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

MEMORANDUM

DATE: 2 December 1998

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

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

SUBJECT: Validation of Polychlorinated Biphenyls (Congeners) Data
Laboratory Batch: K9805481
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 twenty sediment samples, laboratory batch K9805481, 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:

98334037	98334038	98334039	98334040	98334041
98334042	98334043	98334044	98334045	98334046
98334047	98334048	98334049	98334050	98334051
98334052	98334053	98334054	98334055	98334056

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

This document was prepared by Roy F Weston, Inc expressly for the EPA. It shall not be disclosed in whole or in part without the express, written permission of the EPA

Click to WESTON On The Web http://www rfweston com

follows the format described in the *National Functional Guidelines for Organic Data Review* (EPA OSWER Directive 9240.1-05, February 1994).

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)
98334038	PCB52	1	4
98334039	PCB52	1	3
98334044	PCB77	1	2

This document was prepared by Roy F Weston, Inc expressly for the EPA. It shall not be disclosed in whole or in part without the express, written permission of the EPA

Sample	Compound	QL Goal (µg/Kg)	Reported QL (µg/Kg)
98334046	PCB123	1	2
98334050	PCB77	1	3
98334050	PCB123	1	5
98334050	PCB114	1	5
98334054	PCB66	1	7
98334055	PCB66	1	4
98334056	PCB66	1	5
98334056	PCB101	1	2
98334056	PCB105	1	2

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.

b) Field Blanks

No field blanks were associated with this laboratory batch.

7 System Monitoring Compounds (Surrogates)

Surrogate compound percent recovery met quality control criteria for all samples except:

Sample	Surrogate Compound	Percent Recovery	QC Limits
K980822-MB	Hexabromobiphenyl	<1	30-150

This document was prepared by Roy F Weston, Inc expressly for the EPA It shall not be disclosed in whole or in part without the express, written permission of the EPA.

Surrogate recoveries for all associated samples were within QC limits. The case narrative indicates that, as sample surrogate recoveries were acceptable, the low recovery in the method blank is an isolated incident. Method blank results from prior analysis dates indicate that the system is in control. No qualifiers were assigned to samples in this SDG based on method blank surrogate results.

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
98334045MS	PCB18	38	60-140
98334045MS	PCB28	55	60-140
98334045MS	PCB44	42	60-140
98334045MS	PCB81	48	60-140
98334045MS	PCB77	50	60-140
98334045MS	PCB105	35	60-140
98334045MS	PCB126	47	60-140
98334045MS	PCB187	55	60-140
98334045MS	PCB128	42	60-140
98334045MS	PCB156	48	60-140
98334045MS	PCB157	52	60-140
98334045MS	PCB169	55	60-140
98334045MS	PCB170	59	60-140
98334045DMS	PCB18	32	60-140
98334045DMS	PCB28	58	60-140
98334045DMS	PCB44	30	60-140
98334045DMS	PCB81	42	60-140
98334045DMS	PCB77	42	60-140
98334045DMS	PCB123	59	60-140

This document was prepared by Roy F Weston, Inc expressly for the EPA It shall not be disclosed in whole or in part without the express, written permission of the EPA

Sample	Compound	Percent Recovery	QC Limits
98334045DMS	PCB105	20	60-140
98334045DMS	PCB126	45	60-140
98334045DMS	PCB187	45	60-140
98334045DMS	PCB128	35	60-140
98334045DMS	PCB167	59	60-140
98334045DMS	PCB156	44	60-140
98334045DMS	PCB157	45	60-140
98334045DMS	PCB180	39	60-140
98334045DMS	PCB169	52	60-140
98334045DMS	PCB170	42	60-140
98334045DMS	PCB189	59	60-140
98334045DMS	PCB195	58	60-140

All relative percent differences between the MS and MSD recoveries were within QC guidelines. In addition, MS/MSD recoveries and RPDs were not calculated for PCB52, PCB 66, PCB101, PCB118, PCB153, and PCB138. 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
K980822-LCS	PCB18	54	70-130
K980822-LCS	PCB28	66	70-130
K980822-LCS	PCB52	61	70-130
K980822-LCS	PCB44	58	70-130
K980822-LCS	PCB66	69	70-130
K980822-LCS	PCB101	63	70-130

This document was prepared by Roy F Weston, Inc expressly for the EPA It shall not be disclosed in whole or in part without the express, written permission of the EPA

Sample	Compound	Percent Recovery	QC Limits
K980822-LCS	PCB81	60	70-130
K980822-LCS	PCB77	64	70-130
K980822-LCS	PCB123	66	70-130
K980822-LCS	PCB118	67	70-130
K980822-LCS	PCB114	64	70-130
K980822-LCS	PCB153	66	70-130
K980822-LCS	PCB105	64	70-130
K980822-LCS	PCB138	60	70-130
K980822-LCS	PCB126	66	70-130
K980822-LCS	PCB187	66	70-130
K980822-LCS	PCB128	61	70-130
K980822-LCS	PCB167	67	70-130
K980822-LCS	PCB156	63	70-130
K980822-LCS	PCB157	61	70-130
K980822-LCS	PCB180	66	70-130
K980822-LCS	PCB169	66	70-130
K980822-LCS	PCB170	64	70-130
K980822-LCS	PCB189	64	70-130
K980822-LCS	PCB195	64	70-130
K980822-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

Samples 98334038 and 98334039 were field duplicates The relative percent difference between duplicate results was within limits of 35 percent RPD for all analytes where concentrations were greater than 5 times the reporting limit except·

This document was prepared by Roy F Weston, Inc expressly for the EPA It shall not be disclosed in whole or in part without the express, written permission of the EPA

Analyte	Initial Result	Duplicate Result	% RPD
PCB138	9	6	40

Results for the analytes listed above were qualified as estimated.

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
98334037	PCB28	1	3	100
98334037	PCB52	3	6	67
98334037	PCB44	1	2	67
98334037	PCB101	2	5	86
98334037	PCB138	8	5	46
98334038	PCB52	3	18	143
98334038	PCB101	3	5	50
98334038	PCB138	9	5	57
98334039	PCB28	1	3	100
98334039	PCB52	2	17	158
98334039	PCB44	1	2	67
98334039	PCB101	2	3	40
98334039	PCB138	6	4	40
98334040	PCB28	2	3	40
98334040	PCB52	2	3	40
98334040	PCB101	1	3	100
98334040	PCB138	3	2	40
98334041	PCB18	1	2	67

This document was prepared by Roy F Weston, Inc expressly for the EPA It shall not be disclosed in whole or in part without the express, written permission of the EPA

Sample Number	Compound	DB-5 Conc (µg/Kg)	DB-608 Conc (µg/Kg)	RPD
98334041	PCB28	2	3	40
98334041	PCB52	4	9	77
98334041	PCB105	1	2	67
98334041	PCB138	10	6	50
98334042	PCB28	1	2	67
98334042	PCB52	3	5	50
98334042	PCB101	2	4	67
98334042	PCB138	8	5	46
98334043	PCB18	2	4	67
98334043	PCB28	3	5	50
98334043	PCB101	2	3	40
98334043	PCB138	6	4	40
98334043	PCB187	3	2	40
98334044	PCB28	2	3	40
98334044	PCB52	4	6	40
98334044	PCB77	15	1	175
98334044	PCB138	9	5	57
98334045	PCB18	2	4	67
98334045	PCB28	4	7	55
98334045	PCB101	4	6	40
98334045	PCB138	9	5	57
98334045	PCB128	1	2	67
98334046	PCB18	2	5	86
98334046	PCB28	4	8	67
98334046	PCB101	7	11	44
98334046	PCB123	14	2	150
98334046	PCB138	17	9	62

This document was prepared by Roy F Weston, Inc expressly for the EPA It shall not be disclosed in whole or in part without the express, written permission of the EPA

Sample Number	Compound	DB-5 Conc (µg/Kg)	DB-608 Conc (µg/Kg)	RPD
98334047	PCB18	1	2	67
98334047	PCB28	2	4	67
98334048	PCB28	1	2	67
98334048	PCB101	2	3	40
98334048	PCB138	6	3	67
98334048	PCB187	3	2	40
98334049	PCB28	2	3	40
98334049	PCB52	3	5	50
98334049	PCB101	2	3	40
98334049	PCB138	6	4	40
98334049	PCB187	3	2	40
98334050	PCB28	13	28	73
98334050	PCB101	20	30	40
98334050	PCB77	105	3	189
98334050	PCB123	48	4	169
98334050	PCB114	4	10	86
98334050	PCB138	57	32	56
98334051	PCB52	2	3	40
98334051	PCB138	4	2	67
98334052	PCB52	2	3	40
98334052	PCB138	3	2	40
98334052	PCB187	2	1	67
98334053	PCB28	1	3	100
98334053	PCB52	3	5	50
98334053	PCB44	1	2	67
98334053	PCB138	9	5	57
98334054	PCB28	1	2	67

This document was prepared by Roy F Weston, Inc expressly for the EPA It shall not be disclosed in whole or in part without the express, written permission of the EPA

Sample Number	Compound	DB-5 Conc (µg/Kg)	DB-608 Conc (µg/Kg)	RPD
98334054	PCB52	3	5	50
98334054	PCB44	1	2	67
98334054	PCB101	2	3	40
98334054	PCB138	8	4	67
98334055	PCB52	2	3	40
98334056	PCB52	2	4	67
98334056	PCB105	2	1	67
98334056	PCB138	5	3	50
98334056	PCB187	3	2	40

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 on sample 98334043. All RPD values for the replicates were less than 30%, except PCB105, which had a RPD of 67%. The case narrative notes that the RPD for PCB105 was outside of acceptance limits because the analyte concentration was not significantly greater than the reporting limit. Precision near the detection limit is not as accurate as values that are higher on the calibration range. The narrative also indicates that several congeners in the LCS and MS/MSD do not meet the QC limits No other complications were noted.

13 Laboratory Contact

The laboratory was not contacted.

This document was prepared by Roy F Weston, Inc expressly for the EPA It shall not be disclosed in whole or in part without the express, written permission of the EPA

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.

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.

This document was prepared by Roy F Weston, Inc expressly for the EPA It shall not be disclosed in whole or in part without the express, written permission of the EPA

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334037	Units	ug/Kg (ppb)
Lab Code	K9805481-001	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	8/22/98	8/28/98	ND 1 UJ	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	6 J	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	5 J	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	6 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	8 J	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

Approved By _____ Date 9/14/98

1S44/021397p

00054

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334038	Units	ug/Kg (ppb)
Lab Code	K9805481-002	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	8/22/98	8/28/98	ND 1UJ	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 52	EPA 3550B	8082	4	1	8/22/98	8/28/98	ND 4UJ	JB
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	6 J	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	5 J	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	7 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	9 J	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

RGT 11/10/98

B The MRL is elevated because of matrix interferences

Approved By _____ Date 9/14/98

1S44/021397p

00055

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334039	Units	ug/Kg (ppb)
Lab Code	K9805481-003	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	8/22/98	8/28/98	ND 1 UJ	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 52	EPA 3550B	8082	3	1	8/22/98	8/28/98	ND 3 UJ J B	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	5 J	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	5 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	6 J	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

MAT 11/10/98

B The MRL is elevated because of matrix interferences

Approved By _____ Date 9/14/98

1S44/021397p

00056

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334040	Units	ug/Kg (ppb)
Lab Code	K9805481-004	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	8/22/98	8/28/98	ND 1UJ	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	2	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	1	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

Approved By _____ Date. 9/14/98

1S44/021397p

00057

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334041	Units	ug/Kg (ppb)
Lab Code	K9805481-005	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	8/22/98	8/28/98	1 J	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	2	
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	2	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	7	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	5 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	8 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	10 J	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	7 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

MGT 1/10/98

Approved By _____ Date 9/14/98

1S44/021397p

00058

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334042	Units	ug/Kg (ppb)
Lab Code	K9805481-006	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	8/22/98	8/28/98	ND	1 UJ
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	1	J
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	1	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	5	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	J
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	8	J
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	8	J
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	J
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	6	J
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	J
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

MCT 11/10/98

Approved By _____ Date 9/14/98

1S44/021397p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334043	Units	ug/Kg (ppb)
Lab Code	K9805481-007	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	8/22/98	8/28/98	2 J	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	2	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	7	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	5 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	6 J	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

Approved By _____ Date 9/14/98

1S44/021397p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334044	Units	ug/Kg (ppb)
Lab Code	K9805481-008	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	8/22/98	8/28/98	ND	1UJ
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	2	J
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	2	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	7	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1UJ
PCB 77	EPA 3550B	8082	2	1	8/22/98	8/28/98	ND	2UJ JB
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1UJ
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	J
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1UJ
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	8	J
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	2	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	9	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1UJ
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	J
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	1	J
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1UJ
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	1	J
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1UJ
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	5	J
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1UJ
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	J
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1UJ
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

TKGT 11/10/99

B The MRL is elevated because of matrix interferences

Approved By _____ Date 9/14/98

1S44/021397p

00061

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334045	Units	ug/Kg (ppb)
Lab Code	K9805481-009	Basis	Dry
Test Notes			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
PCB 18	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	7	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	12	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	6	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	7 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	8 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	9	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

Approved By _____ Date 9/14/98

1S44/021397p

00062

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334046	Units	ug/Kg (ppb)
Lab Code	K9805481-010	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	8/22/98	8/28/98	2 J	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	10	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	5	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	18	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	11	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 123	EPA 3550B	8082	2	1	8/22/98	8/28/98	ND 2 UI J B	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	12 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	13 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	17	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	5 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	8 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

TMJ 11/12/98

B The MRL is elevated because of matrix interferences

Approved By _____ Date 9/14/98

1S44/021397p

00063

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334047	Units	ug/Kg (ppb)
Lab Code	K9805481-011	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	8/22/98	8/28/98	1 J	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	2	
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	2	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	8	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	4	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	5 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	6 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	2	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	7	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

MGT 11/20/98

Approved By _____ Date 9/14/98

1S44/021397p

00064

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334048	Units	ug/Kg (ppb)
Lab Code	K9805481-012	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	8/22/98	8/28/98	ND 1 UJ	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	1	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	5	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	5 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	6 J	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

KGT 11/10/98

Approved By _____ Date 9/14/98

1S44/021397p

00065

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334049	Units	ug/Kg (ppb)
Lab Code	K9805481-013	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	8/22/98	8/28/98	ND 1 UJ	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	2	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	6	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	6 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	1	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	6	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

Approved By _____ Date 9/14/98

1S44/021397p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334050	Units	ug/Kg (ppb)
Lab Code	K9805481-014	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	8/22/98	8/28/98	7 J	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	13	
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	32	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	16	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	54	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	30	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	3	1	8/22/98	8/28/98	ND 3 UI J ~~B~~	
PCB 123	EPA 3550B	8082	5	1	8/22/98	8/28/98	ND 5 UI J ~~B~~	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	31 J	
PCB 114	EPA 3550B	8082	5	1	8/22/98	8/28/98	ND 5 UI J ~~B~~	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	50 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	11	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	57	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	23 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	6	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	5	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	38 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	20 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

B The MRL is elevated because of matrix interferences

WGT 11/10/98

Approved By _____ Date 9/14/98

1S44/021397p

00067

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334051	Units	ug/Kg (ppb)
Lab Code	K9805481-015	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	8/22/98	8/28/98	ND 1 UJ	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	4 J	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

11/12/98

Approved By: _____ Date 9/14/98

1S44/021397p

00068

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334052	Units	ug/Kg (ppb)
Lab Code	K9805481-016	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	8/22/98	8/28/98	ND 1 UJ	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND ↓	
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND ↓	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	3 J	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND ↓	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	2 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	1 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND ↓	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

MAT 11/12/98

Approved By. _____ Date 9/14/98

1S44/021397p

00069

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334053	Units	ug/Kg (ppb)
Lab Code	K9805481-017	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	8/22/98	8/28/98	ND	1 UJ
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/28/98	1	J
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/28/98	1	
PCB 66	EPA 3550B	8082	1	1	8/22/98	8/28/98	7	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/28/98	5	J
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/28/98	7	J
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/28/98	2	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/28/98	9	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	J
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/28/98	1	J
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/28/98	1	J
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/28/98	5	J
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/28/98	3	J
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	1 UJ
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/28/98	ND	

NAT 11/10/98

Approved By _____ Date 9/14/98

1S44/021397p

00070

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334054	Units	ug/Kg (ppb)
Lab Code	K9805481-018	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	8/22/98	8/30/98	ND	1 UJ
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/30/98	1	J
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/30/98	3	↓
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/30/98	1	↓
PCB 66	EPA 3550B	8082	7	1	8/22/98	8/30/98	ND	7 UI JB
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/30/98	3	J
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	1 UJ
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/30/98	4	J
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	1 UJ
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/30/98	6	J
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/30/98	2	↓
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/30/98	8	↓
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	1 UJ
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/30/98	3	J
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/30/98	1	J
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	1 UJ
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/30/98	4	J
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	1 UJ
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/30/98	2	J
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	1 UJ
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	

B The MRL is elevated because of matrix interferences

REV 11/12/98

Approved By _____ Date 9/14/98

1S44/021397p

00071

05481SVG JJ3 - 6 9/14/98

Page No

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334055	Units	ug/Kg (ppb)
Lab Code	K9805481-019	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	8/22/98	8/30/98	ND 1 UJ	
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND 1 UJ	
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/30/98	2 J	
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND 1 UJ	
PCB 66	EPA 3550B	8082	4	1	8/22/98	8/30/98	ND 4 UI J B	
PCB 101	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND 1 UJ	
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/30/98	2 J	
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND 1 UJ	
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/30/98	4 J	
PCB 105	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND 1 UJ	
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/30/98	4 J	
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND 1 UJ	
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/30/98	2 J	
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND 1 UJ	
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/30/98	2 J	
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND 1 UJ	
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/30/98	1 J	
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND 1 UJ	
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	

B The MRL is elevated because of matrix interferences

Approved By _____ Date 9/14/98

1S44/021397p

00072

05481SVGJJ4 - 1 9/14/98

Page No

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805481
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/13/98
Sample Matrix:	Sediment	**Date Received:**	8/14/98

Congener Specific PCBs

Sample Name	98334056	Units	ug/Kg (ppb)
Lab Code	K9805481-020	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	8/22/98	8/30/98	ND	1 UJ
PCB 28	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 52	EPA 3550B	8082	1	1	8/22/98	8/30/98	2	J
PCB 44	EPA 3550B	8082	1	1	8/22/98	8/30/98	1	J
PCB 66	EPA 3550B	8082	5	1	8/22/98	8/30/98	ND	5 UI J ~~B~~
PCB 101	EPA 3550B	8082	2	1	8/22/98	8/30/98	ND	2 UI J ~~B~~
PCB 81	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	1 UJ
PCB 77	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 123	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 118	EPA 3550B	8082	1	1	8/22/98	8/30/98	3	J
PCB 114	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	1 UJ
PCB 153	EPA 3550B	8082	1	1	8/22/98	8/30/98	4	J
PCB 105	EPA 3550B	8082	2	1	8/22/98	8/30/98	ND	2 UI J ~~B~~
PCB 138	EPA 3550B	8082	1	1	8/22/98	8/30/98	5	J
PCB 126	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	1 UJ
PCB 187	EPA 3550B	8082	1	1	8/22/98	8/30/98	2	J
PCB 128	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	1 UJ
PCB 167	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 156	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 157	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 180	EPA 3550B	8082	1	1	8/22/98	8/30/98	3	J
PCB 169	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	1 UJ
PCB 170	EPA 3550B	8082	1	1	8/22/98	8/30/98	2	J
PCB 189	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	1 UJ
PCB 195	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 206	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	↓
PCB 209	EPA 3550B	8082	1	1	8/22/98	8/30/98	ND	

MGT 11/10/98

B The MRL is elevated because of matrix interferences

Approved By _____ Date 9/14/98

1S44/021397p

00073