2.549	1.0
3	2.639	+-0.3	2.339	to	2.939	1.0
4	2.923	+-0.3	2.623	to	3.223	1.0
5	4.359	+-0.3	4.059	to	4.659	1.0

Mean Calibration Factor = 1.390559E+05
Standard Deviation = 1.520828E+04
percent Relative Std. deviation = 10.94

PCB Calculator(c) Calibration File
3/10/95 10:07

Initial Calibration C:\DIRECT\DATA1\MAR093AC.CAM Version# = 3
Calibration file date = 3/10/95 9:16
Instrument: GC3 Column: OV101 10% Sample units: MG/L

PCB Component #3 A1254 WINDOW size in minutes

LEVEL	AMOUNT	STD FILE	DATE & TIME	CAL. FACTOR
1	0.02	030753AA.16A	3/7/09 23:44	1.174539E+04
2	1.5	030753AA.17A	3/8/09 0:09	1.566051E+02
3	1.0	030753AA.18A	3/8/09 0:33	1.311663E+03
4	0.5	030753AA.19A	3/8/09 0:58	1.606375E+03
5	0.25	030753AA.20A	3/8/09 1:22	4.611835E+03
6	0.1	030753AA.21A	3/8/09 1:46	4.856634E+05

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT
1	2.644	+-0.3	2.344	to	2.944	1.0
2	3.050	+-0.3	2.750	to	3.350	1.0
3	4.349	+-0.3	4.049	to	4.649	1.0
4	5.019	+-0.3	4.719	to	5.319	1.0
5	5.847	+-0.3	5.547	to	6.147	1.0

Mean Calibration Factor = 8.418255E+04
Standard Deviation = 1.967294E+05
percent Relative Std. deviation = 2.336938E+02

PCB Calculator(c) Calibration File
3/10/95 10:07

Initial Calibration C:\DIRECT\DATA1\MAR093AC.CAM Version# = 3
Calibration file date = 3/10/95 9:16
Instrument: GC3 Column: OV101 10% Sample units: MG/L
Curve fit is Mean Calibration Factor

PCB Component #4 A1260 WINDOW size in minutes

LEVEL	AMOUNT	STD FILE	DATE & TIME	CAL. FACTOR
1	0.02	030953A.23A	3/10/09 9:40	2.111444E+05
2	1.5	030953A.24A	3/10/09 9:41	2.053149E+05
3	1.0	030953A.25A	3/10/09 9:43	2.081138E+05
4	0.5	030953A.26A	3/10/09 9:45	2.085255E+05
5	0.25	030953A.27A	3/10/09 9:47	2.417712E+05
6	0.1	030953A.28A	3/10/09 9:49	2.901153E+05

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT
1	5.033	+-0.3	4.733	to	5.333	1.0
2	5.850	+-0.3	5.550	to	6.150	1.0
3	6.636	+-0.3	6.336	to	6.936	1.0
4	7.564	+-0.3	7.264	to	7.864	1.0
5	8.997	+-0.3	8.697	to	9.297	1.0

Mean Calibration Factor = 2.274975E+05
Standard Deviation = 3.352575E+04
percent Relative Std. deviation = 14.74

Sequence file C:\DIRECT\DATA3\DAILY3A.SEQ Date = 03-30-1995 Time = 05:57:01

#	DATA FILE	SAMPLE NAME	METHOD	SAMPLE WEIGHT	AMT INJ	DIL FAC	INT STD AMT	CAL
1	033053A.01R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0
2	033053A.02R	A1242 GCA 486 0.50 PPM -7.52	...TART3.MET	1.00	1.00	1.00	0.00	0
3	033053A.03R	A1248 GCA 492 0.50 PPM -12.02	...TART3.MET	1.00	1.00	1.00	0.00	0
4	033053A.04R	A1254 GCA 498 0.50 PPM -9.92	...TART3.MET	1.00	1.00	1.00	0.00	0
5	033053A.05R	A1260 GCA 504 0.50 PPM -8.12	...TART3.MET	1.00	1.00	1.00	0.00	0
6	033053A.06R	HEXANE BLANK	...TART3.MET	1.00	1.00	1.00	0.00	0
7	033053A.07R	GCA 581 A1242 LCS .5PPM .91	...TART3.MET	1.00	1.00	1.00	0.00	0
8	033053A.08R	GCA 582 A1248 LCS .5PPM .92	...TART3.MET	1.00	1.00	1.00	0.00	0
9	033053A.09R	GCA 583 A1254 LCS .5PPM .96	...TART3.MET	1.00	1.00	1.00	0.00	0
10	033053A.10R	GCA 584 A1260 LCS .5PPM .95	...TART3.MET	1.00	1.00	1.00	0.00	0

9. diff

oil factor

CJD 3.30.95

PCB Calculator(c) Calibration File
3/30/95 8:03

Continuing Calibration C:\DIRECT\DATA3\MAR30AC.CAM Version# = 34
Calibration file date = 3/30/95 8:03
Initial calibration file is C:\DIRECT\DATA3\MAR093AC.CAM
Instrument: GC3 Column: OV101 10% Sample units: MG/L
Curve fit is Mean Calibration Factor

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PCB Component #1 A1242 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	033053A.02A	3/30/09 7:17

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	1.025	+-0.3	0.725	to	1.325	1.0	35643.426
2	1.252	+-0.3	0.952	to	1.552	1.0	28177.504
3	1.560	+-0.3	1.260	to	1.860	1.0	48936.746
4	2.587	+-0.3	2.287	to	2.887	1.0	39016.34
5	2.862	+-0.3	2.562	to	3.162	1.0	15273.427

Mean Calibration Factor = 1.553685E+05
Calibration Factor of 033053A.02A = 167047.438
percent Difference = -7.52

CMD 3-30-95

PCB Calculator(c) Calibration File
3/30/95 8:03

Continuing Calibration C:\DIRECT\DATA3\MAR30AC.CAM Version# = 34
Calibration file date = 3/30/95 8:03
Initial calibration file is C:\DIRECT\DATA3\MAR093AC.CAM
Instrument: GC3 Column: OV101 10% Sample units: MG/L
Curve fit is Mean Calibration Factor

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PCB Component #2 A1248 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	033053A.03A	3/30/09 7:24

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	1.897	+-0.3	1.597	to	2.197	1.0	24395.459
2	2.207	+-0.3	1.907	to	2.507	1.0	17881.943
3	2.585	+-0.3	2.285	to	2.885	1.0	67390.938
4	2.870	+-0.3	2.570	to	3.170	1.0	27208.754
5	4.287	+-0.3	3.987	to	4.587	1.0	18896.217

Mean Calibration Factor = 1.390559E+05
Calibration Factor of 033053A.03A = 155773.313
percent Difference = -12.02

MD
3-30-95

PCB Calculator(c) Calibration File
3/30/95 8:03

Continuing Calibration C:\DIRECT\DATA3\MAR30AC.CAM Version# = 34
Calibration file date = 3/30/95 8:03
Initial calibration file is C:\DIRECT\DATA3\MAR093AC.CAM
Instrument: GC3 Column: OV101 10% Sample units: MG/L
Curve fit is Mean Calibration Factor

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PCB Component #3 A1254 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	033053A.04A	3/30/09 7:53

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	2.606	+-0.3	2.306	to	2.906	1.0	38697.836
2	3.010	+-0.3	2.710	to	3.310	1.0	48552.207
3	4.285	+-0.3	3.985	to	4.585	1.0	65744.305
4	4.948	+-0.3	4.648	to	5.248	1.0	51859.113
5	5.769	+-0.3	5.469	to	6.069	1.0	42326.715

Mean Calibration Factor = 2.248701E+05
Calibration Factor of 033053A.04A = 247180.172
percent Difference = -9.92

CP
3.30.95

PCB Calculator(c) Calibration File
3/30/95 8:03

Continuing Calibration C:\DIRECT\DATA3\MAR30AC.CAM Version# = 34
Calibration file date = 3/30/95 8:03
Initial calibration file is C:\DIRECT\DATA3\MAR093AC.CAM
Instrument: GC3 Column: OV101 10% Sample units: MG/L
Curve fit is Mean Calibration Factor

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PCB Component #4 A1260 WINDOW size in minutes

AMOUNT	STD FILE	DATE & TIME
0.5	033053A.05A	3/30/09 7:57

PEAK	RT (min)	WINDOW	RT RANGE (min)			WEIGHT	HEIGHT
1	4.973	+-0.3	4.673	to	5.273	1.0	67207.031
2	5.775	+-0.3	5.475	to	6.075	1.0	47135.402
3	6.575	+-0.3	6.275	to	6.875	1.0	39231.906
4	7.480	+-0.3	7.180	to	7.780	1.0	30459.875
5	8.890	+-0.3	8.590	to	9.190	1.0	61934.957

Mean Calibration Factor = 2.274975E+05
Calibration Factor of 033053A.05A = 245969.172
percent Difference = -8.12

CD
3.30.95