IL-0041-07

ecology and environment, inc.

223 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60606, TEL. 312-663-9415

International Specialists in the Environmental Sciences

US EPA RECORDS CENTER REGION 5
486822

Date Received for Review: 1/15/85 Date Review Completed: 1/16/85

To: Dan Coyne

From: Cynthia Bachunas

Subject: Hinsdale Sexton RS-8303-1F CASE 3566

Sample Description: low water organics
low water metals

Project Data Status: Complete

FIT Data Review Findings:

Organics - NO HITS except for acetone, methylene chloride + phthalates which are also in the blank

inorganics

Additional Comments:

recycled paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 1/15/85

RECEIVED JAN 1 5 1985

SUBJECT: Review of Region V CLP Data
Received for Review on 1/14/85

FROM: Curtis Ross, Director (5SCRL) Chuck Elly
Central Regional Laboratory

TO: Data User: Fit

We have reviewed the data for the following case(s).

SITE NAME: Hinsdale Sexton SMO Case No. 3566

EPA Data Set No. SF 866 No. of Samples: 2 D.U./Activity Numbers 1985 I C48588

CRL No. 85MC04562 - 85MC04R07

SMO Traffic No. MEA373 - MEA372

CLP Laboratory: Wilson Lab Hrs. Required for Review: 4

Following are our findings.

The spike recoveries for Sb, Tl and Sn are reported as being 0, 64 and 50% respectively. There may be a low bias for these elements in these samples.

The results for Fe on the field blank show a value of 130 ug/L indicating a possibility for low level contamination for Fe occurring in this analysis.

The field blank DL's for As, Se and Tl are reported to be 20, 6 and 14 ug/L respectively.

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Don Trees, CLP/Sample Management Office

EPA FORM 1320-6 (REV. 3-76)

REGION V, U.S. ENVIRONMENTAL PROTECTION AGENCY
ESD/Central Regional Laboratory

DATA TRACKING - FORM I RECEIVED JAN 15 1985

CRL Data Set No. 5F 866 ERRIS No. _____

SMO Case No. 3566 Site Name: Hinsdale Sexton

Name of Laboratory: Wilson Lab Data User: Fit

No. of Samples: 2 Date Samples Received: 1/14/85

1. Have chain-of-custody records been received? YES ✓ NO ___
2. Have Traffic reports been received? YES ___ NO ✓
3. If no, are Traffic report numbers written on the chain-of-custody record? YES ✓ NO ___
4. If no, which Traffic report numbers are missing?

5. Are basic data forms in? YES ✓ NO ___
6. Number of samples claimed: 2 Number of samples received: 2
7. Checked by: [illegible] Date: 1/14/85
8. Received by Contract Project Management Section: CM Date: 1/14/85
9. Review Started: 1-14-85 Reviewer Signature: [illegible]
10. Total time spent on review: 4 hrs Date review completed: 1-14-85
11. Copied (xeroxed) by: _____ Date: _____
12. Transmitted by: _____ Date: _____
13. Mailed to Data User by: _____ Date: _____
14. REMARKS:

FORM I

85MC04362

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO.
MEA373

RECEIVED JAN 15 1985

DATE 85/01/09

INORGANIC ANALYSIS DATA SHEET

LAB NAME WILSON LABORATORIES
SOW NO. 784
LAB SAMPLE ID. NO. 8411-1124

CASE NO. 3566

QC REPORT NO. 3566

ELEMENTS IDENTIFIED AND MEASURED

CONCENTRATION: LOW X MEDIUM
MATRIX: WATER X SOIL SLUDGE OTHER

UG/L OR MG/KG DRY WEIGHT (CIRCLE ONE)

1.	ALUMINUM	200 U P	13.	MAGNESIUM	180000 1 8 0 P
2.	ANTIMONY	60 U R P	14.	MANGANESE	240 P
3.	ARSENIC	20 U F	15.	MERCURY	.2 U
4.	BARIUM	200 U P	16.	NICKEL	20 U P
5.	BERYLLIUM	5 U P	17.	POTASSIUM	[3000] P
6.	CADMIUM	2 U P	18.	SELENIUM	6 U F
7.	CALCIUM	201000 P	19.	SILVER	10 U P
8.	CHROMIUM	10 U P	20.	SODIUM	35000 P
9.	COBALT	30 U P	21.	THALLIUM	14 U R F
10.	COPPER	10 U P	22.	TIN	30 U R F
11.	IRON	600 P	23.	VANADIUM	10 U P
12.	LEAD	4 U F	24.	ZINC	40 P

CYANIDE _____ PERCENT SOLIDS (%) _____

FOOTNOTES: FOR REPORTING RESULTS TO EPA, STANDARD RESULT QUALIFIERS ARE USED AS DEFINED ON COVER PAGE. ADDITIONAL FLAGS OR FOOTNOTES EXPLAINING RESULTS ARE ENCOURAGED. DEFINITION OF SUCH FLAGS MUST BE EXPLICIT AND CONTAINED ON COVER PAGE, HOWEVER.

COMMENTS: _____

LAB MANAGER Bernadine Jones

FORM I

85MC04R07

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO.
MEA372

DATE 85/01/09

RECEIVED JAN 15 1985

INORGANIC ANALYSIS DATA SHEET

LAB NAME WILSON LABORATORIES
SOW NO. 784
LAB SAMPLE ID. NO. 8411-1123

CASE NO. 3566
QC REPORT NO. 3566

ELEMENTS IDENTIFIED AND MEASURED

CONCENTRATION: LOW X MEDIUM
MATRIX: WATER X SOIL SLUDGE OTHER

UG/L OR MG/KG DRY WEIGHT (CIRCLE ONE)

1.	ALUMINUM	200 U P	13.	MAGNESIUM	2000 U P
2.	ANTIMONY	60 U R P	14.	MANGANESE	15 U P
3.	ARSENIC	20 U F	15.	MERCURY	.2 U
4.	BARIUM	200 U P	16.	NICKEL	20 U P
5.	BERYLLIUM	5 U P	17.	POTASSIUM	2000 U P
	CADMIUM	2 U P	18.	SELENIUM	6 U F
7.	CALCIUM	1000 U P	19.	SILVER	10 U P
8.	CHROMIUM	10 U P	20.	SODIUM	5000 U P
9.	COBALT	30 U P	21.	THALLIUM	14 U R F
10.	COPPER	10 U P	22.	TIN	30 U R P
11.	IRON	130 P	23.	VANADIUM	10 U P
12.	LEAD	4 U F	24.	ZINC	30 P
	CYANIDE			PERCENT SOLIDS (%)	

FOOTNOTES: FOR REPORTING RESULTS TO EPA, STANDARD RESULT QUALIFIERS ARE USED AS DEFINED ON COVER PAGE. ADDITIONAL FLAGS OR FOOTNOTES EXPLAINING RESULTS ARE ENCOURAGED. DEFINITION OF SUCH FLAGS MUST BE EXPLICIT AND CONTAINED ON COVER PAGE, HOWEVER.

COMMENTS:

LAB MANAGER Bernadine Jensen

RECEIVED JAN 1 5 1985

DATA QUALIFIERS

Contractor: Wilson Labs.

Case 3566

Below is a summary of the out of control audits and the possible effect on the data for this case:

The spike recoveries for Sb, Tl and Sn are reported as being 0, 64 and 50% respectively. There may be a low bias for these elements in the samples.

The results for Fe on the field blank show a value of 130 ug/L indicating the possibility of low level contamination for this element occuring in this analysis.

The field blank DL's for As, Se and Tl are reported to be 20, 6 and 14 ug/L.

Reviewed by: Aaron O Lynstedt

Phone: 886-1973

Date: 1-14-85

REVIEW OF CLP INORGANIC DATA

RECEIVED JAN 1 5 1985

Contractor: Wilson Labs

Case 3566

The data package for this case was reviewed by Region V, Central Regional Laboratory personnel in accordance with the "Standard Operating Procedure for Contract Laboratory (CLP) Data Review; August 1984". The quality of the data was assessed based on laboratory compliance with the contract and the data quality objectives as defined by the user.

This review covers the following samples and parameters:

SMO#	CRL#	MATRIX	CONCENTRATION
ME4 373	85MC04562	Water	Low
ME4 372	85MC0R07	"	"

Case: 3566

Contractor: Wilson Labs.

DATA PACKAGE COMPLETENESS AUDIT

RECEIVED JAN 1 5 1985

I. Cover Page

✓ The cover page must include general comments, Statement of Work Number, QC Report #, EPA cross reference numbers, footnotes used in the data package, and the statement on ICP corrections.

II. Inorganic Data Report Sheet - Form I

A completed Form I must be submitted for every sample in that case.

✓ Proper matrix and concentration level indicated.

— % solids reported for solid samples.

✓ Analytical method code for each parameter. "P" for ICP/flame AA or "F" for furnace.

✓ Any dilutions affecting the IDL explained in the comment section.

✓ For positive values less than the contract required detection limit, the value is put in brackets. [ ].

✓ For not detected, the detection limit is reported, followed by a "U".

✓ Lab manager's signature.

III. QA/QC Data

The following forms must be submitted. A check for completeness and and compliance follows in this audit.

✓ Initial and Continuing Calibration Verification - Form II.

✓ Blank data - Form III

✓ ICP Interference Check Sample - Form IV

✓ Spike Sample Recovery - Form V

✓ Duplicate Data - Form VI

✓ Instrument Detection Limit and Laboratory Control Sample - Form VII.

✓ Standard Addition Results - Form VIII

RECEIVED JAN 1 5 1985

IV. Raw Data

A legible photocopy of raw data consisting of the sequential measurement readout record, such as an instrument tape or printout, clearly labeled with sufficient information to identify both the sample identity and the final result must be submitted for each of the following.

✓ calibration standards, with prep date.

✓ calibration and preparation blanks

✓ initial and continuing calibration

✓ interference check samples, initial and continuing.

✓ duplicates

✓ spikes - indicating standard solutions used, final spike concentrations and volumes involved.

✓ samples - including all weights, dilutions and volumes used to obtain the reported value.

✓ instrument adjustments or corrections, if any.

✓ raw furnace data for:

- initial single spike data
- single spike % recovery, if used
- full method of standard addition, if performed.
- method of standard addition correlation coefficient, slope and intercept of linear fit.

V. Sample Traffic Report

Not present Copy of SMO Sample Traffic Report with lab receipt information and original contractor signature.

Case: 3564

Contractor: Wilson Labs

CALIBRATION VERIFICATION

Attach Form II to this sheet. List only those parameters outside control limits below.

Hg and Sn 80-120% I = initial
All other compounds 90-110% C = continuing

RECEIVED JAN 15 1985

Parameter	I or C	% Recovery	Affected Sample #S
		O.K.	1-14-85

NOTE: Sources of initial and continuing cal standards should be checked. Only EPA QC or NBS reference solutions are acceptable for initial solutions (except Sn).

Corrective action by lab must include recalibration and reanalysis of the preceding 10 samples for the parameters involved. Ensure that this was done.

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Form II B

Q. C. Report No. 3566

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Wilson Laboratories

CASE NO. 3566

SOW NO. 784

DATE 85/01/09

UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals[5]:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic	235	238	101	235	238	101			F
4. Barium									
5. Beryllium									
6. Cadmium									
7. Calcium	100,000	98,000	98	100,000	95,000	95			P
8. Chromium									
9. Cobalt									
10. Copper									
11. Iron									
12. Lead	870	870	100	870	850	98			P
13. Magnesium	10,000	10,000	100	10,000	10,000	100			P
14. Manganese									
15. Mercury									
16. Nickel									
17. Potassium									
18. Selenium									
19. Silver									
20. Sodium									
21. Thallium									
22. Tin									
23. Vanadium									
24. Zinc									
Other:									
Cyanide									

[1] Initial Calibration Source EPA [2] Continuing Calibration Source EPA

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

RECEIVED JAN 15 1985

Form II

Q. C. Report No. 3566

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Wilson Laboratories

CASE NO. 3566

SOW NO. 784

DATE 85/01/09

UNITS UG/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum	6,500	6,500	100	6,500	6,500	100			P
2. Antimony	2,500	2540	102	2,500	2,690	108			P
3. Arsenic	235	233	99	235	221	94			F
4. Barium	5,000	5,100	102	5,000	5,200	104			P
5. Beryllium	235	240	102	235	240	102			P
6. Cadmium	39	36	92	39	36	92			P
7. Calcium	100,000	101,000	101	100,000	101,000	101			P
8. Chromium	520	490	94	520	480	92			P
9. Cobalt	520	530	102	520	560	108			P
10. Copper	340	340	100	340	330	97			P
11. Iron	1,590	1,620	102	1,590	1,620	102			P
12. Lead	174	166	95	174	161	92			F
13. Magnesium	50,000	49,000	98	50,000	49,000	98			P
14. Manganese	700	690	99	700	680	97			P
15. Mercury	8.7	7.1	87	8.7	7.2	83			
16. Nickel	410	400	98	410	390	95			P
17. Potassium	20,000	20,000	100	20,000	20,000	100			P
18. Selenium	50	53	105	50	54	108			F
19. Silver	50	50	100	50	50	100			P
20. Sodium	100,000	104,000	104	100,000	104,000	104			P
21. Thallium	101	111	110	101	110	109			F
22. Tin	5,000	4930	99	5,000	5440	109			P
23. Vanadium	1,690	1,750	104	1,690	1,750	104			P
24. Zinc	420	400	95	420	410	98			P
Other:									
Cyanide									

[1] Initial Calibration Source EPA [2] Continuing Calibration Source EPA

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Case: 3566

Contractor: Wilson Labs

BLANK CONTAMINANTS - Attach Form III to this sheet.

RECEIVED JAN 1 5 1985

A) CALIBRATION BLANKS

List only those parameters detected above the Contract Required Detection Limit (CRDL) below.

Units = ug/L

Parameter	CRDL	Blank Value	Affected Sample #S
			all O.K. 1-14-85 aod.

NOTE: Corrective action is to terminate the analysis, correct the problem and recalibrate.

B) PREPARATION BLANKS

List only those parameters detected above the CRDL. Check frequency of blanks: Limits are one per case or 20 samples, whichever is more frequent.

Units = ug/L

Parameter	CRDL	Blank Value	Affected Sample #S
			aoo.K. 1-14-85 aod

NOTE: Contractor required to flag data with "C" and "NDB" codes. Check final data sheets for proper codes.

Form III

Q. C. Report No. 3566

BLANKS

RECEIVED JAN 15 1985

LAB NAME Wilson Labs

CASE NO. 3566

DATE 85/01/09

UNITS UG/L

Matrix Water

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum	200 U	200 U				200 U	
2. Antimony	60 U	60 U				60 U	
3. Arsenic	10 U	10 U	10 U	10 U	10 U	10 U	
4. Barium	200 U	200 U				200 U	
5. Beryllium	5 U	5 U				5 U	
6. Cadmium	2 U	2 U				2 U	
7. Calcium	2 U	2 U				2 U	
8. Chromium	10 U	10 U				10 U	
9. Cobalt	30 U	30 U				30 U	
10. Copper	10 U	10 U				10 U	
11. Iron	30 U	30 U				[70]	
12. Lead	2 U	2 U				2 U	
13. Magnesium	2 U	2 U				2 U	
14. Manganese	15 U	15 U				15 U	
15. Mercury	0.2 U	0.2 U				0.2 U	
16. Nickel	20 U	20 U				20 U	
17. Potassium	2,000 U	2000 U				2000 U	
18. Selenium	3 U	3 U				3 U	
19. Silver	10 U	10 U				10 U	
20. Sodium	5,000 U	5000 U				5,000 U	
21. Thallium	7 U	7 U				7 U	
22. Tin	30 U	30 U				30 U	
23. Vanadium	10 U	10 U				10 U	
24. Zinc	10 U	10 U				10 U	
Other:							
Cyanide							

Case: 3566

Contractor: Wilson Labs

ICP INTERFERENCE CHECK

RECEIVED JAN 1 5 1985

Attach Form IV to this sheet. List only those parameters outside ± 20% of the established mean value.

I = Initial
F = Final

Parameter	I or F	%RC	Affected Sample

NOTE: If outside the limit, the lab must correct the problem, recalibrate, verify the calibration and reanalyze the samples.

Effect of ICP biases on sample data:

All O.K 1-14.85 aol

Form IV

Q. C. Report No. 3566 RECEIVED JAN 1 5 1985

ICP INTERFERENCE CHECK SAMPLE

LAB NAME Wilson Laboratories

DATE 85/01/08

CASE NO. 3566

Check Sample I.D. ICS

Check Sample Source EPA

Units ug/l

Compound	Control Limits[1] Mean	Control Limits[1] Std. Dev.	True[2]	Initial Observed	Initial %R	Final Observed	Final %R
Metals:							
1. Aluminum	444000	16000	448000	490000	109	460000	103
2. Antimony	—	—	—				
3. Arsenic							
4. Barium	400	0	464	400	100	400	100
5. Beryllium	412	.18	412	—	—	—	—
6. Cadmium							
7. Calcium	434000	12000	445	480000	111	470000	108
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium	427000	28000	425000	490000	115	470000	110
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium	—	—	—	—	—	—	—
21. Thallium							
22. Tin	—	—	—	—	—	—	—
23. Vanadium	480	13	508	500	104	510	106
24. Zinc							
Other:							
	—			—			

1 Mean value based on n = 5.

2 True value of EPA ICP Interference Check Sample or contractor standard.

Case: 3566

Contractor: Wilson Labs.

SPIKE BIASES

RECEIVED JAN 1 5 1985

Attach Form V to this sheet. List only those recoveries which are outside the control limits of 75%-125%. State spiking concentration only if different from the contract required levels.

Parameter	% Recovery	Spike Concentration	SMO#
Sb	000		ME4 373
Tl	64		↓
Sn	50		

NOTE: At least one spike per case or per every 20 samples, whichever is more frequent is required. If recovery is outside the limits, all data associated with that spike must be flagged with an "R". If sample concentration exceeds the spike concentration by a factor of four or more, and the recovery is out of control, the data reported is not flagged.

Form V

Q. C. Report No. 3566

RECEIVED JAN 1 5 1985

SPIKE SAMPLE RECOVERY

LAB NAME Wilson Labs

DATE 85/01/09

CASE NO. 3566

EPA Sample No. MEA ~~372~~ 373

Lab Sample ID No. 8411-~~1123~~1124

Units UG/L

Matrix Water

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R[1]
Metals:					
1. Aluminum	75-125	2,000	200 U	2,000	100
2. Antimony	"	60 U	60 U	50 ~~500~~	000R
3. Arsenic	"	21	20 U	20	105
4. Barium	"	1,900	200 U	2,000	95
5. Beryllium	"	50	5 U	50	100
6. Cadmium	"	53	2 U	50	106
7. Calcium	"	300,000	201,000	100,000	99
8. Chromium	"	170	10 U	200	85
9. Cobalt	"	520	30 U	500	104
10. Copper	"	250	10 U	250	100
11. Iron	"	1,620	600	1,000	102
12. Lead	"	530	4 U	500	106
13. Magnesium	"	230,000	180,000	50,000	100
14. Manganese	"	440	240	200	100
15. Mercury	"	2.0	0.2	2.0	100
16. Nickel	"	390	20 U	400	98
17. Potassium	"	46,000	3,000	50,000 ~~86~~	86
18. Selenium	"	10	6 U	10	100
19. Silver	"	50	10 U	50	100
20. Sodium	"	129,000	35,000	100,000	94
21. Thallium	"	32	7 U	50	64
22. Tin	"	200	30 U	400	50 R
23. Vanadium	"	490	10 U	500	98
24. Zinc	"	260	40	200	110
Other:					
Cyanide	"				

[1] %R = [(SSR - SR)/SA] x 100

"R"- out of control

Comments:

Case: 3566

Contractor: Wilson Labs

DUPLICATE PRECISION

RECEIVED JAN 1 5 1985

Attach Form VI to this sheet. List only those parameters outside the advisory 20% RPD at concentrations <5 x CRDL or ± CRDL for sample results ≤5 x CRDL.

Units = ug/L

Parameter	Result Sample	Result Duplicate	RPD	SMO#
			all O.K.	1-14-85 aod

NOTE: No lab corrective action is contractually required. Flag the sample parameter in question on the precision summary.

Form VI

Q. C. Report No. 3566

RECEIVED JAN 1 5 1985

DUPLICATES

LAB NAME Wilson Laboratories

DATE 85/01/09

CASE NO. 3566
EPA Sample No. ME A 373
Lab Sample ID No. 8411-1124
Units UG/L

Matrix Water

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. Aluminum		200 U	200 U	0
2. Antimony		60 U	60 U	0
3. Arsenic		20 U	20 U	0
4. Barium		~~2000 U~~ 200U	~~2000~~ 200U	0
5. Beryllium		5U	5U	0
6. Cadmium		2 U	2 U	0
7. Calcium		201,000	198,000	2
8. Chromium		10 U	10 U	0
9. Cobalt		30 U	30 U	0
10. Copper		10 U	10 U	0
11. Iron		600	580	3
12. Lead		4U	4U	0
13. Magnesium		180,000	180,000	0
14. Manganese		240	240	0
15. Mercury		0.2 U	0.2 U	0
16. Nickel		20 U	20 U	0
17. Potassium		[3,000]	[3,000]	0
18. Selenium		6 U	6 U	0
19. Silver		10 U	10 U	0
20. Sodium		35,000	35,000	0
21. Thallium		14 U	14 U	0
22. Tin		30U	30U	0
23. Vanadium		10U	10U	0
24. Zinc		40	40	0
Other:				
Cyanide				

* Out of Control

[1] To be added at a later date.

[2] RPD = [|S - D|/((S + D)/2)] x 100

NC - Non calculable RPD due to value(s) less than CRDL

Case: 3566

Contractor: Midwest Lab

RECEIVED JAN 15 1985

CRDL ADHERENCE

Attach Form VII to this sheet. List only those parameters where contractor's Instrument Detection Limit (IDL) exceeds the CRDL.

Parameter	CRDL	IDL ICP/AA	IDL Furnace	Affected Sample #S
		all O.K		1-14-85 a.l

NOTE: No lab corrective action required at this time. If CRDL's are quoted for affected sample results, cross out and put in the contractor IDL to avoid misleading data user as to the level of detection.

Case: 3566

Contractor: Wilson Labs.

RECEIVED JAN 1 5 1985

LABORATORY CONTROL SAMPLE ANALYSIS

Attach Form VII to this sheet. List only those recoveries outside the limits of 80%-120% recovery.

Parameter	% Recovery	Affected Sample #s

NOTE: If outside the control limits, the analysis must be terminated, problems corrected and the previous 19 samples associated with the LCS reanalyzed.

Form VII

Q.C. Report No. 3566

RECEIVED JAN 15 1985

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Wilson Labs

CASE NO. 3566

DATE 85/01/09

LCS UNITS ug/L mg/kg

(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Instrument Detection Limits (IDL)-ug/l Furnace	Lab Control Sample True	Lab Control Sample Found	Lab Control Sample %R
Metals:						
1. Aluminum	200	200		5,700	5,700	100
2. Antimony	60	60		1,000	830	83
3. Arsenic	10		10	235	238	101
4. Barium	200	200		5,000	5,500	110
5. Beryllium	5	5		235	240	102
6. Cadmium	5	2		39	37	95
7. Calcium	5000	2,000		100,000	101,000	101
8. Chromium	10	10		260	250	96
9. Cobalt	50	30		260	280	108
10. Copper	25	10		340	340	100
11. Iron	100	30		790	760	96
12. Lead	5	200	4	430	430	100
13. Magnesium	5000	2,000		50,000	50,000	100
14. Manganese	15	15		350	340	97
15. Mercury	0.2		0.2	8.7	7.1	82
16. Nickel	40	20		210	200	95
17. Potassium	5000	3,000		50,000	44,000	88
18. Selenium	5		3	50	52	104
19. Silver	10	10		100	100	100
20. Sodium	5000	5,000		100,000	102,000	102
21. Thallium	10		7	100	106	105
22. Tin	40	30		1,000	1,080	108
23. Vanadium	50	10		850	860	101
24. Zinc	20	10		420	430	102
Other:						
Cyanide	10					

Case: 3566

Contrctor: Wilson Labs.

STANDARD ADDITION RESULTS - FURNACE ANALYSIS

RECEIVED JAN 1 5 1985

A. Attach Form VIII. All samples analyzed by furnace require an initial single spike at 2 x the CRDL. Duplicate injections are required, and the average is reported. For concentrations greater than the CRDL duplicates must agree ± 20% RPD. Corrective action is to rerun the sample at least once. List only deviations from this criteria.

Parameter	SMO#	% RPD Duplicate injections	Spiking level

B. Sample quantitation is obtained from either single spike or full method of standard addition based on spike recovery and sample concentration criteria. Verify that the applicable criteria was used for each sample.

- Spike recovery is ≤ 40%; samples must be diluted and rerun. If still ≤ 40%, the result for that sample is flagged with an "E".

  or

- Spike recovery is ≥ 40%, but sample concentration is ≤ 50% of the measured spike value. The CRDL is reported, multiplied by any dilution factor.

  or

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- Spike recovery is within 85%-115% limit, and sample concentration is > 50% of the measured spike value. Quantitation is obtained directly from the single spike.

  or

- Spike recovery is outside 85%-115% limit, and sample concentration is > 50% of the measured spike value. A full method of standard addition is required. (Sample plus 3 spikes). That sample result is flagged with an "s". The correlation coefficient must be ≥ 0.995. If it is less than this, that sample result is flagged with a "+".

List only where improper criteria was used.

Parameter	SMO#	Comment	Correlation Coefficient <0.995
		O.K.	1-14-85 a.o.l.

Form VIII

Q.C. Report No. 3566

STANDARD ADDITION RESULTS

RECEIVED JAN 1 5 1985

LAB NAME Wilson Laboratories CASE NO. 3566

DATE 85/01/09 UNITS UG/L

Sample #	Element	0 ADD ABS.	1 ADD CON./ABS[1]	2 ADD CON./ABS.[1]	3 ADD CON./ABS.[1]	FINAL CON.[2]	r*
MEA373 Spike	As	0.016	50/0.048	100/0.085	200/108	21	.998

[1] CON is the concentration added, ABS. is the instrument readout in absorbance or concentration.

[2] Concentration as determined by MSA

*"r" is the correlation coefficient.

+ - correlation coefficient is outside of control window of 0.995.

Case 3566

REVIEW SUMMARY

RECEIVED JAN 15 1985

	Precision	Bias
Al	See Form VI	0
Ba		-5.0
Be		0
Cr		-15.0
Co		+4.0
Cu		0
Fe		+2.0
Mn		0
Ni		-2.0
Ag		0
V		-2.0
Zn		+10.0
As		+5.0
Sb		-100
Cd		+6.0
Pb		+6.0
Hg		0
Se		0
Tl		-36.0
Sn		-50.0
CN		—

Precision expressed as RPD between duplicates of sample MEA 373.

Bias expressed as the percent of spike recovery of sample " " from 100%.

10/3

Form IX (Quarterly)
Instrument Detection Limits

RECEIVED JAN 1 5 1985

Laboratory Name Wilson Laboratories ICP/Flame AA (Circle One) Model Number 5000

Date 85/01/09 Furnace AA Number 500

Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)	Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)
1. Aluminum		200		13. Magnesium		5000	
2. Antimony		60		14. Manganese	279.5 B	15	15 P
3. Arsenic	193.7 B	10	10 F	15. Mercury	instrument set	0.2	0.2
4. Barium		200	200 P	16. Nickel	232.0 B	40	20 P
5. Beryllium	234.9 B	5	5 P	17. Potassium	766.5	5000	2000 P
6. Cadmium	228.8 B	5	2 P	18. Selenium	196.0 F	5	3 F
7. Calcium		5000		19. Silver	328.1 B	10	10 P
8. Chromium	357.9 B	10	10 P	20. Sodium		5000	
9. Cobalt	240.7 B	50	30 P	21. Thallium	276.8 B	10	7 F
10. Copper	324.8 B	25	10 P	22. Tin		40	
11. Iron	248.3 B	100	30 P	23. Vanadium		50	
12. Lead	283.3 B	5	2 F	24. Zinc	213.9 B	20	10 P

Footnotes:

- Indicate the instrument for which the IDL applies with a P (for ICP/Flame AA) or a F (for Furnace AA) behind the IDL value.
- Indicate elements commonly run with background correction (AA) with a B behind the analytical wavelength.
- If more than one ICP/Flame or Furnace AA is used, submit separate Forms IX-XI for each instrument.

Comments:

Lab Manager [illegible]

Form IX (Quarterly)
Instrument Detection Limits

2 of 3

RECEIVED JAN 1 5 1985

Laboratory Name Wilson Laboratories ICP/Flame AA (Circle One) Model Number 503

Date 85/01/09 Furnace AA Number HGA 2100

Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)	Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)
1. Aluminum		200		13. Magnesium		5000	
2. Antimony		60		14. Manganese		15	
3. Arsenic		10		15. Mercury		0.2	
4. Barium		200		16. Nickel		40	
5. Beryllium		5		17. Potassium		5000	
6. Cadmium		5		18. Selenium		5	
7. Calcium		5000		19. Silver		10	
8. Chromium		10		20. Sodium		5000	
9. Cobalt		50		21. Thallium	276.8B	10	7 F
10. Copper		25		22. Tin		40	
11. Iron		100		23. Vanadium		50	
12. Lead	283.6 B	5	2 F	24. Zinc		20	

Footnotes:

- Indicate the instrument for which the IDL applies with a P (for ICP/Flame AA) or a F (for Furnace AA) behind the IDL value.
- Indicate elements commonly run with background correction (AA) with a B behind the analytical wavelength.
- If more than one ICP/Flame or Furnace AA is used, submit separate Forms IX-XI for each instrument.

Comments:

Lab Manager [illegible]

3 of 3

Form IX (Quarterly)
Instrument Detection Limits

RECEIVED JAN 1 5 1985

Laboratory Name Wilson Laboratories (ICP)/Flame AA (Circle One) Model Number 6000

Date 84/12/20 Furnace AA Number

Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)	Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)
1. Aluminum	237.335 P	200	200	13. Magnesium	285.213 P	5000	2000
2. Antimony	206.833 P	60		14. Manganese		15	
3. Arsenic		10		15. Mercury		0.2	
4. Barium	455.403 P	200	200	16. Nickel		40	
5. Beryllium	313.042 P	5	3	17. Potassium		5000	
6. Cadmium		5		18. Selenium		5	
7. Calcium	422.673 P	5000	1000	19. Silver		10	
8. Chromium		10		20. Sodium	330.237 P	5000	5000
9. Cobalt		50		21. Thallium		10	
10. Copper		25		22. Tin	189.989 P	40	30
11. Iron		100		23. Vanadium	292.402 P	50	10
12. Lead		5		24. Zinc		20	

Footnotes:

- Indicate the instrument for which the IDL applies with a P (for ICP/Flame AA) or a F (for Furnace AA) behind the IDL value.
- Indicate elements commonly run with background correction (AA) with a B behind the analytical wavelength.
- If more than one ICP/Flame or Furnace AA is used, submit separate Forms IX-XI for each instrument.

Comments:

Lab Manager Bernadine Williams

Form X (Quarterly)

ICP Interelement Correction Factors

RECEIVED JAN 1 5 1985

Laboratory Wilson Laboratories

ICP Model Number PE 6000

Date 85/01/09

Analyte	Analyte Wavelength (nm)	Interelement Correction Factors for Al	Ca	Fe	Mg				
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Chromium									
Cobalt									
Copper									
Lead									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Tin									
Vanadium									
Zinc									

NOT USED

Comments:

Lab Manager [illegible]

Form XI (Quarterly)
ICP Linear Ranges

Laboratory Name Wilson Laboratories ICP Model Number 6000

Date 85/01/08

RECEIVED JAN 1 5 1985

Upper ICP Linearity Limits

Analyte	Integration Time (Seconds)	Concentration (µg/L)	Analyte	Integration Time (Seconds)	Concentration (µg/L)
1. Aluminum	2.0	200000	13. Magnesium	2.0	110000
2. Antimony	3.0	6000	14. Manganese	NA	NA
3. Arsenic	NA	NA	15. Mercury	NA	NA
4. Barium	2.0	6000	16. Nickel	NA	NA
5. Beryllium	NA	NA	17. Potassium	NA	NA
6. Cadmium	NA	NA	18. Selenium	NA	NA
7. Calcium	2.0	250000	19. Silver	NA	NA
8. Chromium	NA	NA	20. Sodium	2.0	300000
9. Cobalt	NA	NA	21. Thallium	NA	NA
10. Copper	NA	NA	22. Tin	3.0	11000
11. Iron	NA	NA	23. Vanadium	2.0	4000
12. Lead	NA	NA	24. Zinc	NA	NA

Footnotes: ● Indicate elements not analysed by ICP with the notation NA.

Comments:

Lab Manager Brandon Lewis

RECEIVED JAN 1 5 1985

DATA QUALITY OBJECTIVES AND REVIEW

Case 3566

OSC or responsible party: Not given.

Case Objective

Data Quality Needs

Precision: See Form VI.

Bias: " " V.

Obtain the information above directly from the OSC or designee before starting data review. Categorize review level into one of the following (circle one):

A. Enforcement: Case is already an enforcement action, data is sure to be used in court.

B. Assessment: Case already has preliminary data, level and degree of contamination or clean up action needs to be determined.

C. Screening: Case purpose is to determine what, if any, pollutants are at the site, followup sampling likely.

RECEIVED JAN 1 5 1985

Case 3566

Contractor: Wilson Labs

MISSING DELIVERABLES

Item Description	Date Requested	Requestor	Date Received
SMO Traffic Report			

Corrective Action: Call SMO at FTS 557-2490.

Case 3556

REVIEW SUMMARY

RECEIVED JAN 1 5 1985

Data Quality Needs Met?: Yes.

Action Items to Resolve Data Quality:

Item Description	Responsible Party	Completion Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 1-14-85

SUBJECT: Review of Region V CLP Data
Received for Review on 12/31/84

RECEIVED JAN 15 1985

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: Hinsdale Sexton SMO Case No. 3566

EPA Data Set No. SF866 No. of Samples: 2 D.U./Activity Numbers Y905 K48500

CRL No. 85MC04562 to 85MC04R07

SMO Traffic No. EA601 to EA602

CLP Laboratory: Pedco Hrs. Required for Review: 4

Following are our findings.

PRECISION - ACCEPTABLE for VOA, B/N, Acid, + PESTICIDES

Accuracy - " " VOA, + B/N

Accuracy - Negative bias for Acids + PESTICIDES

Methylene Chloride was greater than 5 times the CRDL in the 11/27/84 blank

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above. R.H. 1-11-85
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Don Trees, CLP/Sample Management Office

EPA FORM 1320-6 (REV 3-76)

SURROGATE RECOVERY SUMMARY

Case No. 3566 Contract Laboratory PEI Assoc Contract No. 68-01-7015

		VOLATILE			SEMI-VOLATILE								PESTICIDE
	SMO TRAFFIC NO.	TOLUENE-D8 (88-110)	BFB (95-121)	1,2 DICHLORO-ETHANE-D4 (77-120)	NITRO-BENZENE-D5 (41-120)	2-FLUORO-BIPHENYL (44-119)	TERPHENYL-D14 (33-128)			PHENOL-D5 (15-103)	2-FLUORO-PHENOL (23-121)	2,4,6 TRIBROMO-PHENOL (10-130)	DIBUTYL-CHLORENDATE ** (46-136)
11/26	BLANK	102	85	80	50	100	118			16	34	22	72
	EA601R	97	97	95	52	78	50			18	28	34	39*
	EA602	97	98	93	58	96	112			30	44	82	74
	EA601MS	96	96	95	68	98	126			50	70	80	45*
	EA601MSD	97	89	91	78	128*	170*			60	88	112	35*
	EA601MSR	99	88	94									
11/27	BLANK	97	85	90									

RECEIVED JAN 15 1985

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 21 ; outside of QC limits

Semi-Volatiles: 2 out of 30 ; outside of QC limits

Pesticides: 3 out of 5 ; outside of QC limits

Comments:

FORM II 4/84

REAGENT BLANK SUMMARY

RECEIVED JAN 1 5 1985

Case No. 3826 Contractor PEI Assoc., Inc. Contract No. ~~68-01-~~ 7015

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRQL
VOABLK 1127	11/27	V	W	L	T	75-09-2	Methylene chloride	40.1	ug/l	5
						67-64-1	Acetone	22.0	"	10
VOABLK 1126	11/26	V	W	L	T	75-09-2	Methylene chloride	13.2	"	5
						67-64-1	Acetone	14.9	"	10
BNABLKW 3826	12/20	BNA	W	L	X		None			
PESTBLC 3826	12/13	P	W	L	V		None			

Comments:

FORM IV

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. 3566 Contractor PEI Associates Inc. Contract No. 68-01-7015

Instrument ID X Date 12/20/84 Time 12:0

Lab ID DFTPP1220B Data Release Authorized By: [illegible]

RECEIVED JAN 15 1985

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	43.67
68	less than 2.0% of mass 69	ND (0)[1]
69	mass 69 relative abundance	46.63
70	less than 2.0% of mass 69	ND (0)[1]
127	40.0 - 60.0% of mass 198	53.37
197	less than 1.0% of mass 198	ND
198	base peak, 100% relative abundance	100.00
199	5.0 - 9.0% of mass 198	6.18
275	10.0 - 30.0% of mass 198	16.32
365	greater than 1.00% of mass 198	1.29
441	present, but less than mass 443	7.77
442	greater than 40.0% of mass 198	55.39
443	17.0 - 23.0% of mass 442	9.75 (17.61)[2]

[1] Value in parenthesis is % mass 69.
[2] Value in parenthesis is % mass 442.

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
BNA E1220		12/20/84	1228
BNA D 1220		"	1307
BNA C 1220		"	1426
BNA B1220		"	1518
BNA A 1220		"	1717
Blank	water Blank	"	1806
EA602 MS	DX 218 MS	"	2008
EA602 MSD	DX 218 MSD	"	2058
Blank (R)		"	2326

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

011

Case No. 3566 Contractor PEI Associates Inc. Contract No. 68-01-7015

Instrument ID X Date 12/21/84 Time 1128

Lab ID DFTPP1221 Data Release Authorized By: [illegible]

RECEIVED JAN 15 1985

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	44.37	
68	less than 2.0% of mass 69	0.58	(1.25)[1]
69	mass 69 relative abundance	46.04	
70	less than 2.0% of mass 69	ND	(0)[1]
127	40.0 - 60.0% of mass 198	54.79	
197	less than 1.0% of mass 198	ND	
198	base peak, 100% relative abundance	100.00	
199	5.0 - 9.0% of mass 198	8.06	
275	10.0 - 30.0% of mass 198	17.61	
365	greater than 1.00% of mass 198	1.53	
441	present, but less than mass 443	9.10	
442	greater than 40.0% of mass 198	63.60	
443	17.0 - 23.0% of mass 442	12.18	(19.15)[2]

[1] Value in parenthesis is % mass 69.
[2] Value in parenthesis is % mass 442.

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
BNAC1221		12/21/84	1144
EA601	DX217	"	1530
EA602	DX218	"	1620

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. 3566 Contractor PEI Associates, Inc. Contract No. 68-01-7015

Instrument ID T Date 11/26/84 Time 1125

Lab ID T5080 Data Release Authorized By: [signature]

RECEIVED JAN 15 1985

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE	
50	15.0 - 40.0% of the base peak	15.8	
75	30.0 - 60.0% of the base peak	39.2	
95	Base peak, 100% relative abundance	100.0	
96	5.0 - 9.0% of the base peak	6.3	
173	Less than 1.0% of the base peak	N.D.	
174	Greater than 50.0% of the base peak	63.4	
175	5.0 - 9.0% of mass 174	4.0	(6.25)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	61.0	(96.2)[1]
177	5.0 - 9.0% of mass 176	3.7	(6.0)[2]

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
VOABLK1126	5ml blank	11/26	1138
VOAH1126	200 ppb	"	1339
VOAMH1126	150 ppb	"	1426
VOAML1126	50 ppb	"	1500
VOAL1126	20 ppb	"	1532
VOAM1126	100 ppb	"	1611
EA601VOA	DX217	"	1652
EA602VOA	DX218	"	1723
EA601VOAR	DX217	"	1801
EA601VMS	DX217 MS	"	1839
EA601VMSD	DX217 MSD	"	1917

4/84

FORM V

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. 3566 Contractor PEI Associates Inc Contract No. 68-01-7015

Instrument ID T Date 11/27/84 Time 1128

Lab ID T5096 Data Release Authorized By: [signature]

RECEIVED JAN 1 5 1985

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE	
50	15.0 - 40.0% of the base peak	18.0	
75	30.0 - 60.0% of the base peak	40.3	
95	Base peak, 100% relative abundance	100.0	
96	5.0 - 9.0% of the base peak	6.4	
173	Less than 1.0% of the base peak	N.D.	
174	Greater than 50.0% of the base peak	57.0	
175	5.0 - 9.0% of mass 174	3.5	(6.1)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	55.5	(97.3)[1]
177	5.0 - 9.0% of mass 176	2.8	(5.0)[2]

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
VOABLK1127		11/27	1138
VOAM1127		"	1229
EA001VMSR	DX217		1355

4/84

FORM V

RECEIVED JAN 15 1985

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 3566 Contractor PEI Assoc., Inc. Contract No. 68-01-7015

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. EA601	1,1-Dichloroethene	49.9	0	84.4	169.1*				14	61-145
	Trichloroethene	55.4	0	79.4	143.3*				14	71-120
	Chlorobenzene	42.3	0	64.4	152.2*				13	75-130
	Toluene	42.1	0	61.2	145.4*				13	76-125
	Benzene	41.7	0	64.1	153.7*				11	76-127
B/N SMO SAMPLE NO.	1,2,4-Trichlorobenzene								28	39-98
	Acenaphthene								31	46-118
	2,4 Dinitrotoluene								38	24-96
	Di-n-Butylphthalate								40	11-117
	Pyrene								31	26-127
	N-Nitroso-Di-n-Propylamine								38	41-116
	1,4-Dichlorobenzene								28	36-97
ACID SMO SAMPLE NO.	Pentachlorophenol								50	9-103
	Phenol								42	12-89
	2-Chlorophenol								40	27-123
	4-Chloro-3-Methylphenol								42	23-97
	4-Nitrophenol								50	10-80
PEST SMO SAMPLE NO.	Lindane								15	56-123
	Heptachlor								20	40-131
	Aldrin								22	40-120
	Dieldrin								18	52-126
	Endrin								21	56-121
	4,4'-DDT								27	38-127

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs ____ out of ____; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

RECOVERY: VOAs 0 out of 5; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

Comments:

RECEIVED JAN 15 1985

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 3566 Contractor PEI Assoc., Inc. Contract No. 68-01-7015

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug)		SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. EA601	1,1-Dichloroethene	49.9		0	70.7	141.7	71.4	143.1	0.9	14	61-145
	Trichloroethene	53.4		0	77.3	139.5*	79.9	144.2*	3.3	14	71-120
	Chlorobenzene	42.3		0	58.4	138.1*	60.7	143.5*	3.8	13	75-130
	Toluene	42.1		0	58.3	139.5*	59.4	141.1*	1.8	13	76-125
	Benzene	41.7		0	58.8	141.0*	60.3	144.6*	2.5	11	76-127
B/N SMO SAMPLE NO. EA602	1,2,4-Trichlorobenzene	51.7			50.6	98	62.1	120*	22	28	39-98
	Acenaphthene	50.3			53.6	107	71.2	142*	28	31	46-118
	2,4 Dinitrotoluene	52.2			35.2	67	51.8	99*	41*	38	24-96
	Di-n-Butylphthalate	69.5			23.3	33	31.2	45	31	40	11-117
	Pyrene	65.0			64.5	99	87.8	135*	31	31	26-127
	N-Nitroso-Di-n-Propylamine	56.1			25.4	45	32.5	58	25	38	41-116
	1,4-Dichlorobenzene	60.7			45.8	75	53.4	88	16	28	36-97
ACID SMO SAMPLE NO. EA602	Pentachlorophenol	101.2			11.8	12	19.6	19	47	50	9-103
	Phenol	163.8			59.4	57	74.	71	22	42	12-89
	2-Chlorophenol	110.4			84.6	77	104.4	95	21	40	27-123
	4-Chloro-3-Methylphenol	100.8			62.6	62	85.2	85	32	42	23-97
	4-Nitrophenol	160.8			0	0*	0	0*	0	50	10-80
PEST SMO SAMPLE NO. EA601	Lindane	1.26	2.10	0.00	1.10	87.2	1.81	86.1	1.27	15	56-123
	Heptachlor	0.99	1.66	0.0	0.68	68.4	0.93	56.1	19.8	20	40-131
	Aldrin	1.08	1.80	0.0	0.91	84.1	1.17	64.9	25.8	22	40-120
	Dieldrin	1.01	1.68	0.0	0.93	92.3	1.35	80.4	13.8	18	52-126
	Endrin	1.04	1.73	0.0	0.99	95.4	1.48	85.5	10.9	21	56-121
	4,4'-DDT	1.01	1.69	0.0	0.65	64.2	0.99	58.7	9.0	27	38-127
		MS	MSD								

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs 0 out of 5; outside QC limits
B/N 1 out of 7; outside QC limits
ACID 0 out of 5; outside QC limits
PEST 1 out of 6; outside QC limits

RECOVERY: VOAs 8 out of 10; outside QC limits
B/N 4 out of 14; outside QC limits
ACID 2 out of 10; outside QC limits
PEST 0 out of 12; outside QC limits

Comments: EA601 PESTICIDE MSD was re-extracted using the ~~and there was~~ 300ml remaining. RPD values based on percent recovery.

REGION V, U.S. ENVIRONMENTAL PROTECTION AGENCY
ESD/Central Regional Laboratory

DATA TRACKING - FORM I

RECEIVED JAN 1 5 1985

CRL Data Set No. SF 866 ERRIS No. _____

SMO Case No. 3566 Site Name: Hinsdale Sexton

Name of Laboratory: Pedco Data User: FIT

No. of Samples: 2 Date Samples Received: 12/31/84

1. Have chain-of-custody records been received? YES ✓ NO ___
2. Have Traffic reports been received? YES ___ NO ✓
3. If no, are Traffic report numbers written on the chain-of-custody record? YES ✓ NO ___
4. If no, which Traffic report numbers are missing?

5. Are basic data forms in? YES ✓ NO ___
6. Number of samples claimed: 2 Number of samples received: 2
7. Checked by: Marsha Phillips Date: 12/31/84
8. Received by Contract Project Management Section: _____ Date: _____
9. Review Started: _____ Reviewer Signature: _____
10. Total time spent on review: _____ Date review completed: _____
11. Copied (xeroxed) by: _____ Date: _____
12. Transmitted by: _____ Date: _____
13. Mailed to Data User by: _____ Date: _____
14. REMARKS:

ENVIRONMENTAL PROTECTION AGENCY SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313 703/557-2490

014

SAMPLE NUMBER EA601

RECEIVED JAN 15 1985

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ORGANICS ANALYSIS DATA SHEET
PAGE 1

85MC04562

LABORATORY NAME: PEI ASSOCIATES INC
LAB SAMPLE IQ NO---------DX217
SAMPLE MATRIX----------WATER
DATA RELEASE AUTHORIZED:

CASE NO:---------- 3566
QC REPORT NO:----------
CONTRACT NO:-------68-01-7015
DATE SAMPLE RECEIVED-----11/20/84

VOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------11/26/84
DATE ANALYZED----------11/26/84
CONC/DIL FACTOR---------- .2
PH---------- 6
PERCENT MOISTURE---------N/A
% MOISTURE (DECANTED)----

CAS NO.		UG/L	CAS NUMBER		UG/L
74-87-3	CHLOROMETHANE	10U	79-34-5	1,1,2,2-TETRACHLOROETHANE	5U
74-83-9	BROMOMETHANE	10U	78-87-5	1,2-DICHLOROPROPANE	5U
75-01-4	VINYL CHLORIDE	10U	10061-02-6	TRANS-1,3-DICHLOROPROPANE	5U
75-00-3	CHLOROETHANE	10U	79-01-6	TRICHLOROETHENE	5U
75-09-2	METHYLENE CHLORIDE	52.7B	124-48-1	DIBROMOCHLOROMETHANE	5U
67-64-1	ACETONE	94.2B	79-00-5	1,1,2-TRICHLOROETHANE	5U
75-15-0	CARBON DISULFIDE	5U	71-43-2	BENZENE	5U
75-35-4	1,1-DICHLOROETHENE	5U	10061-05-5	CIS-1,3-DICHLOROPROPANE	5U
75-34-3	1,1-DICHLOROETHANE	5U	110-75-8	2-CHLOROETHYLVINYLETHER	10U
156-60-5	TRANS-1,2-DICHLOROETHENE	5U	75-25-2	BROMOFORM	5U
67-66-3	CHLOROFORM	5U	591-78-6	2-HEXANONE	10U
107-06-2	1,2-DICHLOROETHANE	5U	108-10-1	4-METHYL-2-PENTANONE	10U
78-93-3	2-BUTANONE	5U	127-18-4	TETRACHLOROETHENE	5U
71-55-6	1,1,1-TRICHLOROETHANE	5U	108-88-3	TOLUENE	5U
56-23-5	CARBON TETRACHLORIDE	5U	108-90-7	CHLOROBENZENE	5U
108-05-4	VINYL ACETATE	10U	100-41-4	ETHYLBENZENE	5U
75-27-4	BROMODICHLOROMETHANE	5U	100-42-5	STYRENE	5U
				TOTAL XYLENES	5U

DATA REPORT QUALIFIERS

VALUE IF THE VALUE IS A VALUE GREATER THAN OR EQUAL TO THE DETECTION LIMIT, REPORT THE VALUE

U COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED REPORT THE MINIMUM DETECTION LIMIT WITH THE U

J INDICATES AN ESTIMATED VALUE

K INDICATES THE COMPOUND WAS DETECTED, HOWEVER, THE VALUE WAS BELOW THE DETECTION LIMIT FOR THE COMPOUND

C PRESENCE CONFIRMED BY GC/MS PESTICIDES ONLY

B ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE

ENVIRONMENTAL PROTECTION AGENCY SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313 703/557-2490

SAMPLE NUMBER
EA601

1

ORGANICS ANALYSIS DATA SHEET
PAGE 2

RECEIVED JAN 1 5 1985

SEMIVOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------11/21/84
DATE ANALYZED----------12/21/84
CONC/DIL FACTOR---------- 500

CAS NO.		UG/L	CAS NO.		UG/L
62-75-9	N-NITROSODIMETHYL AMINE--	10U	83-32-9	ACENAPTHENE----------	10U
108-95-2	PHENOL----------	10U	51-28-5	2,4-DINITROPHENOL--------	50U
62-53-3	ANILINE----------	10U	100-02-7	4-NITROPHENOL----------	50U
111-44-4	BIS(2-CHLOROETHYL)ETHER--	10U	132-64-9	DIBENZOFURAN----------	10U
95-57-8	2-CHLOROPHENOL----------	10U	121-14-2	2,4-DINITROTOLUENE-------	10U
541-73-1	1,3-DICHLOROBENZENE------	10U	606-20-2	2,6-DINITROTOLUENE-------	10U
106-46-7	1,4-DICHLOROBENZENE------	10U	84-66-2	DIETHYLPHTHALATE---------	10U
100-51-6	BENZYL ALCOHOL----------	10U	7005-72-3	4-CHLOROPHENYLPHENYLETHER	10U
95-50-1	1,2-DICHLOROBENZENE------	10U	86-73-7	FLUORENE----------	10U
95-48-7	2-METHYL PHENOL----------	10U	100-01-6	4-NITROANILINE----------	50U
36938-32-9	BIS(2CHLOROISOPROPYLETHER	10U	534-52-1	4,6DINITRO2METHYLPHENOL--	50U
106-44-5	4-METHYL PHENOL----------	10U	86-30-6	N-NITROSODIPHENYLAMINE(1)	10U
621-64-7	NNITROSODIPROPYL AMINE---	10U	101-55-3	4BROMPHENYLPHENYLETHER---	10U
67-72-1	HEXACHLOROETHANE---------	10U	118-74-1	HEXACHLOROBENZENE--------	10U
98-95-3	NITROBENZENE----------	10U	87-86-5	PENTACHLOROPHENOL--------	50U
78-59-1	ISOPHORONE----------	10U	85-01-8	PHENANTHRENE----------	10U
88-75-5	2-NITROPHENOL----------	10U	120-12-7	ANTHRACENE----------	10U
105-67-9	2,4-DIMETHYL PHENOL------	10U	84-74-2	DI-N-BUTYLPHTHALATE------	6.8K
65-85-0	BENZOIC ACID----------	50U	206-44-0	FLUORANTHENE----------	10U
111-91-1	BIS2CHLORETHOXY METHANE--	10U	92-87-5	BENZIDINE----------	10U
120-83-2	2,4-DICHLOROPHENOL-------	10U	129-00-0	PYRENE----------	10U
120-82-1	1,2,4-TRICHLOROBENZENE---	10U	85-68-7	BUTYLBENZYLPHTHALATE-----	4.7K
91-20-3	NAPTHALENE----------	10U	91-94-1	3,3'-DICHLOROBENZIDINE---	20U
106-47-8	4-CHLOROANILINE----------	10U	56-55-3	BENZO(A)ANTHRACENE-------	10U
87-68-3	HEXACHLOROBUTADIENE------	10U	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	13.1
59-50-7	4-CHLORO-3-METHYL PHENOL-	10U	218-01-9	CHRYSENE----------	10U
91-57-6	2-METHYLNAPTHALENE-------	10U	117-84-0	DI-N-OCTYL PHTHALATE-----	10U
77-47-4	HEXACHLOROCYCLOPENTADIENE	10U	205-99-2	BENZO(B)FLUORANTHENE-----	10U
88-06-2	2,4,6-TRICHLOROPNENOL----	10U	207-08-9	BENZO(K)FLUORANTHENE-----	10U
95-95-4	2,4,5-TRICHLOROPHENOL----	50U	50-32-8	BENZO(A)PYRENE----------	10U
91-58-7	2-CHLORONAPTHALENE-------	10U	193-39-5	INDENO(123-CD)PYRENE-----	10U
88-74-4	2-NITROANILINE----------	50U	53-70-3	DIBENZ(GHI)PERYLENE------	10U
131-11-3	DIMETHYL PHTHALATE-------	10U	191-24-2	BENZO(GHI)PERYLENE-------	10U
208-96-8	ACENAPHTHYLENE----------	10U			
99-09-2	3-NITROANILINE----------	50U			

(1) CANNOT BE SEPARATED FROM DIPHENYAMINE

ENVIRONMENTAL PROTECTION AGENCY SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313 703/557-2490

SAMPLE NUMBER
EA601

1

ORGANICS ANALYSIS DATA SHEET
PAGE 3

RECEIVED JAN 1 5 1985

PESTICIDE/PCB'S

CONCENTRATION----------LOW
DATE EXTRACTED----------11/21/84
DATE ANALYZED----------12/13/84
CONC/DIL FACTOR---------- 10

CAS NO.		UG/L
319-84-6	ALPHA-BHC	.05U
319-85-7	BETA-BHC	.05U
319-86-8	DELTA-BHC	.05U
58-89-9	GAMMA-BHC(LINDANE)-------	.05U
76-44-8	HEPTACHLOR----------	.05U
309-00-2	ALDRIN----------	.05U
1024-57-3	HEPTACHLOR EPOXIDE-------	.05U
959-98-8	ENDOSULFAN I----------	.05U
60-57-1	DIELDRIN----------	.1U
72-55-9	4,4'-DDE----------	.1U
72-20-8	ENDRIN----------	.1U
33213-65-9	ENDOSULFAN II----------	.1U
72-54-8	4,4'-DDD	.1U
7421-93-4	ENDRIN ALDEHYDE----------	.1U
1031-07-8	ENDOSULFAN SULFATE-------	.1U
50-29-3	4,4'-DDT	.1U
72-43-5	METHOXYCHLOR----------	.5U
53494-70-5	ENDRIN KETONE----------	.1U
57-74-9	CHLORDANE----------	.5U
8001-35-2	TOXAPHENE----------	1U
12674-11-2	AROCHLOR-1016----------	.5U
11104-28-2	AROCHLOR-1221----------	.5U
11141-16-5	AROCHLOR-1232----------	.5U
53469-21-9	AROCHLOR-1242----------	.5U
12672-29-6	AROCHLOR-1248----------	.5U
11097-69-1	AROCHLOR-1254----------	1U
11096-82-5	AROCHLOR-1260----------	1U

VI=VOLUME OF EXTRACT INJECTED------ 5UL
VS=VOLUME OF WATER EXTRACTED------- 1000ML
WS=WEIGHT OF SAMPLE EXTRACTED------ G
VT=VOLUME OF TOTAL EXTRACT--------- 10000UL

Environmental Protection Agency. CLP Sample Management Office.
P. O. Box 818. Alexandria, Virginia 22313 703/557-2490

Sample Number
EA601

017

Organics Analysis Data Sheet
(Page 4)

RECEIVED JAN 15 1985

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	NONE	VOA		
2.				
3.	UNKNOWN	BNA	1426	5
4.	UNKNOWN		930	4
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
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17.				
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19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

ENVIRONMENTAL PROTECTION AGENCY SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313 703/557-2490

SAMPLE NUMBER
EA602

1

ORGANICS ANALYSIS DATA SHEET
PAGE 1

85M04R07

LABORATORY NAME: PEI ASSOCIATES INC
LAB SAMPLE ID NO---------DX218
SAMPLE MATRIX----------WATER
DATA RELEASE AUTHORIZED:

CASE NO:---------- 3566
QC REPORT NO:----------
CONTRACT NO:-------68-01-7015
DATE SAMPLE RECEIVED-----11/20/84

RECEIVED JAN 15 1985

VOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------11/26/84
DATE ANALYZED----------11/26/84
CONC/DIL FACTOR---------- .2
PH---------- 6
PERCENT MOISTURE---------N/A
% MOISTURE (DECANTED)----

CAS NO.		UG/L	CAS NUMBER		UG/L
74-87-3	CHLOROMETHANE	10U	79-34-5	1,1,2,2-TETRACHLOROETHANE	5U
74-83-9	BROMOMETHANE	10U	78-87-5	1,2-DICHLOROPROPANE	5U
75-01-4	VINYL CHLORIDE	10U	10061-02-6	TRANS-1,3-DICHLOROPROPANE	5U
75-00-3	CHLOROETHANE	10U	79-01-6	TRICHLOROETHENE	5U
75-09-2	METHYLENE CHLORIDE	37.5B	124-48-1	DIBROMOCHLOROMETHANE	5U
67-64-1	ACETONE	157B	79-00-5	1,1,2-TRICHLOROETHANE	5U
75-15-0	CARBON DISULFIDE	5U	71-43-2	BENZENE	5U
75-35-4	1,1-DICHLOROETHENE	5U	10061-05-5	CIS-1,3-DICHLOROPROPANE	5U
75-34-3	1,1-DICHLOROETHANE	5U	110-75-8	2-CHLOROETHYLVINYLETHER	10U
156-60-5	TRANS-1,2-DICHLOROETHENE	5U	75-25-2	BROMOFORM	5U
67-66-3	CHLOROFORM	5U	591-78-6	2-HEXANONE	10U
107-06-2	1,2-DICHLOROETHANE	5U	108-10-1	4-METHYL-2-PENTANONE	10U
78-93-3	2-BUTANONE	5U	127-18-4	TETRACHLOROETHENE	5U
71-55-6	1,1,1-TRICHLOROETHANE	5U	108-88-3	TOLUENE	5U
56-23-5	CARBON TETRACHLORIDE	5U	108-90-7	CHLOROBENZENE	5U
108-05-4	VINYL ACETATE	10U	100-41-4	ETHYLBENZENE	5U
75-27-4	BROMODICHLOROMETHANE	5U	100-42-5	STYRENE	5U
				TOTAL XYLENES	5U

DATA REPORT QUALIFIERS

VALUE IF THE VALUE IS A VALUE GREATER THAN OR EQUAL TO THE DETECTION LIMIT, REPORT THE VALUE

U COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED REPORT THE MINIMUM DETECTION LIMIT WITH THE U

J INDICATES AN ESTIMATED VALUE

K INDICATES THE COMPOUND WAS DETECTED, HOWEVER, THE VALUE WAS BELOW THE DETECTION LIMIT FOR THE COMPOUND

C PRESENCE CONFIRMED BY GC/MS PESTICIDES ONLY

B ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE

ENVIRONMENTAL PROTECTION AGENCY SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313 703/557-2490

040 SAMPLE NUMBER EA602

1

ORGANICS ANALYSIS DATA SHEET
PAGE 2

SEMIVOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------11/21/84
DATE ANALYZED----------12/21/84
CONC/DIL FACTOR---------- 500

RECEIVED JAN 1 5 1985

CAS NO.		UG/L	CAS NO.		UG/L
62-75-9	N-NITROSODIMETHYL AMINE--	10U	83-32-9	ACENAPTHENE----------	10U
108-95-2	PHENOL----------	10U	51-28-5	2,4-DINITROPHENOL--------	50U
62-53-3	ANILINE----------	10U	100-02-7	4-NITROPHENOL----------	50U
111-44-4	BIS(2-CHLOROETHYL)ETHER--	10U	132-64-9	DIBENZOFURAN----------	10U
95-57-8	2-CHLOROPHENOL----------	10U	121-14-2	2,4-DINITROTOLUENE-------	10U
541-73-1	1,3-DICHLOROBENZENE------	10U	606-20-2	2,6-DINITROTOLUENE-------	10U
106-46-7	1,4-DICHLOROBENZENE------	10U	84-66-2	DIETHYLPHTHALATE---------	10U
100-51-6	BENZYL ALCOHOL----------	10U	7005-72-3	4-CHLOROPHENYLPHENYLETHER	10U
95-50-1	1,2-DICHLOROBENZENE------	10U	86-73-7	FLUORENE----------	10U
95-48-7	2-METHYL PHENOL----------	10U	100-01-6	4-NITROANILINE----------	50U
36938-32-9	BIS(2CHLOROISOPROPYLETHER	10U	534-52-1	4,6DINITRO2METHYLPHENOL--	50U
106-44-5	4-METHYL PHENOL----------	10U	86-30-6	N-NITROSODIPHENYLAMINE(1)	10U
621-64-7	NNITROSODIPROPYL AMINE---	10U	101-55-3	4BROMPHENYLPHENYLETHER---	10U
67-72-1	HEXACHLOROETHANE---------	10U	118-74-1	HEXACHLOROBENZENE--------	10U
98-95-3	NITROBENZENE----------	10U	87-86-5	PENTACHLOROPHENOL--------	50U
78-59-1	ISOPHORONE----------	10U	85-01-8	PHENANTHRENE----------	10U
88-75-5	2-NITROPHENOL----------	10U	120-12-7	ANTHRACENE----------	10U
105-67-9	2,4-DIMETHYL PHENOL------	10U	84-74-2	DI-N-BUTYLPHTHALATE------	10U
65-85-0	BENZOIC ACID----------	50U	206-44-0	FLUORANTHENE----------	10U
111-91-1	BIS2CHLORETHOXY METHANE--	10U	92-87-5	BENZIDINE----------	10U
120-83-2	2,4-DICHLOROPHENOL-------	10U	129-00-0	PYRENE----------	10U
120-82-1	1,2,4-TRICHLOROBENZENE---	10U	85-68-7	BUTYLBENZYLPHTHALATE-----	10U
91-20-3	NAPTHALENE----------	10U	91-94-1	3,3'-DICHLOROBENZIDINE---	20U
106-47-8	4-CHLOROANILINE----------	10U	56-55-3	BENZO(A)ANTHRACENE-------	10U
87-68-3	HEXACHLOROBUTADIENE------	10U	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	10U
59-50-7	4-CHLORO-3-METHYL PHENOL-	10U	218-01-9	CHRYSENE----------	10U
91-57-6	2-METHYLNAPTHALENE-------	10U	117-84-0	DI-N-OCTYL PHTHALATE-----	10U
77-47-4	HEXACHLOROCYCLOPENTADIENE	10U	205-99-2	BENZO(B)FLUORANTHENE-----	10U
88-06-2	2,4,6-TRICHLOROPNENOL----	10U	207-08-9	BENZO(K)FLUORANTHENE-----	10U
95-95-4	2,4,5-TRICHLOROPHENOL----	50U	50-32-8	BENZO(A)PYRENE----------	10U
91-58-7	2-CHLORONAPTHALENE-------	10U	193-39-5	INDENO(123-CD)PYRENE-----	10U
88-74-4	2-NITROANILINE----------	50U	53-70-3	DIBENZ(GHI)PERYLENE------	10U
131-11-3	DIMETHYL PHTHALATE-------	10U	191-24-2	BENZO(GHI)PERYLENE-------	10U
208-96-8	ACENAPHTHYLENE----------	10U			
99-09-2	3-NITROANILINE----------	50U			

(1) CANNOT BE SEPARATED FROM DIPHENYAMINE

ENVIRONMENTAL PROTECTION AGENCY SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313 703/557-2490

041

SAMPLE NUMBER
EA602

1

ORGANICS ANALYSIS DATA SHEET
PAGE 3

RECEIVED JAN 15 1985

PESTICIDE/PCB'S

CONCENTRATION----------LOW
DATE EXTRACTED----------11/21/84
DATE ANALYZED----------12/13/84
CONC/DIL FACTOR---------- 10

CAS NO.		UG/L
319-84-6	ALPHA-BHC	.05U
319-85-7	BETA-BHC	.05U
319-86-8	DELTA-BHC	.05U
58-89-9	GAMMA-BHC(LINDANE)-------	.05U
76-44-8	HEPTACHLOR----------	.05U
309-00-2	ALDRIN----------	.05U
1024-57-3	HEPTACHLOR EPOXIDE-------	.05U
959-98-8	ENDOSULFAN I----------	.05U
60-57-1	DIELDRIN----------	.1U
72-55-9	4,4'-DDE----------	.1U
72-20-8	ENDRIN----------	.1U
33213-65-9	ENDOSULFAN II----------	.1U
72-54-8	4,4'-DDD	.1U
7421-93-4	ENDRIN ALDEHYDE----------	.1U
1031-07-8	ENDOSULFAN SULFATE-------	.1U
50-29-3	4,4'-DDT	.1U
72-43-5	METHOXYCHLOR----------	.5U
53494-70-5	ENDRIN KETONE----------	.1U
57-74-9	CHLORDANE----------	.5U
8001-35-2	TOXAPHENE----------	1U
12674-11-2	AROCHLOR-1016----------	.5U
11104-28-2	AROCHLOR-1221----------	.5U
11141-16-5	AROCHLOR-1232----------	.5U
53469-21-9	AROCHLOR-1242----------	.5U
12672-29-6	AROCHLOR-1248----------	.5U
11097-69-1	AROCHLOR-1254----------	1U
11096-82-5	AROCHLOR-1260----------	1U

VI=VOLUME OF EXTRACT INJECTED------ 5UL
VS=VOLUME OF WATER EXTRACTED------- 1000ML
WS=WEIGHT OF SAMPLE EXTRACTED------ G
VT=VOLUME OF TOTAL EXTRACT--------- 10000UL

Environmental Protection Agency. CLP Sample Management Office.
P. O. Box 818. Alexandria, Virginia 22313 703/557-2490

Sample Number
EA602

042

Organics Analysis Data Sheet
(Page 4)

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Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	NONE	VOA		
2.				
3.	PHTHALATE	BNA	1504	6
4.	CYCLO ALKANE		736	7
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

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REVIEW OF CLP ORGANIC DATA

Contractor: PEDCO

Case 3566

The data package for this case was reviewed by Region V CRL personnel in accordance with the "Standard Operating Procedure for Contract Laboratory Program (CLP) Data Review; August 1984". The quality of the data was assessed based on laboratory compliance with the contract and the data quality objectives as defined by the data user.

This review covers the following samples and parameters:

SMO#	CRL#	MATRIX	VOA	ABN	PEST
EA601	85MC04562	WATER	✓	✓	✓
EA602	85MC04R01	"	✓	✓	✓

DATA QUALITY OBJECTIVES AND REVIEW

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Case 3566

OSC or responsible party: FIT

Case Objective LEVEL C Screening

Data Quality Needs N/A

Precision: SEE Summary

Bias:

Obtain the information above directly from the OSC or designee before starting data review. Categorize review level into one of the following (circle one):

A. Enforcement: Case is already an enforcement action, data is sure to be used in court.

B. Assessment: Case already has preliminary data, level and degree of contamination or clean up action needs to be determined.

C. Screening: Case purpose is to determine what, if any, pollutants are at the site, followup sampling likely.

REVIEW SUMMARY

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Case 3566

	VOA	A	BN	PEST
Precision	2.5	24.4	27.1	13.4
Bias	-5	-10	-42	-52

Precision expressed as mean RPD between appropriate matrix spike duplicate compounds.

Bias expressed as mean percent of appropriate surrogate spike recoveries from 100%.

Data Quality Needs Met?: Data Quality C were met

Action Items to Resolve Data Quality: NONE

Item Description	Responsible Party	Completion Date

DATA QUALIFIERS

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Contractor: PEDCO

Case 3566

Below is a summary of the out of control audits and the possible effect on the data for this case:

PRECISION - Acceptable for VOA, B/N, Acid, & Pesticides
Accuracy - Acceptable for VOA, + B/N
Accuracy - Negative bias for Acid, + Pesticides
Methylene Chloride was greater than 5 times the CRDL in the 11/27/84 blank.

Reviewed by: Robert Hall

Phone: (312) 886-1970

Date: 1-8-85

DATA PACKAGE COMPLETENESS AUDIT

CASE: 3566

Check if present:

CONTRACTOR: PEDCO

DELIVERABLES INDEX WA 84A-266,267

☐ I. Case Narrative

The Case narrative must contain: Case number, Contract number, summary of any QC, sample, shipment and analytical problems, and documentation of all internal decision tree processes used.

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II. QC Summary

☑ A. Surrogate Percent Recovery Summary (Form II)

☑ B. Matrix Spike/Matrix Spike Duplicate Summary (Form III)

☑ C. Reagent Blank Summary (Form IV)
(If more than a single form is necessary, it must be arranged in chronological order.)

☑ D. GC/MS Tuning and Calibration Standard (Form V)

☑ 1. DFTPP in chronological order; by instrument.

☑ 2. BFB in chronological order; by instrument.

III. Sample Data Package

A. Sample data in increasing SMO Number order:

☑ 1. HSL Results - Organic Analysis Data Sheet (Form I)

☑ 2. GC/MS tentative ID (Form I, Part B) - Must be included even if no compounds are found; if so, indicate on form: "no volatile compounds found" and/or "no semi-volatile compounds found."

3. Raw data - in order: VOA, BNA, Pesticide

☑ a. Reconstructed ion chromatogram(s) (GC/MS), chromatogram(s) (GC)

b. Data System Printout

☑ • Quantitation report or legible facsimile (GC/MS)

☑ • Integration report or data system printout (GC)

☑ c. HSL spectra with lab generated standard (Dual Display)

• data systems incapable of dual display shall provide spectra in order:

CASE: 3566

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- raw HSL compound spectra
- enhanced or background subtracted spectra
- laboratory generated HSL standard

d. GC/MS library search spectra for Tentatively Identified Compound(s) (TIC)

e. Quantitation/Calculation of tentative ID concentration(s)

IV. Standards Data Package

A. Current list of laboratory calculated instrument detection limits for all HSL compounds.

B. Initial Calibration Data (Form VI) - in order: VOA, BNA; by instrument if more than one instrument used.

1. When more than one initial calibration is performed, the data must be put in chronological order. All initial calibration data must be included even for a specific Case.

C. Continuing Calibration (Form VII) - in order: VOA, BNA; by instrument if more than one instrument used.

1. When more than one Continuing Calibration is performed, forms must be in chronological order.

D. Pesticide forms in the following order:

1. Form VIII - Pesticide Evaluation Standards Summary

2. Form IX - Pesticide/PCB Standards Summary

3. Form X - Pesticide/PCB Identification (only required for positive results)

E. VOA standard(s) chromatograms and data system printouts (or legible facsimile). Spectra are not required.

F. BNA standard(s) chromatograms and data system printouts (or legible facsimile). Spectra are not required.

G. All pesticide evaluation standard(s) (A, B, and C) chromatograms and data system printouts in chronological order.

H. All pesticide Individual Standard Mix (A or B) chromatograms and data system printouts.

CASE: 3566

I. Pesticide Quantitation standard(s) chromatograms and data system printouts.

V. Raw QC Data Package

A. DFTPP

1. Bar graph spectrum

2. Mass listing

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B. BFB

1. Bar graph spectrum

2. Mass listing

C. Blank Data

1. Tabulated results (Form I)

2. GC/MS tentative ID sheet (Form I, Part B) even if none found

3. Raw Data - in order: VOA, BNA, Pesticide

a. Reconstructed ion chromatogram(s) and quantitation report(s) or legible facsimile (GC/MS)

b. Chromatogram(s) and data system printout(s) (GC)

c. HSL spectra with lab generated standard (dual display)

- data systems which are incapable of dual display shall provide spectra in order:

  - raw HSL compound spectra

  - enhanced or background subtracted spectra

  - laboratory generated HSL standard spectra

d. GC/MS library search spectra for Tentatively Identified Compounds (TIC)

e. Quantitation/Calculation of Tentative ID concentrations

D. Matrix Spike Data

1. Tabulated results (Form I) of non-spiked compounds

2. Raw Data - in order: VOA, BNA, Pesticide

CASE: 3566

a. Reconstructed ion chromatogram(s) and quantitation report(s) or legible facsimile (GC/MS)

- spectra not required

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b. Chromatogram(s) and data system printout(s) (GC)

E. Matrix Spike Duplicate Data

1. Tabulated results (Form I) of non-spiked compounds

2. Raw Data - in order: VOA, BNA, Pesticide

a. Reconstructed ion chromatogram(s) and quantitation report(s) or legible facsimile (GC/MS)

- spectra not required

b. Chromatogram(s) and data system printout(s) (GC)

MISSING DELIVERABLES	DATE REQUESTED	REQUESTOR	DATE RECEIVED

CORRECTIVE ACTION: Call SMO at FTS-557-2490

ABN, VOA
QUALITATIVE PRIORITY POLLUTANT ANALYSIS

Case: 3566

Contractor: PEDCO

SMO#	DATE TIME INJECTED	POSITIVE HIT COMPOUND	STANDARD DATE/ TIME INJ	RRT STD	RRT SAMPLE	(LIMIT) (±.06) Δ RRT	Check if OK, or note exceptions: All ions >10% in STD are in sample	relative intensity sample ± 20% STD	no ions >10% in sample not in STD
E601	11/26/84 18:01	METHYLENE CHLORIDE (B)	12/13/84 9:06	.617	0.610	0.007	✓	✓	✓
E601	11/26/84 18:01	ACETONE (B)	12/13/84 9:06	.650	0.661	0.011	✓	✓	✓
E601	12/21/84 15:30	DI-N-BUTYLPHTHALATE	12/19/84 11:41	1.111	1.109	0.002	✓	✓	✓
E601	12/21/84 15:30	BUTYLBENZYLPHTHALATE	12/19/84 11:41	0.956	0.954	0.002	✓	✓	✓
E601	12/21/84 15:30	Bis(2-ETHYLHEXYL)PHTHALATE	12/19/84 11:41	1.022	1.018	0.004	✓	✓	✓

NOTE: False Positives, as determined by reviewer, should be flagged on Organic Analysis Data Sheet.

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Case: 3566

Contractor: PEDCO

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TENTATIVELY IDENTIFIED COMPOUNDS MATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Case: 3566

Contractor: PEDCO

LAB REAGENT/INSTRUMENT BLANK CONTAMINANTS

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List only those compounds detected. Check OADS to ensure that the proper flag code B is present for the contaminants found. Contractors do not subtract lab blank contents from samples. If sample level is > 10 x lab blank, pollutant may be really due to the sample. Flag all other sample data as invalid for these compounds.

Units: UG/L

COMPOUND	CRDL	BLANK LEVEL	LIMIT EXCEEDED?
METHYLENE CHLORIDE	5	40	25

NOTE: CH_2Cl_2, acetone, benzene, toluene, phthalates limits are <5 x CRDL, all others are <1 x CRDL.

Case: 3566

Contractor: PEDCO

VOLATILES INITIAL AND CONTINUING CALIBRATION OUTLIERS

RECEIVED JAN 1 5 1985

I = Initial
C = Continuing

List only outliers below

COMPOUND	CCC %RSD (Limit ≤ 25%)	SPCC $\overline{RF}$ (Limit ≥ 0.3)	I or C	Date/Time

IMPACT ON ASSOCIATED SAMPLE DATA:

LAB CORRECTIVE ACTION TAKEN (i.e. new 5 point curve)

Case: 3566

Contractor: PEDCO

SPIKE OUTLIERS

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Attach contractor supplied Forms II, III to this sheet.

Reviewer note:

1) Advisory limits, if exceeded, do not invalidate sample data.

2) No reanalysis or corrective action is contractually required for MS/MSD outliers.

3) If reagent blank has 1 or more surrogates outside contract required QC limits, evidence of recalculation or reanalysis must be found with all new values in control. Call SMO to request reanalysis.

4) If a sample has 1 or more surrogates outside contract required QC limits, evidence of recalculation or reanalysis must be found in the data package. If any surrogate, upon reanalysis, are still out of control, sample data should be flagged as biased due to matrix effect.

OVERALL % OUTLIERS

Surrogate $\frac{\sum \text{outliers}}{\sum \text{all recoveries}} \times 100 = _____\%$

(Expect 5-15%)

Matrix $\frac{\sum \text{RPD outliers}}{\sum \text{all RPDs}} \times 100 = _____\%$

$\frac{\sum \text{outliers}}{\sum \text{all recoveries}} \times 100 = _____\%$

(No expectations)

Case: 3566

Contractor: PEDCO

ABN INITIAL AND CONTINUING CALBRATION OUTLIERS

I = Initial
C = Continuing

List only outliers below.

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COMPOUND	CCC % RSD Limit ≤25%	SPCC $\overline{RF}$ Limit >.05	I or C	Date/Time

IMPACT ON ASSOCIATED SAMPLE DATA:

LAB CORRECTIVE ACTION TAKEN (i.e. new 5 point curve)

Case: 3566

Contractor: PEDCO

PCB/PESTICIDE GC/EC EVALUATION

Attach Form VIII to this sheet. List only outliers on this sheet.

A) Linearity Check Outliers (limit ≤ 10% rsd)

Pesticide	Date/Time	% rsd

Note: No lab action required.

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B) Breakdown Check Outliers (limit <10% endrin)
(limit < 5% DDT)

Pesticide	Date/Time	% Breakdown	Samples Affected

Note: Lab must take corrective action. Subsequent runs must be in control. Affected samples must be repeated.

C) Dibutylchlorendate RT Shift Outliers
(limit: ≤2% packed column)
(limit: ≤0.3% cap column)

Standard Name	Date/Time	% Difference	Affected Sample #s

Note: Lab is to continue injecting replicate standards to meet criteria.

Case: 3566

Contractor: PEDCO

PCB/PESTICIDE STANDARDS EVALUATION

Attach Form IX to this sheet. List only outliers below. C = Confirmatic run, Q = quantitation run.

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(% Diff Limit C < 20%)
Q < 10%)

Compound	C or Q	% DIFF	Affected Sample #s

Note: Lab must take corrective action and reanalyze affected samples if limits exceeded.

PCB/Pesticide Blank Contaminants

List only those compounds appearing at >CRDL. Sample data should be fla ged with a "B" code - check for this.

Compound	CRDL	Blank level	Affected Sample #s

Case: 3566

Contractor: PEDCO

PCB/PESTICIDE POSITIVE ID CONFIRMATION

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If positive hits were found in the case, Form X must be submitted. Attach Form X to this sheet.

A. RT window criteria outliers (limit: 3 x sd of absolute RT of standard] [Allowable Exceptions: toxaphene, PCBs).

SMO#	Compound	RT actual	RT window Limit	STD Date/Time

B. GC/EC confirmation outliers packed column. (Limit: at least 25% resolution between all compounds in standard chromatograms).

Compound	Approximate % Resolution	Affected Sample #s

C. GC/EC Confirmation Outliers - capillary column (Limit: at least 25% resolution between B-BHC/α-BHC, Dieldrin/DDT, DDD/endrin aldehyde, endosulfan sulfate/DDT)

Pesticide Pair	Approximate % Resolution	Affected Sample #s

Case: 3566

Contractor: PEDCO

PCB/PESTICIDE POSITIVE ID CONFIRMATION

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D. GC/MS Confirmation

DFTPP run date/time: _____
Criteria met? Y N (Circle one)

If DFTPP not met, confirmation invalid, samples should be reinjected after GC/MS tuned. Affected samples: _____

_____

_____

ASSESSMENT OF POSITIVE HITS:

SMO#	Compound	Reviewer Assessment*

*Agree, or disagree and reason, crossout false positives on OADS

Comments on PCB/Pesticide Data Quality:

_____

_____

_____

_____

_____

RECEIVED JAN 1 5 1985

Case 3566

Contractor PEDCO

HOLDING TIME REQUIREMENTS

SMO#	VOA A Date Rec'd.	B Date Injected	B-A (Limit) ≤7 or 10*	Sample positive?	ABN, PCB/Pest A Date Rec'd.	B Date Ext.	C Date Anal.	B-A (Limit) ≤ 5,10 **	C-B (Limit) (≤ 40)	Sample positive?
EA601	11/20/84	11/26/84	6							
EA602	11/20/84	11/26/84	6							

NOTE: No regulatory requirement for holding time exists for these analyses.

Negative samples: flag data as possibly not detected due to holding time exceeded.

Positive samples: flag data as quantitation biased low due to exceeded holding times (especially VOA results).

* 7 for water, 10 for soil

** 5 for water, 10 for soil

ENVIRONMENTAL PROTECTION AGENCY SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313 703/557-2490

014

SAMPLE NUMBER EA601

RECEIVED JAN 15 1985

G-103
85MC04562

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ORGANICS ANALYSIS DATA SHEET
PAGE 1

LABORATORY NAME: PEI ASSOCIATES INC
LAB SAMPLE ID NO---------DX217
SAMPLE MATRIX----------WATER
DATA RELEASE AUTHORIZED:

CASE NO:----------3566
QC REPORT NO:----------
CONTRACT NO:-------68-01-7015
DATE SAMPLE RECEIVED-----11/20/84

VOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------11/26/84
DATE ANALYZED----------11/26/84
CONC/DIL FACTOR---------- .2
PH---------- 6
PERCENT MOISTURE---------N/A
% MOISTURE (DECANTED)----

CAS NO.		UG/L	CAS NUMBER		UG/L
74-87-3	CHLOROMETHANE	10U	79-34-5	1,1,2,2-TETRACHLOROETHANE	5U
74-83-9	BROMOMETHANE	10U	78-87-5	1,2-DICHLOROPROPANE	5U
75-01-4	VINYL CHLORIDE	10U	10061-02-6	TRANS-1,3-DICHLOROPROPANE	5U
75-00-3	CHLOROETHANE	10U	79-01-6	TRICHLOROETHENE	5U
75-09-2	METHYLENE CHLORIDE	52.7B	124-48-1	DIBROMOCHLOROMETHANE	5U
67-64-1	ACETONE	94.2B	79-00-5	1,1,2-TRICHLOROETHANE	5U
75-15-0	CARBON DISULFIDE	5U	71-43-2	BENZENE	5U
75-35-4	1,1-DICHLOROETHENE	5U	10061-05-5	CIS-1,3-DICHLOROPROPANE	5U
75-34-3	1,1-DICHLOROETHANE	5U	110-75-8	2-CHLOROETHYLVINYLETHER	10U
156-60-5	TRANS-1,2-DICHLOROETHENE	5U	75-25-2	BROMOFORM	5U
67-66-3	CHLOROFORM	5U	591-78-6	2-HEXANONE	10U
107-06-2	1,2-DICHLOROETHANE	5U	108-10-1	4-METHYL-2-PENTANONE	10U
78-93-3	2-BUTANONE	5U	127-18-4	TETRACHLOROETHENE	5U
71-55-6	1,1,1-TRICHLOROETHANE	5U	108-88-3	TOLUENE	5U
56-23-5	CARBON TETRACHLORIDE	5U	108-90-7	CHLOROBENZENE	5U
108-05-4	VINYL ACETATE	10U	100-41-4	ETHYLBENZENE	5U
75-27-4	BROMODICHLOROMETHANE	5U	100-42-5	STYRENE	5U
				TOTAL XYLENES	5U

DATA REPORT QUALIFIERS

VALUE IF THE VALUE IS A VALUE GREATER THAN OR EQUAL TO THE DETECTION LIMIT, REPORT THE VALUE

U COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED REPORT THE MINIMUM DETECTION LIMIT WITH THE U

J INDICATES AN ESTIMATED VALUE

K INDICATES THE COMPOUND WAS DETECTED, HOWEVER, THE VALUE WAS BELOW THE DETECTION LIMIT FOR THE COMPOUND

C PRESENCE CONFIRMED BY GC/MS PESTICIDES ONLY

B ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE

ENVIRONMENTAL PROTECTION AGENCY SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313 703/557-2490

SAMPLE NUMBER
EA601

1

ORGANICS ANALYSIS DATA SHEET
PAGE 2

RECEIVED JAN 15 1985

SEMIVOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------11/21/84
DATE ANALYZED----------12/21/84
CONC/DIL FACTOR---------- 500

CAS NO.		UG/L	CAS NO.		UG/L
62-75-9	N-NITROSODIMETHYL AMINE--	10U	83-32-9	ACENAPTHENE----------	10U
108-95-2	PHENOL----------	10U	51-28-5	2,4-DINITROPHENOL--------	50U
62-53-3	ANILINE----------	10U	100-02-7	4-NITROPHENOL----------	50U
111-44-4	BIS(2-CHLOROETHYL)ETHER--	10U	132-64-9	DIBENZOFURAN----------	10U
95-57-8	2-CHLOROPHENOL----------	10U	121-14-2	2,4-DINITROTOLUENE-------	10U
541-73-1	1,3-DICHLOROBENZENE------	10U	606-20-2	2,6-DINITROTOLUENE-------	10U
106-46-7	1,4-DICHLOROBENZENE------	10U	84-66-2	DIETHYLPHTHALATE---------	10U
100-51-6	BENZYL ALCOHOL----------	10U	7005-72-3	4-CHLOROPHENYLPHENYLETHER	10U
95-50-1	1,2-DICHLOROBENZENE------	10U	86-73-7	FLUORENE----------	10U
95-48-7	2-METHYL PHENOL----------	10U	100-01-6	4-NITROANILINE----------	50U
36938-32-9	BIS(2CHLOROISOPROPYLETHER	10U	534-52-1	4,6DINITRO2METHYLPHENOL--	50U
106-44-5	4-METHYL PHENOL----------	10U	86-30-6	N-NITROSODIPHENYLAMINE(1)	10U
621-64-7	NNITROSODIPROPYL AMINE---	10U	101-55-3	4BROMPHENYLPHENYLETHER---	10U
67-72-1	HEXACHLOROETHANE---------	10U	118-74-1	HEXACHLOROBENZENE--------	10U
98-95-3	NITROBENZENE----------	10U	87-86-5	PENTACHLOROPHENOL--------	50U
78-59-1	ISOPHORONE----------	10U	85-01-8	PHENANTHRENE----------	10U
88-75-5	2-NITROPHENOL----------	10U	120-12-7	ANTHRACENE----------	10U
105-67-9	2,4-DIMETHYL PHENOL------	10U	84-74-2	DI-N-BUTYLPHTHALATE------	6.8K
65-85-0	BENZOIC ACID----------	50U	206-44-0	FLUORANTHENE----------	10U
111-91-1	BIS2CHLORETHOXY METHANE--	10U	92-87-5	BENZIDINE----------	10U
120-83-2	2,4-DICHLOROPHENOL-------	10U	129-00-0	PYRENE----------	10U
120-82-1	1,2,4-TRICHLOROBENZENE---	10U	85-68-7	BUTYLBENZYLPHTHALATE-----	4.7K
91-20-3	NAPTHALENE----------	10U	91-94-1	3,3'-DICHLOROBENZIDINE---	20U
106-47-8	4-CHLOROANILINE----------	10U	56-55-3	BENZO(A)ANTHRACENE-------	10U
87-68-3	HEXACHLOROBUTADIENE------	10U	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	13.1
59-50-7	4-CHLORO-3-METHYL PHENOL-	10U	218-01-9	CHRYSENE----------	10U
91-57-6	2-METHYLNAPTHALENE-------	10U	117-84-0	DI-N-OCTYL PHTHALATE-----	10U
77-47-4	HEXACHLOROCYCLOPENTADIENE	10U	205-99-2	BENZO(B)FLUORANTHENE-----	10U
88-06-2	2,4,6-TRICHLOROPNENOL----	10U	207-08-9	BENZO(K)FLUORANTHENE-----	10U
95-95-4	2,4,5-TRICHLOROPHENOL----	50U	50-32-8	BENZO(A)PYRENE----------	10U
91-58-7	2-CHLORONAPTHALENE-------	10U	193-39-5	INDENO(123-CD)PYRENE-----	10U
88-74-4	2-NITROANILINE----------	50U	53-70-3	DIBENZ(GHI)PERYLENE------	10U
131-11-3	DIMETHYL PHTHALATE-------	10U	191-24-2	BENZO(GHI)PERYLENE-------	10U
208-96-8	ACENAPHTHYLENE----------	10U			
99-09-2	3-NITROANILINE----------	50U			

(1) CANNOT BE SEPARATED FROM DIPHENYAMINE

ENVIRONMENTAL PROTECTION AGENCY SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313 703/557-2490

SAMPLE NUMBER
EA601

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ORGANICS ANALYSIS DATA SHEET
PAGE 3

RECEIVED JAN 1 5 1985

PESTICIDE/PCB'S

CONCENTRATION----------LOW
DATE EXTRACTED----------11/21/84
DATE ANALYZED----------12/13/84
CONC/DIL FACTOR---------- 10

CAS NO.		UG/L
319-84-6	ALPHA-BHC	.05U
319-85-7	BETA-BHC	.05U
319-86-8	DELTA-BHC	.05U
58-89-9	GAMMA-BHC(LINDANE)-------	.05U
76-44-8	HEPTACHLOR----------	.05U
309-00-2	ALDRIN----------	.05U
1024-57-3	HEPTACHLOR EPOXIDE-------	.05U
959-98-8	ENDOSULFAN I----------	.05U
60-57-1	DIELDRIN----------	.1U
72-55-9	4,4'-DDE----------	.1U
72-20-8	ENDRIN----------	.1U
33213-65-9	ENDOSULFAN II----------	.1U
72-54-8	4,4'-DDD	.1U
7421-93-4	ENDRIN ALDEHYDE----------	.1U
1031-07-8	ENDOSULFAN SULFATE-------	.1U
50-29-3	4,4'-DDT	.1U
72-43-5	METHOXYCHLOR----------	.5U
53494-70-5	ENDRIN KETONE----------	.1U
57-74-9	CHLORDANE----------	.5U
8001-35-2	TOXAPHENE----------	1U
12674-11-2	AROCHLOR-1016----------	.5U
11104-28-2	AROCHLOR-1221----------	.5U
11141-16-5	AROCHLOR-1232----------	.5U
53469-21-9	AROCHLOR-1242----------	.5U
12672-29-6	AROCHLOR-1248----------	.5U
11097-69-1	AROCHLOR-1254----------	1U
11096-82-5	AROCHLOR-1260----------	1U

VI=VOLUME OF EXTRACT INJECTED------ 5UL
VS=VOLUME OF WATER EXTRACTED------- 1000ML
WS=WEIGHT OF SAMPLE EXTRACTED------ G
VT=VOLUME OF TOTAL EXTRACT--------- 10000UL

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Sample Number
EA601

017

Organics Analysis Data Sheet
(Page 4)

RECEIVED JAN 15 1985

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	NONE	VOA		
2.				
3.	UNKNOWN	BNA	1426	5
4.	UNKNOWN		930	4
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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29.				
30.				

ENVIRONMENTAL PROTECTION AGENCY SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313 703/557-2490

079

SAMPLE NUMBER
EA602

BLANK

85MC04R07

1

ORGANICS ANALYSIS DATA SHEET
PAGE 1

LABORATORY NAME: PEI ASSOCIATES INC
LAB SAMPLE ID NO---------DX218
SAMPLE MATRIX----------WATER
DATA RELEASE AUTHORIZED:

CASE NO:---------- 3566
QC REPORT NO:----------
CONTRACT NO:-------68-01-7015
DATE SAMPLE RECEIVED-----11/20/84

RECEIVED JAN 15 1985

VOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------11/26/84
DATE ANALYZED----------11/26/84
CONC/DIL FACTOR---------- .2
PH---------- 6
PERCENT MOISTURE---------N/A
% MOISTURE (DECANTED)----

CAS NO.		UG/L	CAS NUMBER		UG/L
74-87-3	CHLOROMETHANE	10U	79-34-5	1,1,2,2-TETRACHLOROETHANE	5U
74-83-9	BROMOMETHANE	10U	78-87-5	1,2-DICHLOROPROPANE	5U
75-01-4	VINYL CHLORIDE	10U	10061-02-6	TRANS-1,3-DICHLOROPROPANE	5U
75-00-3	CHLOROETHANE	10U	79-01-6	TRICHLOROETHENE	5U
75-09-2	METHYLENE CHLORIDE	37.5B	124-48-1	DIBROMOCHLOROMETHANE	5U
67-64-1	ACETONE	157B	79-00-5	1,1,2-TRICHLOROETHANE	5U
75-15-0	CARBON DISULFIDE	5U	71-43-2	BENZENE	5U
75-35-4	1,1-DICHLOROETHENE	5U	10061-05-5	CIS-1,3-DICHLOROPROPANE	5U
75-34-3	1,1-DICHLOROETHANE	5U	110-75-8	2-CHLOROETHYLVINYLETHER	10U
156-60-5	TRANS-1,2-DICHLOROETHENE	5U	75-25-2	BROMOFORM	5U
67-66-3	CHLOROFORM	5U	591-78-6	2-HEXANONE	10U
107-06-2	1,2-DICHLOROETHANE	5U	108-10-1	4-METHYL-2-PENTANONE	10U
78-93-3	2-BUTANONE	5U	127-18-4	TETRACHLOROETHENE	5U
71-55-6	1,1,1-TRICHLOROETHANE	5U	108-88-3	TOLUENE	5U
56-23-5	CARBON TETRACHLORIDE	5U	108-90-7	CHLOROBENZENE	5U
108-05-4	VINYL ACETATE	10U	100-41-4	ETHYLBENZENE	5U
75-27-4	BROMODICHLOROMETHANE	5U	100-42-5	STYRENE	5U
				TOTAL XYLENES	5U

DATA REPORT QUALIFIERS

VALUE IF THE VALUE IS A VALUE GREATER THAN OR EQUAL TO THE DETECTION LIMIT, REPORT THE VALUE

U COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED REPORT THE MINIMUM DETECTION LIMIT WITH THE U

J INDICATES AN ESTIMATED VALUE

K INDICATES THE COMPOUND WAS DETECTED, HOWEVER, THE VALUE WAS BELOW THE DETECTION LIMIT FOR THE COMPOUND

C PRESENCE CONFIRMED BY GC/MS PESTICIDES ONLY

B ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE

ENVIRONMENTAL PROTECTION AGENCY SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313 703/557-2490

040 SAMPLE NUMBER EA602

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ORGANICS ANALYSIS DATA SHEET
PAGE 2

SEMIVOLATILE COMPOUNDS

CONCENTRATION----------LOW
DATE EXTRACTED----------11/21/84
DATE ANALYZED----------12/21/84
CONC/DIL FACTOR---------- 500

RECEIVED JAN 15 1985

CAS NO.		UG/L	CAS NO.		UG/L
62-75-9	N-NITROSODIMETHYL AMINE--	10U	83-32-9	ACENAPTHENE----------	10U
108-95-2	PHENOL----------	10U	51-28-5	2,4-DINITROPHENOL--------	50U
62-53-3	ANILINE----------	10U	100-02-7	4-NITROPHENOL----------	50U
111-44-4	BIS(2-CHLOROETHYL)ETHER--	10U	132-64-9	DIBENZOFURAN----------	10U
95-57-8	2-CHLOROPHENOL----------	10U	121-14-2	2,4-DINITROTOLUENE-------	10U
541-73-1	1,3-DICHLOROBENZENE------	10U	606-20-2	2,6-DINITROTOLUENE-------	10U
106-46-7	1,4-DICHLOROBENZENE------	10U	84-66-2	DIETHYLPHTHALATE---------	10U
100-51-6	BENZYL ALCOHOL----------	10U	7005-72-3	4-CHLOROPHENYLPHENYLETHER	10U
95-50-1	1,2-DICHLOROBENZENE------	10U	86-73-7	FLUORENE----------	10U
95-48-7	2-METHYL PHENOL----------	10U	100-01-6	4-NITROANILINE----------	50U
36938-32-9	BIS(2CHLOROISOPROPYLETHER	10U	534-52-1	4,6DINITRO2METHYLPHENOL--	50U
106-44-5	4-METHYL PHENOL----------	10U	86-30-6	N-NITROSODIPHENYLAMINE(1)	10U
621-64-7	NNITROSODIPROPYL AMINE---	10U	101-55-3	4BROMPHENYLPHENYLETHER---	10U
67-72-1	HEXACHLOROETHANE---------	10U	118-74-1	HEXACHLOROBENZENE--------	10U
98-95-3	NITROBENZENE----------	10U	87-86-5	PENTACHLOROPHENOL--------	50U
78-59-1	ISOPHORONE----------	10U	85-01-8	PHENANTHRENE----------	10U
88-75-5	2-NITROPHENOL----------	10U	120-12-7	ANTHRACENE----------	10U
105-67-9	2,4-DIMETHYL PHENOL------	10U	84-74-2	DI-N-BUTYLPHTHALATE------	10U
65-85-0	BENZOIC ACID----------	50U	206-44-0	FLUORANTHENE----------	10U
111-91-1	BIS2CHLORETHOXY METHANE--	10U	92-87-5	BENZIDINE----------	10U
120-83-2	2,4-DICHLOROPHENOL-------	10U	129-00-0	PYRENE----------	10U
120-82-1	1,2,4-TRICHLOROBENZENE---	10U	85-68-7	BUTYLBENZYLPHTHALATE-----	10U
91-20-3	NAPTHALENE----------	10U	91-94-1	3,3'-DICHLOROBENZIDINE---	20U
106-47-8	4-CHLOROANILINE----------	10U	56-55-3	BENZO(A)ANTHRACENE-------	10U
87-68-3	HEXACHLOROBUTADIENE------	10U	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	10U
59-50-7	4-CHLORO-3-METHYL PHENOL-	10U	218-01-9	CHRYSENE----------	10U
91-57-6	2-METHYLNAPTHALENE-------	10U	117-84-0	DI-N-OCTYL PHTHALATE-----	10U
77-47-4	HEXACHLOROCYCLOPENTADIENE	10U	205-99-2	BENZO(B)FLUORANTHENE-----	10U
88-06-2	2,4,6-TRICHLOROPNENOL----	10U	207-08-9	BENZO(K)FLUORANTHENE-----	10U
95-95-4	2,4,5-TRICHLOROPHENOL----	50U	50-32-8	BENZO(A)PYRENE----------	10U
91-58-7	2-CHLORONAPTHALENE-------	10U	193-39-5	INDENO(123-CD)PYRENE-----	10U
88-74-4	2-NITROANILINE----------	50U	53-70-3	DIBENZ(GHI)PERYLENE------	10U
131-11-3	DIMETHYL PHTHALATE-------	10U	191-24-2	BENZO(GHI)PERYLENE-------	10U
208-96-8	ACENAPHTHYLENE----------	10U			
99-09-2	3-NITROANILINE----------	50U			

(1) CANNOT BE SEPARATED FROM DIPHENYAMINE

ENVIRONMENTAL PROTECTION AGENCY SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313 703/557-2490

041

SAMPLE NUMBER
EA602

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ORGANICS ANALYSIS DATA SHEET
PAGE 3

PESTICIDE/PCB'S

RECEIVED JAN 15 1985

CONCENTRATION----------LOW
DATE EXTRACTED----------11/21/84
DATE ANALYZED----------12/13/84
CONC/DIL FACTOR---------- 10

CAS NO.		UG/L
319-84-6	ALPHA-BHC	.05U
319-85-7	BETA-BHC	.05U
319-86-8	DELTA-BHC	.05U
58-89-9	GAMMA-BHC(LINDANE)-------	.05U
76-44-8	HEPTACHLOR----------	.05U
309-00-2	ALDRIN----------	.05U
1024-57-3	HEPTACHLOR EPOXIDE-------	.05U
959-98-8	ENDOSULFAN I----------	.05U
60-57-1	DIELDRIN----------	.1U
72-55-9	4,4'-DDE----------	.1U
72-20-8	ENDRIN----------	.1U
33213-65-9	ENDOSULFAN II----------	.1U
72-54-8	4,4'-DDD	.1U
7421-93-4	ENDRIN ALDEHYDE----------	.1U
1031-07-8	ENDOSULFAN SULFATE-------	.1U
50-29-3	4,4'-DDT	.1U
72-43-5	METHOXYCHLOR----------	.5U
53494-70-5	ENDRIN KETONE----------	.1U
57-74-9	CHLORDANE----------	.5U
8001-35-2	TOXAPHENE----------	1U
12674-11-2	AROCHLOR-1016----------	.5U
11104-28-2	AROCHLOR-1221----------	.5U
11141-16-5	AROCHLOR-1232----------	.5U
53469-21-9	AROCHLOR-1242----------	.5U
12672-29-6	AROCHLOR-1248----------	.5U
11097-69-1	AROCHLOR-1254----------	1U
11096-82-5	AROCHLOR-1260----------	1U

VI=VOLUME OF EXTRACT INJECTED------	5UL
VS=VOLUME OF WATER EXTRACTED-------	1000ML
WS=WEIGHT OF SAMPLE EXTRACTED------	G
VT=VOLUME OF TOTAL EXTRACT---------	10000UL

Environmental Protection Agency. CLP Sample Management Office.
P. O. Box 818. Alexandria, Virginia 22313 703/557-2490

Sample Number
EA602

042

Organics Analysis Data Sheet
(Page 4)

RECEIVED JAN 15 1985

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	NONE	VOA		
2.				
3.	PHTHALATE	BNA	1504	6
4.	CYCLO ALKANE		236	7
5.				
6.				
7.				
8.				
9.				
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11.				
12.				
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SURROGATE RECOVERY SUMMARY

Case No. 3566 Contract Laboratory PEI Assoc Contract No. 68-01-7015

	VOLATILE			SEMI-VOLATILE								PESTICIDE
CLP TRAFFIC NO.	TOLUENE-D8 (88-110)	BFB (86-121)	1,2 DICHLORO-ETHANE-D4 (77-120)	NITRO-BENZENE-D5 (41-120)	2-FLUORO-BIPHENYL (44-110)	TERPHENYL-D14 (33-120)			PHENOL-D5 (10-103)	2-FLUORO-PHENOL (22-121)	2,4,6 TRIBROMO-PHENOL (10-130)	DIBUTYL-CHLORENDATE (46-130) **
11/26 BLANK	102	85	80	50	100	118			16	34	22	72
EA601R	97	97	95	52	78	50			18	28	34	39*
EA602	97	98	93	58	96	112			30	44	82	74
EA601MS	96	96	95	68	98	126			50	70	80	45*
EA601MSD	97	89	91	78	128*	170*			60	88	112	35*
EA601MS*	99	88	94									
11/27 BLANK	97	85	90									

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: 0 out of 21 ; outside of QC limits

Semi-Volatiles: 2 out of 30 ; outside of QC limits

Pesticides: 3 out of 5 ; outside of QC limits

Comments:

FORM II 4/84

RECEIVED JAN 15 1985

REAGENT BLANK SUMMARY

RECEIVED JAN 1 5 1985

Case No. 3826 Contractor PEI Assoc., Inc. Contract No. ~~68-01-~~ 7015

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
VOABLK 1127	11/27	V	W	L	T	75-09-2	Methylene chloride	40.1	ug/l	5
						67-64-1	Acetone	22.0		10
VOABLK 1126	11/26	V	W	L	T	75-09-2	Methylene chloride	13.2		5
						67-64-1	Acetone	14.9		10
BNABLKW 3826	12/20	BNA	W	L	X		None			
PESTBLC 3826	12/13	P	W	L	V		None			

Comments:

FORM IV

GC/MS TUNING AND MASS CALIBRATION

Decafluorotriphenylphosphine (DFTPP)

Case No. 3566 Contractor PEI Associates Inc. Contract No. 68-01-7015

Instrument ID X Date 12/20/84 Time 12:0

Lab ID DFTPP1220B Data Release Authorized By: [illegible]

RECEIVED JAN 15 1985

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	43.67
68	less than 2.0% of mass 69	ND (0)[1]
69	mass 69 relative abundance	46.63
70	less than 2.0% of mass 69	ND (0)[1]
127	40.0 - 60.0% of mass 198	53.37
197	less than 1.0% of mass 198	ND
198	base peak, 100% relative abundance	100.00
199	5.0 - 9.0% of mass 198	6.18
275	10.0 - 30.0% of mass 198	16.32
365	greater than 1.00% of mass 198	1.29
441	present, but less than mass 443	7.77
442	greater than 40.0% of mass 198	55.39
443	17.0 - 23.0% of mass 442	9.75 (17.61)[2]

[1] Value in parenthesis is % mass 69.
[2] Value in parenthesis is % mass 442.

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
BNA E 1220		12/20/84	1228
BNA D 1220		"	1307
BNA C 1220		"	1426
BNA B 1220		"	1518
BNA A 1220		"	1717
Blank	water Blank	"	1806
EA602 MS	DX 218 MS	"	2008
EA602 MSD	DX 218 MSD	"	2058
Blank (R)		"	2326

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

011

Case No. 3566 Contractor PEI Associates Inc. Contract No. 68-01-7015

Instrument ID X Date 12/21/84 Time 1128

Lab ID DFTPP1221 Data Release Authorized By: [illegible]

RECEIVED JAN 15 1985

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.37
68	less than 2.0% of mass 69	0.58 (1.25)[1]
69	mass 69 relative abundance	46.04
70	less than 2.0% of mass 69	ND (0)[1]
127	40.0 - 60.0% of mass 198	54.79
197	less than 1.0% of mass 198	ND
198	base peak, 100% relative abundance	100.00
199	5.0 - 9.0% of mass 198	8.06
275	10.0 - 30.0% of mass 198	17.61
365	greater than 1.00% of mass 198	1.53
441	present, but less than mass 443	9.10
442	greater than 40.0% of mass 198	63.60
443	17.0 - 23.0% of mass 442	12.18 (19.15)[2]

[1] Value in parenthesis is % mass 69.
[2] Value in parenthesis is % mass 442.

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
BNAC 1221		12/21/84	1144
EA601	DX 217	"	1530
EA602	DX 218	"	1620

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. 3566 Contractor PEI Associates, Inc. Contract No. 68-01-7015

Instrument ID T Date 11/26/84 Time 1125

Lab ID I5080 Data Release Authorized By: [signature]

RECEIVED JAN 15 1985

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE	
50	15.0 - 40.0% of the base peak	15.8	
75	30.0 - 60.0% of the base peak	39.2	
95	Base peak, 100% relative abundance	100.0	
96	5.0 - 9.0% of the base peak	6.3	
173	Less than 1.0% of the base peak	N.D.	
174	Greater than 50.0% of the base peak	63.4	
175	5.0 - 9.0% of mass 174	4.0	(6.25)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	61.0	(96.2)[1]
177	5.0 - 9.0% of mass 176	3.7	(6.0)[2]

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
VOABLK1126	5 ml blank	11/26	1138
VOAH1126	200 ppb	"	1339
VOAMH1126	150 ppb	"	1426
VOAML1126	50 ppb	"	1500
VOAL1126	20 ppb	"	1532
VOAM1126	100 ppb	"	1611
EA601VOA	DX217	"	1652
EA602VOA	DX218	"	1723
EA601VOAR	DX217	"	1801
EA601VMS	DX217 MS	"	1839
EA601VMSD	DX217 MSD	"	1917

4/84

FORM V

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. 3566 Contractor PEI Associates, Inc Contract No. 68-01-7015

Instrument ID T Date 11/27/84 Time 1128

Lab ID T5096 Data Release Authorized By: [signature]

RECEIVED JAN 15 1985

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE	
50	15.0 - 40.0% of the base peak	18.0	
75	30.0 - 60.0% of the base peak	40.3	
95	Base peak, 100% relative abundance	100.0	
96	5.0 - 9.0% of the base peak	6.4	
173	Less than 1.0% of the base peak	N.D.	
174	Greater than 50.0% of the base peak	57.0	
175	5.0 - 9.0% of mass 174	3.5	(6.1)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	55.5	(97.3)[1]
177	5.0 - 9.0% of mass 176	2.8	(5.0)[2]

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
VOABLK1127		11/27	1138
VOAM1127		"	1229
EA001VMSR	DX217		1355

4/84

FORM V

RECEIVED JAN 15 1985

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 3566 Contractor PEI Assoc., Inc. Contract No. 68-01-7015

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. EA601	1,1-Dichloroethene	49.9	0	84.4	169.1*				14	61-145
	Trichloroethene	55.4	0	79.4	143.3*				14	71-120
	Chlorobenzene	42.3	0	64.4	152.2*				13	75-130
	Toluene	42.1	0	61.2	145.4*				13	76-125
	Benzene	41.7	0	64.1	153.7*				11	76-127
B/N SMO SAMPLE NO.	1,2,4-Trichlorobenzene								28	39-98
	Acenaphthene								31	46-118
	2,4 Dinitrotoluene								38	24-96
	Di-n-Butylphthalate								40	11-117
	Pyrene								31	26-127
	N-Nitroso-Di-n-Propylamine								38	41-116
	1,4-Dichlorobenzene								28	36-97
ACID SMO SAMPLE NO.	Pentachlorophenol								50	9-103
	Phenol								42	12-89
	2-Chlorophenol								40	27-123
	4-Chloro-3-Methylphenol								42	23-97
	4-Nitrophenol								50	10-80
PEST SMO SAMPLE NO.	Lindane								15	56-123
	Heptachlor								20	40-131
	Aldrin								22	40-120
	Dieldrin								18	52-126
	Endrin								21	56-121
	4,4'-DDT								27	38-127

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs ____ out of ____; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

RECOVERY: VOAs 0 out of 5; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

Comments:

068

RECEIVED JAN 15 1985

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 3566 Contractor PEI Assoc., Inc. Contract No. 68-01-7015

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug)		SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. EA601	1,1-Dichloroethene	49.9		0	70.7	141.7	71.4	143.1	0.9	14	61-145
	Trichloroethene	53.4		0	77.3	139.5 *	79.9	144.2 *	3.3	14	71-120
	Chlorobenzene	42.3		0	58.4	138.1 *	60.7	143.5 *	3.8	13	75-130
	Toluene	42.1		0	58.3	139.5 *	59.4	141.1 *	1.8	13	76-125
	Benzene	41.7		0	58.8	141.0 *	60.3	144.6 *	2.5	11	76-127
B/N SMO SAMPLE NO. EA602	1,2,4-Trichlorobenzene	51.7			50.6	98	62.1	120 *	22	28	39-98
	Acenaphthene	50.3			53.6	107	71.2	142 *	28	31	46-118
	2,4 Dinitrotoluene	52.2			35.2	67	51.8	99 *	41 *	38	24-96
	Di-n-Butylphthalate	69.5			23.	33	31.2	45	31	40	11-117
	Pyrene	65.0			64.5	99	87.8	135 *	31	31	26-127
	N-Nitroso-Di-n-Propylamine	56.1			25.4	45	32.5	58	25	38	41-116
	1,4-Dichlorobenzene	66.7			45.8	75	53.4	88	16	28	36-97
ACID SMO SAMPLE NO. EA602	Pentachlorophenol	101.2			11.8	12	19.6	19	47	50	9-103
	Phenol	103.8			59.4	57	74.	71	22	42	12-89
	2-Chlorophenol	110.4			84.6	77	104.4	95	21	40	27-123
	4-Chloro-3-Methylphenol	100.8			62.6	62	85.2	85	32	42	23-97
	4-Nitrophenol	100.8			0	0 *	0	0 *	0	50	10-80
PEST SMO SAMPLE NO. EA601	Lindane	1.26	2.10	0.00	1.10	87.2	1.81	86.1	1.27	15	56-123
	Heptachlor	0.99	1.66	0.0	0.68	68.7	0.93	56.1	19.8	20	40-131
	Aldrin	1.08	1.80	0.0	0.91	84.1	1.17	64.9	25.8 *	22	40-120
	Dieldrin	1.01	1.68	0.0	0.93	92.3	1.35	80.4	13.9	18	52-126
	Endrin	1.04	1.73	0.0	0.99	95.4	1.48	85.5	10.9	21	56-121
	4,4'-DDT	1.01	1.69	0.0	0.65	64.2	0.94	58.7	9.0	27	38-127
		MS	MSD								

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD:
VOAs 0 out of 5 ; outside QC limits
B/N 1 out of 7 ; outside QC limits
ACID 0 out of 5 ; outside QC limits
PEST 1 out of 12 ; outside QC limits

RECOVERY:
VOAs 8 out of 10 ; outside QC limits
B/N 4 out of 14 ; outside QC limits
ACID 2 out of 10 ; outside QC limits
PEST 0 out of 12 ; outside QC limits

Comments: EA601 PESTICIDE MSD was re-extracted using the ~~and there~~ ~~was~~ 300ml remaining. RPD values based on percent recovery.

RECEIVED JAN 1 9 1985

REVIEW OF CLP ORGANIC DATA

Contractor: PEDCO

Case 3566

The data package for this case was reviewed by Region V CRL personnel in accordance with the "Standard Operating Procedure for Contract Laboratory Program (CLP) Data Review; August 1984". The quality of the data was assessed based on laboratory compliance with the contract and the data quality objectives as defined by the data user.

This review covers the following samples and parameters:

SMO#	CRL#	MATRIX	VOA	ABN	PEST
EA601	85MC04562	WATER	✓	✓	✓
EA602	85MC04201	"	✓	✓	✓

DATA QUALITY OBJECTIVES AND REVIEW

RECEIVED JAN 1 5 1995

Case 3566

OSC or responsible party: FIT

Case Objective LEVEL C Screening

Data Quality Needs N/A

Precision: SEE Summary

Bias:

Obtain the information above directly from the OSC or designee before starting data review. Categorize review level into one of the following (circle one):

A. Enforcement: Case is already an enforcement action, data is sure to be used in court.

B. Assessment: Case already has preliminary data, level and degree of contamination or clean up action needs to be determined.

C. Screening: Case purpose is to determine what, if any, pollutants are at the site, followup sampling likely.

REVIEW SUMMARY

RECEIVED JAN 1 5 1985

Case 3566

	VOA	A	BN	PEST
Precision	2.5	24.4	27.1	13.4
Bias	-5	-10	-42	-52

Precision expressed as mean RPD between appropriate matrix spike duplicate compounds.

Bias expressed as mean percent of appropriate surrogate spike recoveries from 100%.

Data Quality Needs Met?: Data Quality C were met

Action Items to Resolve Data Quality: NONE

Item Description	Responsible Party	Completion Date

DATA QUALIFIERS

RECEIVED JAN 15 1985

Contractor: PEDCO

Case 3566

Below is a summary of the out of control audits and the possible effect on the data for this case:

PRECISION - Acceptable for VOA, B/N, Acid, + Pesticides
Accuracy - Acceptable for VOA, + B/N
Accuracy - Negative bias for Acid, + Pesticides
Methylene Chloride was greater than 5 times the CRDL in the 11/27/84 blank.

Reviewed by: Robert Hall

Phone: (312) 886-1970

Date: 1-8-85

DATA PACKAGE COMPLETENESS AUDIT

CASE: 3566

Check if present:

CONTRACTOR: PEDCO

DELIVERABLES INDEX WA 84A-266,267

☐ I. Case Narrative

The Case narrative must contain: Case number, Contract number, summary of any QC, sample, shipment and analytical problems, and documentation of all internal decision tree processes used.

RECEIVED JAN 15 1985

II. QC Summary

☑ A. Surrogate Percent Recovery Summary (Form II)

☑ B. Matrix Spike/Matrix Spike Duplicate Summary (Form III)

☑ C. Reagent Blank Summary (Form IV)
(If more than a single form is necessary, it must be arranged in chronological order.)

☑ D. GC/MS Tuning and Calibration Standard (Form V)

☑ 1. DFTPP in chronological order; by instrument.

☑ 2. BFB in chronological order; by instrument.

III. Sample Data Package

A. Sample data in increasing SMO Number order:

☑ 1. HSL Results - Organic Analysis Data Sheet (Form I)

☑ 2. GC/MS tentative ID (Form I, Part B) - Must be included even if no compounds are found; if so, indicate on form: "no volatile compounds found" and/or "no semi-volatile compounds found."

3. Raw data - in order: VOA, BNA, Pesticide

☑ a. Reconstructed ion chromatogram(s) (GC/MS), chromatogram(s) (GC)

b. Data System Printout

☑ • Quantitation report or legible facsimile (GC/MS)

☑ • Integration report or data system printout (GC)

☑ c. HSL spectra with lab generated standard (Dual Display)

• data systems incapable of dual display shall provide spectra in order:

CASE: 3566

RECEIVED JAN 15 1985

- raw HSL compound spectra
- enhanced or background subtracted spectra
- laboratory generated HSL standard

d. GC/MS library search spectra for Tentatively Identified Compound(s) (TIC)

e. Quantitation/Calculation of tentative ID concentration(s)

IV. Standards Data Package

A. Current list of laboratory calculated instrument detection limits for all HSL compounds.

B. Initial Calibration Data (Form VI) - in order: VOA, BNA; by instrument if more than one instrument used.

1. When more than one initial calibration is performed, the data must be put in chronological order. All initial calibration data must be included even for a specific Case.

C. Continuing Calibration (Form VII) - in order: VOA, BNA; by instrument if more than one instrument used.

1. When more than one Continuing Calibration is performed, forms must be in chronological order.

D. Pesticide forms in the following order:

1. Form VIII - Pesticide Evaluation Standards Summary

2. Form IX - Pesticide/PCB Standards Summary

3. Form X - Pesticide/PCB Identification (only required for positive results)

E. VOA standard(s) chromatograms and data system printouts (or legible facsimile). Spectra are not required.

F. BNA standard(s) chromatograms and data system printouts (or legible facsimile). Spectra are not required.

G. All pesticide evaluation standard(s) (A, B, and C) chromatograms and data system printouts in chronological order.

H. All pesticide Individual Standard Mix (A or B) chromatograms and data system printouts.

CASE: 3566

I. Pesticide Quantitation standard(s) chromatograms and data system printouts.

V. Raw QC Data Package

A. DFTPP

1. Bar graph spectrum

2. Mass listing

RECEIVED JAN 15 1985

B. BFB

1. Bar graph spectrum

2. Mass listing

C. Blank Data

1. Tabulated results (Form I)

2. GC/MS tentative ID sheet (Form I, Part B) even if none found

3. Raw Data - in order: VOA, BNA, Pesticide

a. Reconstructed ion chromatogram(s) and quantitation report(s) or legible facsimile (GC/MS)

b. Chromatogram(s) and data system printout(s) (GC)

c. HSL spectra with lab generated standard (dual display)

- data systems which are incapable of dual display shall provide spectra in order:

  - raw HSL compound spectra

  - enhanced or background subtracted spectra

  - laboratory generated HSL standard spectra

d. GC/MS library search spectra for Tentatively Identified Compounds (TIC)

e. Quantitation/Calculation of Tentative ID concentrations

D. Matrix Spike Data

1. Tabulated results (Form I) of non-spiked compounds

2. Raw Data - in order: VOA, BNA, Pesticide

CASE: 3566

a. Reconstructed ion chromatogram(s) and quantitation report(s) or legible facsimile (GC/MS)

- spectra not required

RECEIVED JAN 15 1985

b. Chromatogram(s) and data system printout(s) (GC)

E. Matrix Spike Duplicate Data

1. Tabulated results (Form I) of non-spiked compounds

2. Raw Data - in order: VOA, BNA, Pesticide

a. Reconstructed ion chromatogram(s) and quantitation report(s) or legible facsimile (GC/MS)

- spectra not required

b. Chromatogram(s) and data system printout(s) (GC)

MISSING DELIVERABLES	DATE REQUESTED	REQUESTOR	DATE RECEIVED

CORRECTIVE ACTION: Call SMO at FTS-557-2490

ABN, VOA
QUALITATIVE PRIORITY POLLUTANT ANALYSIS

Case: 3566

Contractor: PEDCO

SMO#	DATE TIME INJECTED	POSITIVE HIT COMPOUND	STANDARD DATE/ TIME INJ	RRT STD	RRT SAMPLE	(LIMIT) (±.06) Δ RRT	Check if OK, or note exceptions: All ions >10% in STD are in sample	relative intensity sample ± 20% STD	no ions >10% in sample not in STD
E601	11/26/84 18:01	METHYLENE CHLORIDE (B)	12/13/84 9:06	.617	0.610	0.007	✓	✓	✓
E601	11/26/84 18:01	ACETONE (B)	12/13/84 9:06	.650	0.661	0.011	✓	✓	✓
E601	12/21/84 15:30	DI-N-BUTYLPHTHALATE	12/19/84 11:41	1.111	1.109	0.002	✓	✓	✓
E601	12/21/84 15:30	BUTYLBENZYLPHTHALATE	12/19/84 11:41	0.956	0.954	0.002	✓	✓	✓
E601	12/21/84 15:30	BIS(2-ETHYLHEXYL)PHTHALATE	12/19/84 11:41	1.022	1.018	0.004	✓	✓	✓

NOTE: False Positives, as determined by reviewer, should be flagged on Organic Analysis Data Sheet.

RECEIVED JAN 15 1985

Case: 3566

Contractor: PEDCO

RECEIVED JAN 1 5 1985

TENTATIVELY IDENTIFIED COMPOUNDS
MATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Case: 3566

Contractor: PEDCO

LAB REAGENT/INSTRUMENT BLANK CONTAMINANTS

RECEIVED JAN 1 5 198

List only those compounds detected. Check OADS to ensure that the proper flag code B is present for the contaminants found. Contractors do not subtract lab blank contents from samples. If sample level is > 10 x lab blank, pollutant may be really due to the sample. Flag all other sample data as invalid for these compounds.

Units: UG/L

COMPOUND	CRDL	BLANK LEVEL	LIMIT EXCEEDED?
METHYLENE CHLORIDE	5	40	25

NOTE: CH_2Cl_2, acetone, benzene, toluene, phthalates limits are <5 x CRDL, all others are <1 x CRDL.

Case: 3566

Contractor: PEDCO

VOLATILES INITIAL AND CONTINUING CALIBRATION OUTLIERS

RECEIVED JAN 1 5 1985

I = Initial
C = Continuing

List only outliers below

COMPOUND	CCC %RSD (Limit ≤ 25%)	SPCC $\overline{RF}$ (Limit ≥ 0.3)	I or C	Date/Time

IMPACT ON ASSOCIATED SAMPLE DATA:

LAB CORRECTIVE ACTION TAKEN (i.e. new 5 point curve)

Case: 3566

Contractor: PEDCO

SPIKE OUTLIERS

RECEIVED JAN 1 5 198

Attach contractor supplied Forms II, III to this sheet.

Reviewer note:

1) Advisory limits, if exceeded, do not invalidate sample data.

2) No reanalysis or corrective action is contractually required for MS/MSD outliers.

3) If reagent blank has 1 or more surrogates outside contract required QC limits, evidence of recalculation or reanalysis must be found with all new values in control. Call SMO to request reanalysis.

4) If a sample has 1 or more surrogates outside contract required QC limits, evidence of recalculation or reanalysis must be found in the data package. If any surrogate, upon reanalysis, are still out of control, sample data should be flagged as biased due to matrix effect.

OVERALL % OUTLIERS

Surrogate $\frac{\sum \text{outliers}}{\sum \text{all recoveries}} \times 100 =$ _____%

(Expect 5-15%)

Matrix $\frac{\sum \text{RPD outliers}}{\sum \text{all RPDs}} \times 100 =$ _____%

$\frac{\sum \text{outliers}}{\sum \text{all recoveries}} \times 100 =$ _____%

(No expectations)

Case: 3566

Contractor: PEDCO

ABN INITIAL AND CONTINUING CALBRATION OUTLIERS

I = Initial
C = Continuing

List only outliers below.

RECEIVED JAN 1 5 1985

COMPOUND	CCC % RSD Limit ≤25%	SPCC $\overline{RF}$ Limit >.05	I or C	Date/Time

IMPACT ON ASSOCIATED SAMPLE DATA:

LAB CORRECTIVE ACTION TAKEN (i.e. new 5 point curve)

Case: 3566

Contractor: PEDCO

PCB/PESTICIDE GC/EC EVALUATION

Attach Form VIII to this sheet. List only outliers on this sheet.

A) Linearity Check Outliers (limit ≤ 10% rsd)

Pesticide	Date/Time	% rsd

Note: No lab action required.

RECEIVED JAN 1 5 1985

B) Breakdown Check Outliers (limit <10% endrin)
(limit < 5% DDT)

Pesticide	Date/Time	% Breakdown	Samples Affected

Note: Lab must take corrective action. Subsequent runs must be in control. Affected samples must be repeated.

C) Dibutylchlorendate RT Shift Outliers
(limit: ≤2% packed column)
(limit: ≤0.3% cap column)

Standard Name	Date/Time	% Difference	Affected Sample #s

Note: Lab is to continue injecting replicate standards to meet criteria.

Case: 3566

Contractor: PEDCO

PCB/PESTICIDE STANDARDS EVALUATION

Attach Form IX to this sheet. List only outliers below. C = Confirmatic run, Q = quantitation run.

RECEIVED JAN 1 5 1985

(% Diff Limit C < 20%)
Q < 10%)

Compound	C or Q	% DIFF	Affected Sample #s

Note: Lab must take corrective action and reanalyze affected samples if limits exceeded.

PCB/Pesticide Blank Contaminants

List only those compounds appearing at >CRDL. Sample data should be fla ged with a "B" code - check for this.

Compound	CRDL	Blank level	Affected Sample #s

Case: 3566

Contractor: PEDCO

PCB/PESTICIDE POSITIVE ID CONFIRMATION

RECEIVED JAN 15 1985

If positive hits were found in the case, Form I must be submitted. Attach Form I to this sheet.

A. RT window criteria outliers (limit: 3 x sd of absolute RT of standard] [Allowable Exceptions: toxaphene, PCBs).

SMO#	Compound	RT actual	RT window Limit	STD Date/Time

B. GC/EC confirmation outliers packed column. (Limit: at least 25% resolution between all compounds in standard chromatograms).

Compound	Approximate % Resolution	Affected Sample #s

C. GC/EC Confirmation Outliers - capillary column (Limit: at least 25% resolution between B-BHC/α-BHC, Dieldrin/DDT, DDD/endrin aldehyde, endosulfan sulfate/DDT)

Pesticide Pair	Approximate % Resolution	Affected Sample #s

Case: 3566

Contractor: PEDCO

PCB/PESTICIDE POSITIVE ID CONFIRMATION

RECEIVED JAN 1 5 1985

D. GC/MS Confirmation

DFTPP run date/time: _____
Criteria met? Y N (Circle one)

If DFTPP not met, confirmation invalid, samples should be reinjected after GC/MS tuned. Affected samples: _____

_____

_____

ASSESSMENT OF POSITIVE HITS:

SMO#	Compound	Reviewer Assessment*

*Agree, or disagree and reason, crossout false positives on OADS

Comments on PCB/Pesticide Data Quality:

_____

_____

_____

_____

_____

RECEIVED JAN 1 5 1985

Case 3566

Contractor PEDCO

HOLDING TIME REQUIREMENTS

SMO#	VOA A Date Rec'd.	B Date Injected	B-A (Limit) ≤7 or 10*	Sample positive?	ABN, PCB/Pest A Date Rec'd.	B Date Ext.	C Date Anal.	B-A (Limit) ≤ 5,10 **	C-B (Limit) (≤ 40)	Sample positive?
EA601	11/20/84	11/26/84	6							
EA602	11/20/84	11/26/84	6							

NOTE: No regulatory requirement for holding time exists for these analyses.

Negative samples: flag data as possibly not detected due to holding time exceeded.

Positive samples: flag data as quantitation biased low due to exceeded holding times (especially VOA results).

* 7 for water, 10 for soil

** 5 for water, 10 for soil

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 1/15/85

RECEIVED JAN 1 5 1985

SUBJECT: Review of Region V CLP Data
Received for Review on 1/14/85

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory
Chuck Elly

TO: Data User: Fit

We have reviewed the data for the following case(s).

SITE NAME: Hinsdale Sexton SMO Case No. 3566

EPA Data Set No. SF 866 No. of Samples: 2 D.U./Activity Numbers 1985IC48528

CRL No. 85MC04562 - 85MC04R07

SMO Traffic No. MEA373 - MEA372

CLP Laboratory: Wilson Lab Hrs. Required for Review: 4

Following are our findings.

The spike recoveries for Sb, Tl and Sn are reported as being 0, 64 and 50% respectively. There may be a low bias for these elements in these samples.

The results for Fe on the field blank show a value of 130 ug/L indicating a possibility for low level contamination for Fe occurring in this analysis.

The field blank DL's for As, Se and Tl are reported to be 20, 6 and 14 ug/L respectively.

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Don Trees, CLP/Sample Management Office

EPA FORM 1320-6 (REV. 3-76)

REGION V, U.S. ENVIRONMENTAL PROTECTION AGENCY
ESD/Central Regional Laboratory

DATA TRACKING - FORM I RECEIVED JAN 15 1985

CRL Data Set No. 5F 866 ERRIS No. _____

SMO Case No. 3566 Site Name: Hinsdale Sexton

Name of Laboratory: Wilson Lab Data User: Fit

No. of Samples: 2 Date Samples Received: 1/14/85

1. Have chain-of-custody records been received? YES ✓ NO ___
2. Have Traffic reports been received? YES ___ NO ✓
3. If no, are Traffic report numbers written on the chain-of-custody record? YES ✓ NO ___
4. If no, which Traffic report numbers are missing?

5. Are basic data forms in? YES ✓ NO ___
6. Number of samples claimed: 2 Number of samples received: 2
7. Checked by: [illegible] Date: 1/14/85
8. Received by Contract Project Management Section: CMC Date: 1/14/85
9. Review Started: 1-14-85 Reviewer Signature: [illegible]
10. Total time spent on review: 4 hrs Date review completed: 1-14-85
11. Copied (xeroxed) by: _____ Date: _____
12. Transmitted by: _____ Date: _____
13. Mailed to Data User by: _____ Date: _____
14. REMARKS:

FORM I

85MC0436J

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO.
MEA373

WELL G-103

RECEIVED JAN 15 1985

DATE 85/01/09

INORGANIC ANALYSIS DATA SHEET

LAB NAME WILSON LABORATORIES
SOW NO. 784
LAB SAMPLE ID. NO. 8411-1124

CASE NO. 3566

QC REPORT NO. 3566

ELEMENTS IDENTIFIED AND MEASURED

CONCENTRATION: LOW X MEDIUM
MATRIX: WATER X SOIL SLUDGE OTHER

UG/L OR MG/KG DRY WEIGHT (CIRCLE ONE)

1.	ALUMINUM	200 U P	13.	MAGNESIUM	180000 1 8 0 P
2.	ANTIMONY	60 U R P	14.	MANGANESE	240 P
3.	ARSENIC	20 U F	15.	MERCURY	.2 U
4.	BARIUM	200 U P	16.	NICKEL	20 U P
5.	BERYLLIUM	5 U P	17.	POTASSIUM	[3000] P
6.	CADMIUM	2 U P	18.	SELENIUM	6 U F
7.	CALCIUM	201000 P	19.	SILVER	10 U P
8.	CHROMIUM	10 U P	20.	SODIUM	35000 P
9.	COBALT	30 U P	21.	THALLIUM	14 U R F
10.	COPPER	10 U P	22.	TIN	30 U R P
11.	IRON	600 P	23.	VANADIUM	10 U P
12.	LEAD	4 U F	24.	ZINC	40 P

CYANIDE _____ PERCENT SOLIDS (%) _____

FOOTNOTES: FOR REPORTING RESULTS TO EPA, STANDARD RESULT QUALIFIERS ARE USED AS DEFINED ON COVER PAGE. ADDITIONAL FLAGS OR FOOTNOTES EXPLAINING RESULTS ARE ENCOURAGED. DEFINITION OF SUCH FLAGS MUST BE EXPLICIT AND CONTAINED ON COVER PAGE, HOWEVER.

COMMENTS: _____

LAB MANAGER Bernadine Jones

FORM I

B MC04R87

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO.

MEA372

BLANK

DATE 85/01/09

RECEIVED JAN 15 1985

INORGANIC ANALYSIS DATA SHEET

LAB NAME WILSON LABORATORIES
SOW NO. 784
LAB SAMPLE ID. NO. 8411-1123

CASE NO. 3566

QC REPORT NO. 3566

ELEMENTS IDENTIFIED AND MEASURED

CONCENTRATION: LOW X MEDIUM ____
MATRIX: WATER X SOIL ____ SLUDGE ____ OTHER ____

UG/L OR MG/KG DRY WEIGHT (CIRCLE ONE)

1.	ALUMINUM	200 U P	13.	MAGNESIUM	2000 U P
2.	ANTIMONY	60 U R P	14.	MANGANESE	15 U P
3.	ARSENIC	20 U F	15.	MERCURY	.2 U
4.	BARIUM	200 U P	16.	NICKEL	20 U P
5.	BERYLLIUM	5 U P	17.	POTASSIUM	2000 U P
	CADMIUM	2 U P	18.	SELENIUM	6 U F
7.	CALCIUM	1000 U P	19.	SILVER	10 U P
8.	CHROMIUM	10 U P	20.	SODIUM	5000 U P
9.	COBALT	30 U P	21.	THALLIUM	14 U R F
10.	COPPER	10 U P	22.	TIN	30 U R F
11.	IRON	130 P	23.	VANADIUM	10 U P
12.	LEAD	4 U F	24.	ZINC	30 P

CYANIDE ____ PERCENT SOLIDS (%) ____

FOOTNOTES: FOR REPORTING RESULTS TO EPA, STANDARD RESULT QUALIFIERS ARE USED AS DEFINED ON COVER PAGE. ADDITIONAL FLAGS OR FOOTNOTES EXPLAINING RESULTS ARE ENCOURAGED. DEFINITION OF SUCH FLAGS MUST BE EXPLICIT AND CONTAINED ON COVER PAGE, HOWEVER.

COMMENTS: ____

LAB MANAGER Bernadine Jones

RECEIVED JAN 1 5 1985

DATA QUALIFIERS

Contractor: Wilson Labs.

Case 3566

Below is a summary of the out of control audits and the possible effect on the data for this case:

The spike recoveries for Sb, Tl and Sn are reported as being 0, 64 and 50% respectively. There may be a low bias for these elements in the samples.

The results for Fe on the field blank show a value of 130 ug/L indicating the possibility of low level contamination for this element occuring in this analysis.

The field blank DL's for Cr, Se and Tl are reported to be 20, 6 and 14 ug/L.

Reviewed by: Aaron O Lynstedt

Phone: 886-1973

Date: 1-14-85

REVIEW OF CLP INORGANIC DATA

RECEIVED JAN 1 5 1985

Contractor: Wilson Labs

Case 3566

The data package for this case was reviewed by Region V, Central Regional Laboratory personnel in accordance with the "Standard Operating Procedure for Contract Laboratory (CLP) Data Review; August 1984". The quality of the data was assessed based on laboratory compliance with the contract and the data quality objectives as defined by the user.

This review covers the following samples and parameters:

SMO#	CRL#	MATRIX	CONCENTRATION
ME4 373	85MC04562	Water	Low
ME4 372	85MC0R07	"	"

Case: 3566

Contractor: Wilson Labs

DATA PACKAGE COMPLETENESS AUDIT

RECEIVED JAN 1 5 1985

I. Cover Page

✓ The cover page must include general comments, Statement of Work Number, QC Report #, EPA cross reference numbers, footnotes used in the data package, and the statement on ICP corrections.

II. Inorganic Data Report Sheet - Form I

A completed Form I must be submitted for every sample in that case.

✓ Proper matrix and concentration level indicated.

— % solids reported for solid samples.

✓ Analytical method code for each parameter. "P" for ICP/flame AA or "F" for furnace.

✓ Any dilutions affecting the IDL explained in the comment section.

✓ For positive values less than the contract required detection limit, the value is put in brackets. [ ].

✓ For not detected, the detection limit is reported, followed by a "U".

✓ Lab manager's signature.

III. QA/QC Data

The following forms must be submitted. A check for completeness and and compliance follows in this audit.

✓ Initial and Continuing Calibration Verification - Form II.

✓ Blank data - Form III

✓ ICP Interference Check Sample - Form IV

✓ Spike Sample Recovery - Form V

✓ Duplicate Data - Form VI

✓ Instrument Detection Limit and Laboratory Control Sample - Form VII.

✓ Standard Addition Results - Form VIII

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IV. Raw Data

A legible photocopy of raw data consisting of the sequential measurement readout record, such as an instrument tape or printout, clearly labeled with sufficient information to identify both the sample identity and the final result must be submitted for each of the following.

✓ calibration standards, with prep date.

✓ calibration and preparation blanks

✓ initial and continuing calibration

✓ interference check samples, initial and continuing.

✓ duplicates

✓ spikes - indicating standard solutions used, final spike concentrations and volumes involved.

✓ samples - including all weights, dilutions and volumes used to obtain the reported value.

✓ instrument adjustments or corrections, if any.

✓ raw furnace data for:

- initial single spike data
- single spike % recovery, if used
- full method of standard addition, if performed.
- method of standard addition correlation coefficient, slope and intercept of linear fit.

V. Sample Traffic Report

Not present Copy of SMO Sample Traffic Report with lab receipt information and original contractor signature.

Case: 3564

Contractor: Wilson Labs

CALIBRATION VERIFICATION

Attach Form II to this sheet. List only those parameters outside control limits below.

Hg and Sn 80-120% I = initial
All other compounds 90-110% C = continuing

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Parameter	I or C	% Recovery	Affected Sample #S
		O.K.	1-14-85

NOTE: Sources of initial and continuing cal standards should be checked. Only EPA QC or NBS reference solutions are acceptable for initial solutions (except Sn).

Corrective action by lab must include recalibration and reanalysis of the preceding 10 samples for the parameters involved. Ensure that this was done.

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Form II B

Q. C. Report No. 3566

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Wilson Laboratories

CASE NO. 3566

SOW NO. 784

DATE 85/01/09

UNITS UG/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic	235	238	101	235	238	101			F
4. Barium									
5. Beryllium									
6. Cadmium									
7. Calcium	100,000	98,000	98	100,000	95,000	95			P
8. Chromium									
9. Cobalt									
10. Copper									
11. Iron									
12. Lead	870	870	100	870	850	98			P
13. Magnesium	10,000	10,000	100	10,000	10,000	100			P
14. Manganese									
15. Mercury									
16. Nickel									
17. Potassium									
18. Selenium									
19. Silver									
20. Sodium									
21. Thallium									
22. Tin									
23. Vanadium									
24. Zinc									
Other:									
Cyanide									

[1] Initial Calibration Source EPA [2] Continuing Calibration Source EPA

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

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Form II

Q. C. Report No. 3566

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Wilson Laboratories

CASE NO. 3566

SOW NO. 784

DATE 85/01/09

UNITS UG/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum	6,500	6,500	100	6,500	6,500	100			P
2. Antimony	2,500	2540	102	2,500	2,690	108			P
3. Arsenic	235	233	99	235	221	94			F
4. Barium	5,000	5,100	102	5,000	5,200	104			P
5. Beryllium	235	240	102	235	240	102			P
6. Cadmium	39	36	92	39	36	92			P
7. Calcium	100,000	101,000	101	100,000	101,000	101			P
8. Chromium	520	490	94	520	480	92			P
9. Cobalt	520	530	102	520	560	108			P
10. Copper	340	340	100	340	330	97			P
11. Iron	1,590	1,620	102	1,590	1,620	102			P
12. Lead	174	166	95	174	161	92			F
13. Magnesium	50,000	49,000	98	50,000	49,000	98			P
14. Manganese	700	690	99	700	680	97			P
15. Mercury	8.7	7.1	87	8.7	7.2	83			
16. Nickel	410	400	98	410	390	95			P
17. Potassium	20,000	20,000	100	20,000	20,000	100			P
18. Selenium	50	53	105	50	54	108			F
19. Silver	50	50	100	50	50	100			P
20. Sodium	100,000	104,000	104	100,000	104,000	104			P
21. Thallium	101	111	110	101	110	109			F
22. Tin	5,000	4930	99	5,000	5440	109			P
23. Vanadium	1,690	1,750	104	1,690	1,750	104			P
24. Zinc	420	400	95	420	410	98			P
Other:									
Cyanide									

[1] Initial Calibration Source EPA [2] Continuing Calibration Source EPA

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

Case: 3566

Contractor: Wilson Labs

BLANK CONTAMINANTS - Attach Form III to this sheet.

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A) CALIBRATION BLANKS

List only those parameters detected above the Contract Required Detection Limit (CRDL) below.

Units = ug/L

Parameter	CRDL	Blank Value	Affected Sample #S
			all O.K. 1-14-85 aod

NOTE: Corrective action is to terminate the analysis, correct the problem and recalibrate.

B) PREPARATION BLANKS

List only those parameters detected above the CRDL. Check frequency of blanks: Limits are one per case or 20 samples, whichever is more frequent.

Units = ug/L

Parameter	CRDL	Blank Value	Affected Sample #S
			all O.K. 1-14-85 aod

NOTE: Contractor required to flag data with "C" and "NDB" codes. Check final data sheets for proper codes.

Form III

Q. C. Report No. 3566

BLANKS

RECEIVED JAN 15 1985

LAB NAME Wilson Labs

CASE NO. 3566

DATE 85/01/09

UNITS UG/L

Matrix Water

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum	200 U	200 U				200 U	
2. Antimony	60 U	60 U				60 U	
3. Arsenic	10 U	10 U	10 U	10 U	10 U	10 U	
4. Barium	200 U	200 U				200 U	
5. Beryllium	5 U	5 U				5 U	
6. Cadmium	2 U	2 U				2 U	
7. Calcium	2 U	2 U				2 U	
8. Chromium	10 U	10 U				10 U	
9. Cobalt	30 U	30 U				30 U	
10. Copper	10 U	10 U				10 U	
11. Iron	30 U	30 U				[70]	
12. Lead	2 U	2 U				2 U	
13. Magnesium	2 U	2 U				2 U	
14. Manganese	15 U	15 U				15 U	
15. Mercury	0.2 U	0.2 U				0.2 U	
16. Nickel	20 U	20 U				20 U	
17. Potassium	2,000 U	2000 U				2000 U	
18. Selenium	3 U	3 U				3 U	
19. Silver	10 U	10 U				10 U	
20. Sodium	5,000 U	5000 U				5,000 U	
21. Thallium	7 U	7 U				7 U	
22. Tin	30 U	30 U				30 U	
23. Vanadium	10 U	10 U				10 U	
24. Zinc	10 U	10 U				10 U	
Other:							
Cyanide							

Case: 3566

Contractor: Wilson Lab

ICP INTERFERENCE CHECK

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Attach Form IV to this sheet. List only those parameters outside ± 20% of the established mean value.

I = Initial
F = Final

Parameter	I or F	%RC	Affected Sample

NOTE: If outside the limit, the lab must correct the problem, recalibrate, verify the calibration and reanalyze the samples.

Effect of ICP biases on sample data:

Ael O.K 1-14.85 aol

Form IV

Q. C. Report No. 3566 RECEIVED JAN 1 5 1985

ICP INTERFERENCE CHECK SAMPLE

LAB NAME Wilson Laboratories

DATE 85/01/08

CASE NO. 3566

Check Sample I.D. ICS

Check Sample Source EPA

Units ug/l

Compound	Control Limits[1] Mean	Control Limits[1] Std. Dev.	True[2]	Initial Observed	Initial %R	Final Observed	Final %R
Metals:							
1. Aluminum	444000	16000	448000	490000	109	460000	103
2. Antimony	—	—	—				
3. Arsenic							
4. Barium	400	0	464	400	100	400	100
5. Beryllium	412	.18	412	—	—	—	—
6. Cadmium							
7. Calcium	434000	12000	445	480000	111	470000	108
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium	427000	28000	425000	490000	115	470000	110
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium	—	—	—	—	—	—	—
21. Thallium							
22. Tin	—	—	—	—	—	—	—
23. Vanadium	480	13	508	500	104	510	106
24. Zinc							
Other:							
	—			—			

1 Mean value based on n = 5.

2 True value of EPA ICP Interference Check Sample or contractor standard.

Case: 3566

Contractor: Wilson Labs.

SPIKE BIASES

RECEIVED JAN 15 1985

Attach Form V to this sheet. List only those recoveries which are outside the control limits of 75%-125%. State spiking concentration only if different from the contract required levels.

Parameter	% Recovery	Spike Concentration	SMO#
Sb	000		MEA 373
Tl	64		↓
Sn	50		

NOTE: At least one spike per case or per every 20 samples, whichever is more frequent is required. If recovery is outside the limits, all data associated with that spike must be flagged with an "R". If sample concentration exceeds the spike concentration by a factor of four or more, and the recovery is out of control, the data reported is not flagged.

Form V

Q. C. Report No. 3566

RECEIVED JAN 1 5 1985

SPIKE SAMPLE RECOVERY

LAB NAME Wilson Labs

DATE 85/01/09

CASE NO. 3566

EPA Sample No. MEA ~~372~~ 373

Lab Sample ID No. ~~8411-1123~~ 1124

Units UG/L

Matrix Water

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R[1]
Metals:					
1. Aluminum	75-125	2,000	200 U	2,000	100
2. Antimony	"	60 U	60 U	50 ~~500~~	000R
3. Arsenic	"	21	20 U	20	105
4. Barium	"	1,900	200 U	2,000	95
5. Beryllium	"	50	5 U	50	100
6. Cadmium	"	53	2 U	50	106
7. Calcium	"	300,000	201,000	100,000	99
8. Chromium	"	170	10 U	200	85
9. Cobalt	"	520	30 U	500	104
10. Copper	"	250	10 U	250	100
11. Iron	"	1,620	600	1,000	102
12. Lead	"	530	4 U	500	106
13. Magnesium	"	230,000	180,000	50,000	100
14. Manganese	"	440	240	200	100
15. Mercury	"	2.0	0.2	2.0	100
16. Nickel	"	390	20 U	400	98
17. Potassium	"	46,000	3,000	50,000 ~~86~~	86
18. Selenium	"	10	6 U	10	100
19. Silver	"	50	10 U	50	100
20. Sodium	"	129,000	35,000	100,000	94
21. Thallium	"	32	7 U	50	64
22. Tin	"	200	30 U	400	50 R
23. Vanadium	"	490	10 U	500	98
24. Zinc	"	260	40	200	110
Other:					
Cyanide	"				

[1] %R = [(SSR - SR)/SA] x 100

"R"- out of control

Comments:

Case: 3566

Contractor: Wilson Labs

DUPLICATE PRECISION

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Attach Form VI to this sheet. List only those parameters outside the advisory 20% RPD at concentrations <5 x CRDL or ± CRDL for sample results ≤5 x CRDL.

Units = ug/L

Parameter	Result Sample	Result Duplicate	RPD	SMO#
			ALL O.K.	1-14-85 aol

NOTE: No lab corrective action is contractually required. Flag the sample parameter in question on the precision summary.

Form VI

Q. C. Report No. 3566

RECEIVED JAN 15 1985

DUPLICATES

LAB NAME Wilson Laboratories

DATE 85/01/09

CASE NO. 3566
EPA Sample No. ME A 373
Lab Sample ID No. 8411-1124
Units UG/L

Matrix Water

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. Aluminum		200 U	200 U	0
2. Antimony		60 U	60 U	0
3. Arsenic		20 U	20 U	0
4. Barium		~~2000 U~~ 200U	~~2000~~ 200U	0
5. Beryllium		5U	5U	0
6. Cadmium		2 U	2 U	0
7. Calcium		201,000	198,000	2
8. Chromium		10 U	10 U	0
9. Cobalt		30 U	30 U	0
10. Copper		10 U	10 U	0
11. Iron		600	580	3
12. Lead		4U	4U	0
13. Magnesium		180,000	180,000	0
14. Manganese		240	240	0
15. Mercury		0.2 U	0.2 U	0
16. Nickel		20 U	20 U	0
17. Potassium		[3,000]	[3,000]	0
18. Selenium		6U	6U	0
19. Silver		10 U	10 U	0
20. Sodium		35,000	35,000	0
21. Thallium		14 U	14 U	0
22. Tin		30U	30U	0
23. Vanadium		10U	10U	0
24. Zinc		40	40	0
Other:				
Cyanide				

* Out of Control

[1] To be added at a later date.

[2] RPD = [|S - D|/((S + D)/2)] x 100

NC - Non calculable RPD due to value(s) less than CRDL

Case: 3566

Contractor: ~~RECEIVED JAN 15~~ Lab 1985

CRDL ADHERENCE

Attach Form VII to this sheet. List only those parameters where contractor's Instrument Detection Limit (IDL) exceeds the CRDL.

Parameter	CRDL	IDL ICP/AA	IDL Furnace	Affected Sample #S
		all O.K		1-14-85 a.d.

NOTE: No lab corrective action required at this time. If CRDL's are quoted for affected sample results, cross out and put in the contractor IDL to avoid misleading data user as to the level of detection.

Case: 3566

Contractor: Wilson Labs.

RECEIVED JAN 1 5 1985

LABORATORY CONTROL SAMPLE ANALYSIS

Attach Form VII to this sheet. List only those recoveries outside the limits of 80%-120% recovery.

Parameter	% Recovery	Affected Sample #s

NOTE: If outside the control limits, the analysis must be terminated, problems corrected and the previous 19 samples associated with the LCS reanalyzed.

Form VII

Q.C. Report No. 3566

RECEIVED JAN 15 1985

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME Wilson Labs

CASE NO. 3566

DATE 85/01/09

LCS UNITS (ug/L) mg/kg

(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Instrument Detection Limits (IDL)-ug/l Furnace	Lab Control Sample True	Lab Control Sample Found	Lab Control Sample %R
Metals:						
1. Aluminum	200	200		5700	5700	100
2. Antimony	60	60		1,000	830	83
3. Arsenic	10		10	235	238	101
4. Barium	200	200		5000	5500	110
5. Beryllium	5	5		235	240	102
6. Cadmium	5	2		39	37	95
7. Calcium	5000	2,000		100,000	101,000	101
8. Chromium	10	10		260	250	96
9. Cobalt	50	30		260	280	108
10. Copper	25	10		340	340	100
11. Iron	100	30		790	760	96
12. Lead	5	200	4	430	430	100
13. Magnesium	5000	2,000		50,000	50,000	100
14. Manganese	15	15		350	340	97
15. Mercury	0.2		0.2	8.7	7.1	82
16. Nickel	40	20		210	200	95
17. Potassium	5000	3,000		50,000	44,000	88
18. Selenium	5		3	50	52	104
19. Silver	10	10		100	100	100
20. Sodium	5000	5,000		100,000	102,000	102
21. Thallium	10		7	100	106	105
22. Tin	40	30		1,000	1,080	108
23. Vanadium	50	10		850	860	101
24. Zinc	20	10		420	430	102
Other:						
Cyanide	10					

Case: 3566

Contrctor: Wilson Labs.

STANDARD ADDITION RESULTS - FURNACE ANALYSIS

RECEIVED JAN 1 5 1985

A. Attach Form VIII. All samples analyzed by furnace require an initial single spike at 2 x the CRDL. Duplicate injections are required, and the average is reported. For concentrations greater than the CRDL duplicates must agree ± 20% RPD. Corrective action is to rerun the sample at least once. List only deviations from this criteria.

Parameter	SMO#	% RPD Duplicate injections	Spiking level

B. Sample quantitation is obtained from either single spike or full method of standard addition based on spike recovery and sample concentration criteria. Verify that the applicable criteria was used for each sample.

- Spike recovery is ≤ 40%; samples must be diluted and rerun. If still ≤ 40%, the result for that sample is flagged with an "E".

or

- Spike recovery is ≥ 40%, but sample concentration is ≤ 50% of the measured spike value. The CRDL is reported, multiplied by any dilution factor.

or

RECEIVED JAN 1 5 1985

- Spike recovery is within 85%-115% limit, and sample concentration is > 50% of the measured spike value. Quantitation is obtained directly from the single spike.

  or

- Spike recovery is outside 85%-115% limit, and sample concentration is > 50% of the measured spike value. A full method of standard addition is required. (Sample plus 3 spikes). That sample result is flagged with an "s". The correlation coefficient must be ≥ 0.995. If it is less than this, that sample result is flagged with a "+".

List only where improper criteria was used.

Parameter	SMO#	Comment	Correlation Coefficient <0.995
		O.K.	1-14-85 a.o.l.

Form VIII

Q.C. Report No. 3566

STANDARD ADDITION RESULTS

RECEIVED JAN 15 1985

LAB NAME Wilson Laboratories CASE NO. 3566

DATE 85/01/09 UNITS UG/L

Sample #	Element	0 ADD ABS.	1 ADD CON./ABS[1]	2 ADD CON./ABS.[1]	3 ADD CON./ABS.[1]	FINAL CON.[2]	r*
MEA373 Spike	As	0.016	50/0.048	100/0.085	200/108	21	.998

[1] CON is the concentration added, ABS. is the instrument readout in absorbance or concentration.

[2] Concentration as determined by MSA

*"r" is the correlation coefficient.

+ - correlation coefficient is outside of control window of 0.995.

Case 3566

REVIEW SUMMARY

RECEIVED JAN 1 5 1985

	Precision	Bias
Al	See Form VI	0
Ba		-5.0
Be		0
Cr		-15.0
Co		+4.0
Cu		0
Fe		+2.0
Mn		0
Ni		-2.0
Ag		0
V		-2.0
Zn		+10.0
As		+5.0
Sb		-100
Cd		+6.0
Pb		+6.0
Hg		0
Se		0
Tl		-36.0
Sn		-50.0
CN		—

Precision expressed as RPD between duplicates of sample MEA 373.

Bias expressed as the percent of spike recovery of sample " " from 100%.

10/3

Form IX (Quarterly)
Instrument Detection Limits

RECEIVED JAN 1 5 1985

Laboratory Name Wilson Laboratories ICP/Flame AA (Circle One) Model Number 5000

Date 85/01/09 Furnace AA Number 500

Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)	Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)
1. Aluminum		200		13. Magnesium		5000	
2. Antimony		60		14. Manganese	279.5 B	15	15 P
3. Arsenic	193.7 B	10	10 F	15. Mercury	instrument set	0.2	0.2
4. Barium		200	200 P	16. Nickel	232.0 B	40	20 P
5. Beryllium	234.9 B	5	5 P	17. Potassium	766.5	5000	2000 P
6. Cadmium	228.8 B	5	2 P	18. Selenium	196.0 F	5	3 F
7. Calcium		5000		19. Silver	328.1 B	10	10 P
8. Chromium	357.9 B	10	10 P	20. Sodium		5000	
9. Cobalt	240.7 B	50	30 P	21. Thallium	276.8 B	10	7 F
10. Copper	324.8 B	25	10 P	22. Tin		40	
11. Iron	248.3 B	100	30 P	23. Vanadium		50	
12. Lead	283.3 B	5	2 F	24. Zinc	213.9 B	20	10 P

Footnotes:

- Indicate the instrument for which the IDL applies with a P (for ICP/Flame AA) or a F (for Furnace AA) behind the IDL value.
- Indicate elements commonly run with background correction (AA) with a B behind the analytical wavelength.
- If more than one ICP/Flame or Furnace AA is used, submit separate Forms IX-XI for each instrument.

Comments:

Lab Manager [illegible]

Form IX (Quarterly)
Instrument Detection Limits

2 of 3

RECEIVED JAN 1 5 1985

Laboratory Name Wilson Laboratories ICP/Flame AA (Circle One) Model Number 503

Date 85/01/09 Furnace AA Number HGA 2100

Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)	Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)
1. Aluminum		200		13. Magnesium		5000	
2. Antimony		60		14. Manganese		15	
3. Arsenic		10		15. Mercury		0.2	
4. Barium		200		16. Nickel		40	
5. Beryllium		5		17. Potassium		5000	
6. Cadmium		5		18. Selenium		5	
7. Calcium		5000		19. Silver		10	
8. Chromium		10		20. Sodium		5000	
9. Cobalt		50		21. Thallium	276.8B	10	7 F
10. Copper		25		22. Tin		40	
11. Iron		100		23. Vanadium		50	
12. Lead	283.6 B	5	2 F	24. Zinc		20	

Footnotes:

- Indicate the instrument for which the IDL applies with a P (for ICP/Flame AA) or a F (for Furnace AA) behind the IDL value.
- Indicate elements commonly run with background correction (AA) with a B behind the analytical wavelength.
- If more than one ICP/Flame or Furnace AA is used, submit separate Forms IX-XI for each instrument.

Comments:

Lab Manager [illegible]

3 of 3

Form IX (Quarterly)
Instrument Detection Limits

RECEIVED JAN 15 1985

Laboratory Name Wilson Laboratories (ICP/Flame AA (Circle One) Model Number 6000

Date 84/12/20 Furnace AA Number

Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)	Element	Wavelength (nm)	CRDL (µg/L)	IDL (µg/L)
1. Aluminum	237.335 P	200	200	13. Magnesium	285.213 P	5000	2000
2. Antimony	206.833 P	60		14. Manganese		15	
3. Arsenic		10		15. Mercury		0.2	
4. Barium	455.403 P	200	200	16. Nickel		40	
5. Beryllium	313.042 P	5	3	17. Potassium		5000	
6. Cadmium		5		18. Selenium		5	
7. Calcium	422.673 P	5000	1000	19. Silver		10	
8. Chromium		10		20. Sodium	330.237 P	5000	5000
9. Cobalt		50		21. Thallium		10	
10. Copper		25		22. Tin	189.989 P	40	30
11. Iron		100		23. Vanadium	292.402 P	50	10
12. Lead		5		24. Zinc		20	

Footnotes:

- Indicate the instrument for which the IDL applies with a P (for ICP/Flame AA) or a F (for Furnace AA) behind the IDL value.
- Indicate elements commonly run with background correction (AA) with a B behind the analytical wavelength.
- If more than one ICP/Flame or Furnace AA is used, submit separate Forms IX-XI for each instrument.

Comments:

Lab Manager [illegible]

Form X (Quarterly)

ICP Interelement Correction Factors

RECEIVED JAN 1 5 1985

Laboratory Wilson Laboratories

ICP Model Number PE 6000

Date 85/01/09

Analyte	Analyte Wavelength (nm)	Interelement Correction Factors for Al	Ca	Fe	Mg				
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Chromium									
Cobalt									
Copper									
Lead									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Tin									
Vanadium									
Zinc									

NOT USED

Comments:

Lab Manager [illegible]

Form XI (Quarterly)
ICP Linear Ranges

Laboratory Name Wilson Laboratories ICP Model Number 6000

Date 85/01/08

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Upper ICP Linearity Limits

Analyte	Integration Time (Seconds)	Concentration (µg/L)	Analyte	Integration Time (Seconds)	Concentration (µg/L)
1. Aluminum	2.0	200000	13. Magnesium	2.0	110000
2. Antimony	3.0	6000	14. Manganese	NA	NA
3. Arsenic	NA	NA	15. Mercury	NA	NA
4. Barium	2.0	6000	16. Nickel	NA	NA
5. Beryllium	NA	NA	17. Potassium	NA	NA
6. Cadmium	NA	NA	18. Selenium	NA	NA
7. Calcium	2.0	250000	19. Silver	NA	NA
8. Chromium	NA	NA	20. Sodium	2.0	300000
9. Cobalt	NA	NA	21. Thallium	NA	NA
10. Copper	NA	NA	22. Tin	3.0	11000
11. Iron	NA	NA	23. Vanadium	2.0	4000
12. Lead	NA	NA	24. Zinc	NA	NA

Footnotes: ● Indicate elements not analysed by ICP with the notation NA.

Comments:

Lab Manager Brandon Lowe

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DATA QUALITY OBJECTIVES AND REVIEW

Case 3566

OSC or responsible party: not given.

Case Objective

Data Quality Needs

Precision: See Form VI.

Bias: " " V.

Obtain the information above directly from the OSC or designee before starting data review. Categorize review level into one of the following (circle one):

A. Enforcement: Case is already an enforcement action, data is sure to be used in court.

B. Assessment: Case already has preliminary data, level and degree of contamination or clean up action needs to be determined.

C. Screening: Case purpose is to determine what, if any, pollutants are at the site, followup sampling likely.

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Case 3566

Contractor: Wilson Labs

MISSING DELIVERABLES

Item Description	Date Requested	Requestor	Date Received
SMO Traffic Report			

Corrective Action: Call SMO at FTS 557-2490.

Case 3556

REVIEW SUMMARY

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Data Quality Needs Met?: Yes.

Action Items to Resolve Data Quality:

Item Description	Responsible Party	Completion Date