Roy F. Weston, Inc
Suite 5700
700 5th Avenue
Seattle, Washington 98104-5057
206-521-7600 • Fax 206-521-7601

MEMORANDUM

DATE: 1 December 1998

TO: David Bennett, WAM, U.S. EPA, Region X

FROM: Michelle Turner, Chemist, WESTON, Seattle
RM Roger McGinnis, Senior Environmental Chemist, WESTON, Seattle

SUBJECT: Validation of Polychlorinated Biphenyls (Congeners) Data
Laboratory Batch: K9805547
Site: Duwamish River

WORK ASSIGNMENT NO: 46-23-0JZZ

WORK ORDER NO.: 4000-019-038-5200-00

DOC. CONTROL NO.: 4000-019-038-AAAK

cc. Bruce Woods, RAP-WAM, U.S. EPA, Region X
Dena Hughes, Site Manager, WESTON, Seattle (memo only)
Kevin Mundell-Jackson, Database Management, WESTON, Seattle

The quality assurance review of twelve sediment samples, laboratory batch K9805547, collected from the Duwamish River has been completed. Samples were analyzed for polychlorinated biphenyls as individual congeners using EPA Method 8082 by Columbia Analytical Services of Kelso, Washington. The samples were numbered:

98344010	98344011	98344012	98344013	98344014
98344015	98344016	98344017	98344018	98344019
98344020	98344021			

Data Qualifications

The following comments refer to the laboratory performance in meeting the quality control criteria described in the technical specifications of the laboratory subcontract The review follows the format described in the *National Functional Guidelines for Organic Data Review* (EPA OSWER Directive 9240.1-05, February 1994)

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1. Timeliness

All samples met holding time criteria of 14 days for sample extraction and 40 additional days for extract analysis.

2. Initial Calibration

A six point initial calibration was performed using tetrachloro-meta-xylene (TCMX) as an internal standard. Relative response factors (RRF) were calculated for each target congener. The RRF percent relative standard deviation (%RSD) was less than 20 percent for all analytes.

3. Calibration Verification

Calibration verification standards were analyzed every 12 hours using a midrange standard. The RRF percent difference was less than 25 percent of the initial calibration value.

4 Retention Time Windows

Relative Retention Time Windows were calculated from initial calibration. Retention times for calibration verification standards were within established windows of ± 0.06 RRT.

5. Detection Limits

Instrument detection limits met project required quantitation limits with the following exceptions:

Sample	Compound	QL Goal (µg/Kg)	Reported QL (µg/Kg)
98344010	PCB66	1	11
98344010	PCB138	1	18
98344011	PCB66	1	9
98344012	PCB167	1	2
98344013	PCB123	1	2
98344014	PCB123	1	2

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Sample	Compound	QL Goal (µg/Kg)	Reported QL (µg/Kg)
98344014	PCB187	1	6
98344014	PCB167	1	2
98344014	PCB156	1	3
98344016	PCB123	1	2
98344018	PCB66	1	300
98344018	PCB81	1	10
98344018	PCB77	1	20
98344018	PCB123	1	30
98344018	PCB114	1	20
98344018	PCB126	1	10
98344018	PCB157	1	6
98344018	PCB169	1	10
98344018	PCB189	1	3
98344019	PCB28	1	8
98344019	PCB66	1	18
98344019	PCB123	1	2
98344020	PCB66	1	11
98344021	PCB28	1	4
98344021	PCB66	1	9

Where quantitation limit goals were exceeded, undetected analytes were qualified (UI) to indicate matrix interference.

6. Blanks

a) Laboratory Method Blanks

Laboratory method blank frequency criteria were met.

No target analytes were reported in laboratory method blanks

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b) Field Blanks

No field blanks were associated with this laboratory batch.

7. System Monitoring Compounds (Surrogates)

Hexabromobiphenyl (HBB) was used as a surrogate The surrogate compound percent recovery met quality control criteria for all samples.

8. Matrix Spike and Matrix Spike Duplicate

Matrix spike (MS) or matrix spike duplicate (MSD) percent recovery for the following compounds were outside QC guidelines.

Sample	Compound	Percent Recovery	QC Limits
K9805624-005MS (Batch QC)	PCB66	172	60-140
K9805624-005MS (Batch QC)	PCB101	55	60-140
K9805624-005DMS (Batch QC)	PCB18	48	60-140
K9805624-005DMS (Batch QC)	PCB66	148	60-140
K9805624-005DMS (Batch QC)	PCB101	45	60-140

All relative percent differences between the MS and MSD recoveries were within QC guidelines No action was taken based solely on MS/MSD data.

9. Laboratory Control Sample (LCS) Analysis

LCS percent recoveries were outside the QC limits for the following compounds:

Sample	Compound	Percent Recovery	QC Limits
K980824-LCS	PCB18	49	70-130
K980824-LCS	PCB28	58	70-130

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Sample	Compound	Percent Recovery	QC Limits
K980824-LCS	PCB52	57	70-130
K980824-LCS	PCB44	57	70-130
K980824-LCS	PCB66	65	70-130
K980824-LCS	PCB101	51	70-130
K980824-LCS	PCB81	63	70-130
K980824-LCS	PCB77	65	70-130
K980824-LCS	PCB123	65	70-130
K980824-LCS	PCB118	65	70-130
K980824-LCS	PCB114	63	70-130
K980824-LCS	PCB153	63	70-130
K980824-LCS	PCB105	62	70-130
K980824-LCS	PCB138	63	70-130
K980824-LCS	PCB126	69	70-130
K980824-LCS	PCB187	63	70-130
K980824-LCS	PCB128	62	70-130
K980824-LCS	PCB167	66	70-130
K980824-LCS	PCB156	65	70-130
K980824-LCS	PCB157	65	70-130
K980824-LCS	PCB180	63	70-130
K980824-LCS	PCB170	65	70-130
K980824-LCS	PCB189	68	70-130
K980824-LCS	PCB195	65	70-130
K980824-LCS	PCB206	69	70-130

Results for compounds listed above were qualified as estimated (J) Undetected compounds were also qualified as estimated (UJ)

10 Field Duplicate Analysis

No field duplicates were associated with this SDG.

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11. Second Column Confirmation

The relative percent difference (RPD) in reported analyte concentration was greater than 35 percent for the primary and confirmation column for the following samples:

Sample Number	Compound	DB-5 Conc. (µg/Kg)	DB-608 Conc (µg/Kg)	RPD
98344010	PCB18	1	2	67
98344010	PCB28	3	5	50
98344010	PCB52	4	8	67
98344010	PCB44	2	3	40
98344010	PCB101	4	7	55
98344010	PCB138	17	10	52
98344010	PCB128	2	3	40
98344010	PCB167	1	2	67
98344011	PCB28	2	4	67
98344011	PCB52	3	6	67
98344011	PCB101	3	5	50
98344011	PCB105	2	3	40
98344011	PCB138	11	6	59
98344012	PCB18	1	2	67
98344012	PCB28	2	4	67
98344012	PCB52	4	7	55
98344012	PCB44	2	3	40
98344012	PCB101	4	7	55
98344012	PCB105	2	3	40
98344012	PCB138	12	8	40
98344012	PCB167	2	3	40
98344013	PCB18	2	3	40
98344013	PCB101	4	8	67
98344013	PCB123	12	1	169

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Sample Number	Compound	DB-5 Conc (µg/Kg)	DB-608 Conc (µg/Kg)	RPD
98344013	PCB138	15	9	50
98344013	PCB128	2	3	40
98344014	PCB18	2	3	40
98344014	PCB28	4	7	55
98344014	PCB52	6	9	40
98344014	PCB101	5	8	46
98344014	PCB123	14	1	173
98344014	PCB138	18	11	48
98344014	PCB156	3	2	40
98344014	PCB195	1	3	100
98344015	PCB18	1	2	67
98344015	PCB28	3	5	50
98344015	PCB52	4	7	55
98344015	PCB44	2	3	40
98344015	PCB101	3	6	67
98344015	PCB105	2	3	40
98344015	PCB138	12	8	40
98344016	PCB18	1	2	67
98344016	PCB28	3	6	67
98344016	PCB52	4	7	55
98344016	PCB101	4	6	40
98344016	PCB123	11	1	167
98344016	PCB138	14	9	43
98344016	PCB167	1	2	67
98344016	PCB156	1	2	67
98344017	PCB18	2	3	40
98344017	PCB28	3	5	50
98344017	PCB52	4	7	55

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Sample Number	Compound	DB-5 Conc (µg/Kg)	DB-608 Conc (µg/Kg)	RPD
98344017	PCB101	3	5	50
98344017	PCB105	2	3	40
98344017	PCB138	10	6	50
98344017	PCB156	1	2	67
98344018	PCB157	9	6	40
98344018	PCB189	3	5	50
98344018DIL	PCB18	52	83	46
98344018DIL	PCB28	116	171	38
98344018DIL	PCB101	101	185	59
98344018DIL	PCB77	589	11	193
98344018DIL	PCB123	188	23	156
98344018DIL	PCB114	10	38	117
98344018DIL	PCB138	256	141	58
98344018DIL	PCB126	26	2	171
98344019	PCB18	4	6	40
98344019	PCB28	7	11	44
98344019	PCB101	6	11	59
98344019	PCB123	13	1	171
98344019	PCB138	17	10	52
98344019	PCB206	3	1	100
98344020	PCB18	1	2	67
98344020	PCB28	3	5	50
98344020	PCB52	4	6	40
98344020	PCB44	2	3	40
98344020	PCB101	4	7	55
98344020	PCB105	2	3	40
98344020	PCB138	12	7	53
98344020	PCB156	1	2	67

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Sample Number	Compound	DB-5 Conc (µg/Kg)	DB-608 Conc (µg/Kg)	RPD
98344021	PCB18	1	2	67
98344021	PCB52	4	6	40
98344021	PCB44	2	3	40
98344021	PCB101	3	6	67
98344021	PCB138	10	6	50
98344021	PCB128	1	2	67

Differences can arise from analytical interferences on one column. However, the RPDs are not deemed significant at the reported concentrations. The lower concentration was reported for each analyte, unless interferences or coelution prevented use of the lower concentration.

12 Sample Analysis

A cursory review of raw data was performed All laboratory deliverables were present and complete. A duplicate analysis was performed as Batch QC. All RPD values for the replicates were less than 30%. The case narrative notes that percent recoveries for several congeners in the LCS do not meet the project QC limits. In the MS/DMS, three congeners are outside the QC limits. Also noted were MRL elevations due to matrix interference. No corrective action was taken for results outside the QC limits No other complications were noted.

13. Laboratory Contact

The laboratory was not contacted

Data Assessment

Upon consideration of the data qualifications noted above, the data are ACCEPTABLE for use except where flagged with data qualifiers that modify the usefulness of the individual values

Data Qualifiers

U - The compound was analyzed for, but was not detected.

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UJ - The compound was analyzed for, but was not detected The associated quantitation limit is an estimate because quality control criteria were not met

J - The analyte was positively identified, but the associated numerical value is an estimated quantity because quality control criteria were not met or because concentrations reported are less then CRDL or lowest calibration standard.

R - Quality control indicates that data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification.

N - Presumptive evidence of presence of material (tentative identification).

I - Elevated reporting limit due to matrix interference

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805547
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/17/98
Sample Matrix:	Sediment	**Date Received:**	8/18/98

Congener Specific PCBs

Sample Name	98344010	Units	ug/Kg (ppb)
Lab Code	K9805547-001	Basis	Dry
Test Notes			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
PCB 18	EPA 3550B	8082	1	1	8/24/98	8/31/98	1 J	
PCB 28	EPA 3550B	8082	1	1	8/24/98	8/31/98	3 J	
PCB 52	EPA 3550B	8082	1	1	8/24/98	8/31/98	4 J	
PCB 44	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 66	EPA 3550B	8082	11	1	8/24/98	8/31/98	ND 11 UIJB	
PCB 101	EPA 3550B	8082	1	1	8/24/98	8/31/98	7 J	
PCB 81	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 123	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 118	EPA 3550B	8082	1	1	8/24/98	8/31/98	7 J	
PCB 114	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/24/98	8/31/98	14 J	
PCB 105	EPA 3550B	8082	1	1	8/24/98	8/31/98	3 J	
PCB 138	EPA 3550B	8082	18	1	8/24/98	8/31/98	ND 18 UIJB	
PCB 126	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/24/98	8/31/98	7 J	
PCB 128	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 167	EPA 3550B	8082	1	1	8/24/98	8/31/98	1 J	
PCB 156	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 157	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/24/98	8/31/98	12 J	
PCB 169	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND	
PCB 170	EPA 3550B	8082	1	1	8/24/98	8/31/98	8 J	
PCB 189	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 206	EPA 3550B	8082	1	1	8/24/98	8/31/98	1 J	
PCB 209	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND	

B The MRL is elevated because of matrix interferences

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Approved By _____ Date 9/15/98

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Roy F Weston, Inc
Project: Duwamish River/4000-027-001-2019-38
Sample Matrix: Sediment

Service Request: K9805547
Date Collected: 8/17/98
Date Received: 8/18/98

Congener Specific PCBs

Sample Name 98344011
Lab Code K9805547-002
Test Notes

Units ug/Kg (ppb)
Basis Dry

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
PCB 18	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 28	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 52	EPA 3550B	8082	1	1	8/24/98	8/31/98	3 J	
PCB 44	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 66	EPA 3550B	8082	9	1	8/24/98	8/31/98	ND 9 UJ	
PCB 101	EPA 3550B	8082	1	1	8/24/98	8/31/98	5 J	
PCB 81	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 123	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 118	EPA 3550B	8082	1	1	8/24/98	8/31/98	5 J	
PCB 114	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/24/98	8/31/98	8 J	
PCB 105	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 138	EPA 3550B	8082	1	1	8/24/98	8/31/98	11 J	
PCB 126	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/24/98	8/31/98	4 J	
PCB 128	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 167	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 156	EPA 3550B	8082	1	1	8/24/98	8/31/98	1 J	
PCB 157	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/24/98	8/31/98	6 J	
PCB 169	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND	
PCB 170	EPA 3550B	8082	1	1	8/24/98	8/31/98	3 J	
PCB 189	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 206	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 209	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND	

B The MRL is elevated because of matrix interferences

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805547
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/17/98
Sample Matrix:	Sediment	**Date Received:**	8/18/98

Congener Specific PCBs

Sample Name	98344012	Units	ug/Kg (ppb)
Lab Code	K9805547-003	Basis	Dry
Test Notes			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
PCB 18	EPA 3550B	8082	1	1	8/24/98	8/31/98	1 J	
PCB 28	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 52	EPA 3550B	8082	1	1	8/24/98	8/31/98	4 J	
PCB 44	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 66	EPA 3550B	8082	1	1	8/24/98	8/31/98	9 J	
PCB 101	EPA 3550B	8082	1	1	8/24/98	8/31/98	7 J	
PCB 81	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 123	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 118	EPA 3550B	8082	1	1	8/24/98	8/31/98	6 J	
PCB 114	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/24/98	8/31/98	10 J	
PCB 105	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 138	EPA 3550B	8082	1	1	8/24/98	8/31/98	12 J	
PCB 126	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/24/98	8/31/98	5 J	
PCB 128	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 167	EPA 3550B	8082	2	1	8/24/98	8/31/98	ND 2 UIJB	
PCB 156	EPA 3550B	8082	1	1	8/24/98	8/31/98	1 J	
PCB 157	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/24/98	8/31/98	7 J	
PCB 169	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND	
PCB 170	EPA 3550B	8082	1	1	8/24/98	8/31/98	4 J	
PCB 189	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 206	EPA 3550B	8082	1	1	8/24/98	8/31/98	1 J	
PCB 209	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND	

B The MRL is elevated because of matrix interferences

Approved By _____ Date 9/15/98

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Roy F Weston, Inc
Project: Duwamish River/4000-027-001-2019-38
Sample Matrix: Sediment

Service Request: K9805547
Date Collected: 8/17/98
Date Received: 8/18/98

Congener Specific PCBs

Sample Name 98344013
Lab Code K9805547-004
Test Notes

Units ug/Kg (ppb)
Basis Dry

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
PCB 18	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 28	EPA 3550B	8082	1	1	8/24/98	8/31/98	3 J	
PCB 52	EPA 3550B	8082	1	1	8/24/98	8/31/98	5 J	
PCB 44	EPA 3550B	8082	1	1	8/24/98	8/31/98	3 J	
PCB 66	EPA 3550B	8082	1	1	8/24/98	8/31/98	11 J	
PCB 101	EPA 3550B	8082	1	1	8/24/98	8/31/98	8 J	
PCB 81	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 123	EPA 3550B	8082	2	1	8/24/98	8/31/98	ND 2 UIJB	
PCB 118	EPA 3550B	8082	1	1	8/24/98	8/31/98	7 J	
PCB 114	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/24/98	8/31/98	11 J	
PCB 105	EPA 3550B	8082	1	1	8/24/98	8/31/98	3 J	
PCB 138	EPA 3550B	8082	1	1	8/24/98	8/31/98	15 J	
PCB 126	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/24/98	8/31/98	5 J	
PCB 128	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 167	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 156	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 157	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/24/98	8/31/98	8 J	
PCB 169	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND	
PCB 170	EPA 3550B	8082	1	1	8/24/98	8/31/98	5 J	
PCB 189	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 206	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1 UJ	
PCB 209	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND	

B The MRL is elevated because of matrix interferences

MGT Notice

Approved By _____ Date 9/15/98

1S44/021397p

00037

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Roy F Weston, Inc
Project: Duwamish River/4000-027-001-2019-38
Sample Matrix: Sediment

Service Request: K9805547
Date Collected: 8/17/98
Date Received: 8/18/98

Congener Specific PCBs

Sample Name 98344014
Lab Code K9805547-005
Test Notes

Units ug/Kg (ppb)
Basis Dry

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
PCB 18	EPA 3550B	8082	1	1	8/24/98	8/31/98	2 J	
PCB 28	EPA 3550B	8082	1	1	8/24/98	8/31/98	4 J	
PCB 52	EPA 3550B	8082	1	1	8/24/98	8/31/98	6 J	
PCB 44	EPA 3550B	8082	1	1	8/24/98	8/31/98	4 J	
PCB 66	EPA 3550B	8082	1	1	8/24/98	8/31/98	14 J	
PCB 101	EPA 3550B	8082	1	1	8/24/98	8/31/98	8 J	
PCB 81	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1UJ	
PCB 77	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1UJ	
PCB 123	EPA 3550B	8082	2	1	8/24/98	8/31/98	ND 2UIJB	
PCB 118	EPA 3550B	8082	1	1	8/24/98	8/31/98	9 J	
PCB 114	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1UJ	
PCB 153	EPA 3550B	8082	1	1	8/24/98	8/31/98	13 J	
PCB 105	EPA 3550B	8082	1	1	8/24/98	8/31/98	4 J	
PCB 138	EPA 3550B	8082	1	1	8/24/98	8/31/98	18 J	
PCB 126	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1UJ	
PCB 187	EPA 3550B	8082	6	1	8/24/98	8/31/98	ND 6UIJB	
PCB 128	EPA 3550B	8082	1	1	8/24/98	8/31/98	3 J	
PCB 167	EPA 3550B	8082	2	1	8/24/98	8/31/98	ND 2UIJB	
PCB 156	EPA 3550B	8082	3	1	8/24/98	8/31/98	ND 3UIJB	
PCB 157	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1UJ	
PCB 180	EPA 3550B	8082	1	1	8/24/98	8/31/98	9 J	
PCB 169	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND	
PCB 170	EPA 3550B	8082	1	1	8/24/98	8/31/98	6 J	
PCB 189	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND 1UJ	
PCB 195	EPA 3550B	8082	1	1	8/24/98	8/31/98	1 J	
PCB 206	EPA 3550B	8082	1	1	8/24/98	8/31/98	1 J	
PCB 209	EPA 3550B	8082	1	1	8/24/98	8/31/98	ND	

B The MRL is elevated because of matrix interferences

Approved By _____ Date 9/15/98

1S44/021397p

00038

05547SVGJJ1 - 5 9/15/98

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805547
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/17/98
Sample Matrix:	Sediment	**Date Received:**	8/18/98

Congener Specific PCBs

Sample Name	98344015	Units	ug/Kg (ppb)
Lab Code	K9805547-006	Basis	Dry
Test Notes			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
PCB 18	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 28	EPA 3550B	8082	1	1	8/24/98	9/1/98	3 J	
PCB 52	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 44	EPA 3550B	8082	1	1	8/24/98	9/1/98	2 J	
PCB 66	EPA 3550B	8082	1	1	8/24/98	9/1/98	10 J	
PCB 101	EPA 3550B	8082	1	1	8/24/98	9/1/98	6 J	
PCB 81	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 123	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 118	EPA 3550B	8082	1	1	8/24/98	9/1/98	6 J	
PCB 114	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/24/98	9/1/98	9 J	
PCB 105	EPA 3550B	8082	1	1	8/24/98	9/1/98	2 J	
PCB 138	EPA 3550B	8082	1	1	8/24/98	9/1/98	12 J	
PCB 126	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 128	EPA 3550B	8082	1	1	8/24/98	9/1/98	2 J	
PCB 167	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 156	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 157	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/24/98	9/1/98	7 J	
PCB 169	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND	
PCB 170	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 189	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 206	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 209	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND	

MGT 11/15/98

Approved By _____ Date 9/15/98

1S44/021397p

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805547
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/17/98
Sample Matrix:	Sediment	**Date Received:**	8/18/98

Congener Specific PCBs

Sample Name	98344016	Units	ug/Kg (ppb)
Lab Code	K9805547-007	Basis	Dry
Test Notes			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
PCB 18	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 28	EPA 3550B	8082	1	1	8/24/98	9/1/98	3 J	
PCB 52	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 44	EPA 3550B	8082	1	1	8/24/98	9/1/98	3 J	
PCB 66	EPA 3550B	8082	1	1	8/24/98	9/1/98	11 J	
PCB 101	EPA 3550B	8082	1	1	8/24/98	9/1/98	6 J	
PCB 81	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 123	EPA 3550B	8082	2	1	8/24/98	9/1/98	ND 2 UIJB	
PCB 118	EPA 3550B	8082	1	1	8/24/98	9/1/98	8 J	
PCB 114	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/24/98	9/1/98	11 J	
PCB 105	EPA 3550B	8082	1	1	8/24/98	9/1/98	3 J	
PCB 138	EPA 3550B	8082	1	1	8/24/98	9/1/98	14 J	
PCB 126	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/24/98	9/1/98	5 J	
PCB 128	EPA 3550B	8082	1	1	8/24/98	9/1/98	2 J	
PCB 167	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 156	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 157	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/24/98	9/1/98	7 J	
PCB 169	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND	
PCB 170	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 189	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 206	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 209	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND	

B The MRL is elevated because of matrix interferences

MGT. 10/8/98

Approved By _____ Date 9/15/98

1S44/021397p

00040

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805547
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/17/98
Sample Matrix:	Sediment	**Date Received:**	8/18/98

Congener Specific PCBs

Sample Name	98344017	Units	ug/Kg (ppb)
Lab Code	K9805547-008	Basis	Dry
Test Notes			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
PCB 18	EPA 3550B	8082	1	1	8/24/98	9/1/98	2 J	
PCB 28	EPA 3550B	8082	1	1	8/24/98	9/1/98	3 J	
PCB 52	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 44	EPA 3550B	8082	1	1	8/24/98	9/1/98	3 J	
PCB 66	EPA 3550B	8082	1	1	8/24/98	9/1/98	9 J	
PCB 101	EPA 3550B	8082	1	1	8/24/98	9/1/98	5 J	
PCB 81	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 123	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 118	EPA 3550B	8082	1	1	8/24/98	9/1/98	6 J	
PCB 114	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/24/98	9/1/98	8 J	
PCB 105	EPA 3550B	8082	1	1	8/24/98	9/1/98	2 J	
PCB 138	EPA 3550B	8082	1	1	8/24/98	9/1/98	10 J	
PCB 126	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 128	EPA 3550B	8082	1	1	8/24/98	9/1/98	2 J	
PCB 167	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 156	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 157	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/24/98	9/1/98	6 J	
PCB 169	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND	
PCB 170	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 189	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 206	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 209	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND	

Approved By _____ Date 9/15/98

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00041

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805547
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/17/98
Sample Matrix:	Sediment	**Date Received:**	8/18/98

Congener Specific PCBs

Sample Name	98344018	Units	ug/Kg (ppb)
Lab Code	K9805547-009	Basis	Dry
Test Notes			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
PCB 18	EPA 3550B	8082	10	10	8/24/98	9/2/98	52 J	
PCB 28	EPA 3550B	8082	10	10	8/24/98	9/2/98	120 J	
PCB 52	EPA 3550B	8082	10	10	8/24/98	9/2/98	140 J	
PCB 44	EPA 3550B	8082	10	10	8/24/98	9/2/98	88 J	
PCB 66	EPA 3550B	8082	300	10	8/24/98	9/2/98	ND 300 UIJD	
PCB 101	EPA 3550B	8082	10	10	8/24/98	9/2/98	180 J	
PCB 81	EPA 3550B	8082	10	10	8/24/98	9/2/98	ND 10 UIJD	
PCB 77	EPA 3550B	8082	20	10	8/24/98	9/2/98	ND 20 UIJD	
PCB 123	EPA 3550B	8082	30	10	8/24/98	9/2/98	ND 30 UIJD	
PCB 118	EPA 3550B	8082	10	10	8/24/98	9/2/98	170 J	
PCB 114	EPA 3550B	8082	20	10	8/24/98	9/2/98	ND 20 UI DJ	
PCB 153	EPA 3550B	8082	10	10	8/24/98	9/2/98	170 J	
PCB 105	EPA 3550B	8082	10	10	8/24/98	9/2/98	81 J	
PCB 138	EPA 3550B	8082	10	10	8/24/98	9/2/98	260 J	
PCB 126	EPA 3550B	8082	10	10	8/24/98	9/2/98	ND 10 UIJD	
PCB 187	EPA 3550B	8082	10	10	8/24/98	9/2/98	58 J	
PCB 128	EPA 3550B	8082	10	10	8/24/98	9/2/98	41 J	
PCB 167	EPA 3550B	8082	1	1	8/24/98	9/1/98	16 J	
PCB 156	EPA 3550B	8082	10	10	8/24/98	9/2/98	31 J	
PCB 157	EPA 3550B	8082	6	1	8/24/98	9/1/98	ND 6 UIJB	
PCB 180	EPA 3550B	8082	10	10	8/24/98	9/2/98	110 J	
PCB 169	EPA 3550B	8082	10	10	8/24/98	9/2/98	ND 10 UI D	
PCB 170	EPA 3550B	8082	10	10	8/24/98	9/2/98	65 J	
PCB 189	EPA 3550B	8082	3	1	8/24/98	9/1/98	ND 3 UIJB	
PCB 195	EPA 3550B	8082	1	1	8/24/98	9/1/98	10 J	
PCB 206	EPA 3550B	8082	1	1	8/24/98	9/1/98	7 J	
PCB 209	EPA 3550B	8082	1	1	8/24/98	9/1/98	3	

D The MRL is elevated because of matrix interferences and because the sample required diluting

B The MRL is elevated because of matrix interferences

Approved By: _____ Date 9/15/98

1S44/021397p

MGT 11/3/13

00042

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805547
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/17/98
Sample Matrix:	Sediment	**Date Received:**	8/18/98

Congener Specific PCBs

Sample Name	98344019	Units	ug/Kg (ppb)
Lab Code	K9805547-010	Basis	Dry
Test Notes			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
PCB 18	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 28	EPA 3550B	8082	8	1	8/24/98	9/1/98	ND 8 UI J B	
PCB 52	EPA 3550B	8082	1	1	8/24/98	9/1/98	8 J	
PCB 44	EPA 3550B	8082	1	1	8/24/98	9/1/98	6 J	
PCB 66	EPA 3550B	8082	18	1	8/24/98	9/1/98	ND 18 UI J B	
PCB 101	EPA 3550B	8082	1	1	8/24/98	9/1/98	11 J	
PCB 81	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 123	EPA 3550B	8082	2	1	8/24/98	9/1/98	ND 2 UI J B	
PCB 118	EPA 3550B	8082	1	1	8/24/98	9/1/98	10 J	
PCB 114	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/24/98	9/1/98	12 J	
PCB 105	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 138	EPA 3550B	8082	1	1	8/24/98	9/1/98	17 J	
PCB 126	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/24/98	9/1/98	5 J	
PCB 128	EPA 3550B	8082	1	1	8/24/98	9/1/98	3 J	
PCB 167	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 156	EPA 3550B	8082	1	1	8/24/98	9/1/98	2 J	
PCB 157	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/24/98	9/1/98	9 J	
PCB 169	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND	
PCB 170	EPA 3550B	8082	1	1	8/24/98	9/1/98	5 J	
PCB 189	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 206	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 209	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND	

B The MRL is elevated because of matrix interferences

MGT 11/3/98

Approved By _____ Date 9/15/98

1S44/021397p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805547
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/17/98
Sample Matrix:	Sediment	**Date Received:**	8/18/98

Congener Specific PCBs

Sample Name	98344020	Units	ug/Kg (ppb)
Lab Code	K9805547-011	Basis	Dry
Test Notes			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
PCB 18	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 28	EPA 3550B	8082	1	1	8/24/98	9/1/98	3 J	
PCB 52	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 44	EPA 3550B	8082	1	1	8/24/98	9/1/98	2 J	
PCB 66	EPA 3550B	8082	11	1	8/24/98	9/1/98	ND 11 UI J B	
PCB 101	EPA 3550B	8082	1	1	8/24/98	9/1/98	7 J	
PCB 81	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 123	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 118	EPA 3550B	8082	1	1	8/24/98	9/1/98	7 J	
PCB 114	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/24/98	9/1/98	10 J	
PCB 105	EPA 3550B	8082	1	1	8/24/98	9/1/98	2 J	
PCB 138	EPA 3550B	8082	1	1	8/24/98	9/1/98	12 J	
PCB 126	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/24/98	9/1/98	5 J	
PCB 128	EPA 3550B	8082	1	1	8/24/98	9/1/98	2 J	
PCB 167	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 156	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 157	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/24/98	9/1/98	8 J	
PCB 169	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND	
PCB 170	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 189	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 206	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 209	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND	

B The MRL is elevated because of matrix interferences

Approved By _____ Date 9/15/98

1S44/021397p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805547
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/17/98
Sample Matrix:	Sediment	**Date Received:**	8/18/98

Congener Specific PCBs

Sample Name	98344021	Units	ug/Kg (ppb)
Lab Code	K9805547-012	Basis	Dry
Test Notes			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
PCB 18	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 28	EPA 3550B	8082	4	1	8/24/98	9/1/98	ND 4 UIJ B	
PCB 52	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 44	EPA 3550B	8082	1	1	8/24/98	9/1/98	2 J	
PCB 66	EPA 3550B	8082	9	1	8/24/98	9/1/98	ND 9 UIJ B	
PCB 101	EPA 3550B	8082	1	1	8/24/98	9/1/98	6 J	
PCB 81	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 123	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 118	EPA 3550B	8082	1	1	8/24/98	9/1/98	5 J	
PCB 114	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/24/98	9/1/98	8 J	
PCB 105	EPA 3550B	8082	1	1	8/24/98	9/1/98	2 J	
PCB 138	EPA 3550B	8082	1	1	8/24/98	9/1/98	10 J	
PCB 126	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 128	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 167	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 156	EPA 3550B	8082	1	1	8/24/98	9/1/98	1 J	
PCB 157	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND ~~1 UJ~~ 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/24/98	9/1/98	6 J	
PCB 169	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND ~~[illegible]~~	
PCB 170	EPA 3550B	8082	1	1	8/24/98	9/1/98	4 J	
PCB 189	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 206	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND 1 UJ	
PCB 209	EPA 3550B	8082	1	1	8/24/98	9/1/98	ND	

B The MRL is elevated because of matrix interferences

Approved By _____ Date 9/15/98

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