APPENDIX D

Data Validation Report

EcoChem, INC.
Environmental Data Quality

DATA VALIDATION REPORT

East Waterway – Fish and Shellfish

Prepared for:

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EcoChem Project: C22016-1

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Approved for Release:

Christine Ransom
Project Manager
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PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of full validation (Stage 4_Manual) or summary validation (Stage 3_Manual) performed on tissue and quality control sample data for the East Waterway Fish and Shellfish Study. A complete list of samples is provided in the **SAMPLE INDEX**.

Samples were analyzed by Columbia Analytical Services, Kelso, Washington (PCB Aroclor); BrooksRand Labs, Seattle, Washington (total and inorganic arsenic); and Analytical Resources, Inc. (ARI), Tukwila, Washington (all other tests). The analytical methods and EcoChem project chemists are listed in the table below.

Analysis	Method	Primary Review	Secondary Review
Semivolatile Organic Compounds	EPA 8270D	Jennifer Newkirk	Chris Ransom
Polychlorinated Biphenyls	EPA 8082	Mark Lybeer, Lucy Panteleeff	Chris Ransom, Patricia Lambrecht
Pesticides	EPA 8081	Melissa Swanson, Lucy Panteleeff	Chris Ransom Eric Strout
Butyl tins	Krone 1988-SIM	Lucy Panteleeff, Jen Newkirk	Eric Strout
Metals	EPA 6010/200.8/7471	Linda Holz	Chris Ransom
Total Arsenic	EPA 1638M		
Inorganic Arsenic	EAP 1632M		
Conventionals: Total Solids, Lipids	EPA 160.3, Bligh-Dyer		

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values are assigned an R, the data are to be rejected and should not be used for any site evaluation purposes. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

The data were reviewed using guidance and quality control criteria documented in the analytical methods; the quality assurance project plan (QAPP) from the *East Waterway Operable Unit Supplemental RIFS, Fish and Shellfish Tissue Collection and Chemical* (December, 2008), *National Functional Guidelines for Inorganic Data Review* (USEPA 1994 & 2004), and *National Functional Guidelines for Organic Data Review* (USEPA 1999).

Data qualifier definitions, reason codes, and validation criteria are included as **APPENDIX A**. A Qualified Data Summary Table is included in **APPENDIX B**. Data Validation Worksheets will be kept on file at EcoChem, Inc.

SAMPLE INDEX
East Waterway - Fish and Shellfish
Analytical Resources, Inc.

SDG	Sample ID	Lab ID	SVOC	Pesticides	Butyl Tins	Metals	Conv
OF34	EW-08-RR-EM-COMP1	08-34458-OF34A	x	x	x	x	x
	EW-08-RR-EM-COMP2	08-34459-OF34B	x	x	x	x	x
	EW-08-RR-EM-COMP3	08-34460-OF34C	x	x	x	x	x
	EW-08-RR-EM-COMP4	08-34461-OF34D	x	x	x	x	x
	EW-08-RR-EM-COMP5	08-34462-OF34E	x	x	x	x	x
	EW-08-RR-EM-COMP6	08-34463-OF34F	x	x	x	x	x
	EW-08-RR-EM-COMP7	08-34464-OF34G	x	x	x	x	x
	EW-08-RR-EM-COMP8	08-34465-OF34H	x	x	x	x	x
OF35	EW-08-RR-HP-COMP1	08-34474-OF35A	x	x	x	x	x
	EW-08-RR-HP-COMP2	08-34475-OF35B	x	x	x	x	x
	EW-08-RR-HP-COMP3	08-34476-OF35C	x	x	x	x	x
	EW-08-RR-HP-COMP4	08-34477-OF35D	x	x	x	x	x
	EW-08-RR-HP-COMP5	08-34478-OF35E	x	x	x	x	x
	EW-08-RR-HP-COMP6	08-34479-OF35F	x	x	x	x	x
	EW-08-RR-HP-COMP7	08-34480-OF35G	x	x	x	x	x
	EW-08-RR-HP-COMP8	08-34481-OF35H	x	x	x	x	x
OF36	EW-08-MS-WB-COMP1	08-34482-OF36A	x	x	x	x	x
	EW-08-MS-WB-COMP2	08-34483-OF36B	x	x	x	x	x
	EW-08-MS-WB-COMP3	08-34484-OF36C	x	x	x	x	x
	EW-08-MS-WB-COMP4	08-34485-OF36D	x	x	x	x	x
	EW-08-MS-WB-COMP5	08-34486-OF36E	x	x	x	x	x
	EW-08-MS-WB-COMP6	08-34487-OF36F	x	x	x	x	x
	EW-08-MS-WB-COMP7	08-34488-OF36G	x	x	x	x	x
	EW-08-MS-WB-COMP8	08-34489-OF36H	x	x	x	x	x
	EW-08-MS-WB-COMP9	08-34490-OF36I	x	x	x	x	x
	EW-08-MS-WB-COMP10	08-34491-OF36J	x	x	x	x	x
	EW-08-MS-WB-COMP11	08-34492-OF36K	x	x	x	x	x
OF41	EW-08-SB002-BR-01	08-34547-OF41A	x	x	x	x	x
	EW-08-SB002-BR-02	08-34548-OF41B	x	x	x	x	x
	EW-08-SB003-BR-03	08-34549-OF41C	x	x	x	x	x
	EW-08-SB004-BR-04	08-34550-OF41D	x	x	x	x	x
	EW-08-SB005-BR-05	08-34551-OF41E	x	x	x	x	x
	EW-08-SB006-BR-06	08-34552-OF41F	x	x	x	x	x
	EW-08-SB007-BR-07	08-34553-OF41G	x	x	x	x	x
	EW-08-SB008-BR-08	08-34554-OF41H	x	x	x	x	x
	EW-08-SB009-BR-09	08-34555-OF41I	x	x	x	x	x
	EW-08-SB012-BR-10	08-34556-OF41J	x	x	x	x	x
	EW-08-SB011-BR-11	08-34557-OF41K	x	x	x	x	x
	EW-08-SB012-BR-12	08-34558-OF41L	x	x	x	x	x
	EW-08-SB013-BR-13	08-34559-OF41M	x	x	x	x	x

SAMPLE INDEX
East Waterway - Fish and Shellfish
Analytical Resources, Inc.

SDG	Sample ID	Lab ID	SVOC	Pesticides	Butyl Tins	Metals	Conv
OF42	EW-08-ES-WB-COMP1	08-34571-OF42A	x	x	x	x	x
	EW-08-ES-WB-COMP2	08-34572-OF42B	x	x	x	x	x
	EW-08-ES-WB-COMP3	08-34573-OF42C	x	x	x	x	x
	EW-08-ES-WB-COMP4	08-34574-OF42D	x	x	x	x	x
	EW-08-ES-WB-COMP5	08-34575-OF42E	x	x	x	x	x
	EW-08-ES-WB-COMP6	08-34576-OF42F	x	x	x	x	x
	EW-08-ES-WB-COMP7	08-34577-OF42G	x	x	x	x	x
	EW-08-ES-WB-COMP8	08-34578-OF42H	x	x	x	x	x
	EW-08-ES-WB-COMP9	08-34579-OF42I	x	x	x	x	x
	EW-08-ES-WB-COMP10	08-34580-OF42J	x	x	x	x	x
	EW-08-ES-WB-COMP11	08-34581-OF42K	x	x	x	x	x
OF43	EW-08-ES-FL-COMP1	08-34593-OF43A	x	x	x	x	x
	EW-08-ES-FL-COMP2	08-34594-OF43B	x	x	x	x	x
	EW-08-ES-FL-COMP3	08-34595-OF43C	x	x	x	x	x
	EW-08-ES-FL-COMP4	08-34596-OF43D	x	x	x	x	x
	EW-08-ES-FL-COMP5	08-34597-OF43E	x	x	x	x	x
	EW-08-ES-FL-COMP6	08-34598-OF43F	x	x	x	x	x
	EW-08-ES-FL-COMP7	08-34599-OF43G	x	x	x	x	x
	EW-08-ES-FL-COMP8	08-34600-OF43H	x	x	x	x	x
	EW-08-ES-FL-COMP9	08-34601-OF43I	x	x	x	x	x
	EW-08-ES-FL-COMP10	08-34602-OF43J	x	x	x	x	x
	EW-08-ES-FL-COMP11	08-34603-OF43K	x	x	x	x	x
OG18	EW-08-SS-WB-COMP1	09-136-OG18A	x	x	x	x	x
	EW-08-SS-WB-COMP2	09-137-OG18B	x	x	x	x	x
	EW-08-SS-WB-COMP3	09-138-OG18C	x	x	x	x	x
	EW-08-SS-WB-COMP4	09-139-OG18D	x	x	x	x	x
	EW-08-SS-WB-COMP5	09-140-OG18E	x	x	x	x	x
	EW-08-SS-WB-COMP6	09-141-OG18F	x	x	x	x	x
	EW-08-SS-WB-COMP7	09-142-OG18G	x	x	x	x	x
	EW-08-SS-WB-COMP8	09-143-OG18H	x	x	x	x	x
OG20	EW-08-SR-WB-COMP1	09-165-OG20A	x			x	x
	EW-08-DC-HP-COMP1	09-165-OG20B	x	x	x	x	x
	EW-08-DC-EM-COMP1	09-166-OG20C	x	x	x	x	x

SAMPLE INDEX
East Waterway - Fish and Shellfish
Columbia Analytical Services

SDG	Sample ID	Lab ID	PCB Aroclor
K0900129	EW-08-RR-HP-COMP1	K0900129-001	x
	EW-08-RR-HP-COMP2	K0900129-002	x
	EW-08-RR-HP-COMP3	K0900129-003	x
	EW-08-RR-HP-COMP4	K0900129-004	x
	EW-08-RR-HP-COMP5	K0900129-005	x
	EW-08-RR-HP-COMP6	K0900129-006	x
	EW-08-RR-HP-COMP7	K0900129-007	x
	EW-08-RR-HP-COMP8	K0900129-008	x
K0900132	EW-08-ES-FL-COMP1	K0900132-001	x
	EW-08-ES-FL-COMP2	K0900132-002	x
	EW-08-ES-FL-COMP3	K0900132-003	x
	EW-08-ES-FL-COMP5	K0900132-004	x
	EW-08-ES-FL-COMP6	K0900132-005	x
	EW-08-ES-FL-COMP7	K0900132-006	x
	EW-08-ES-FL-COMP8	K0900132-007	x
	EW-08-ES-FL-COMP9	K0900132-008	x
	EW-08-ES-FL-COMP10	K0900132-009	x
	EW-08-ES-FL-COMP11	K0900132-010	x
	EW-08-ES-FL-COMP4	K0900132-011	x
K0900134	EW-08-ES-WB-comp1	K0900134-001	x
	EW-08-ES-WB-comp2	K0900134-002	x
	EW-08-ES-WB-comp3	K0900134-003	x
	EW-08-ES-WB-comp4	K0900134-004	x
	EW-08-ES-WB-comp5	K0900134-005	x
	EW-08-ES-WB-comp6	K0900134-006	x
	EW-08-ES-WB-comp7	K0900134-007	x
	EW-08-ES-WB-comp8	K0900134-008	x
	EW-08-ES-WB-comp9	K0900134-009	x
	EW-08-ES-WB-COMP10	K0900134-010	x
	EW-08-ES-WB-COMP11	K0900134-011	x
K0900136	EW-08-SB002-BR-01	K0900136-001	x
	EW-08-SB002-BR-02	K0900136-002	x
	EW-08-SB003-BR-03	K0900136-003	x
	EW-08-SB004-BR-04	K0900136-004	x
	EW-08-SB005-BR-05	K0900136-005	x
	EW-08-SB006-BR-06	K0900136-006	x
	EW-08-SB007-BR-07	K0900136-007	x
	EW-08-SB008-BR-08	K0900136-008	x
	EW-08-SB009-BR-09	K0900136-009	x
	EW-08-SB012-BR-10	K0900136-010	x
	EW-08-SB011-BR-11	K0900136-011	x
	EW-08-SB012-BR-12	K0900136-012	x
	EW-08-SB013-BR-13	K0900136-013	x
K0900137	EW-08-RR-EM-COMP1	K0900137-001	x
	EW-08-RR-EM-COMP2	K0900137-002	x
	EW-08-RR-EM-COMP3	K0900137-003	x
	EW-08-RR-EM-COMP4	K0900137-004	x
	EW-08-RR-EM-COMP5	K0900137-005	x
	EW-08-RR-EM-COMP6	K0900137-006	x
	EW-08-RR-EM-COMP7	K0900137-007	x
	EW-08-RR-EM-COMP8	K0900137-008	x

SAMPLE INDEX
East Waterway - Fish and Shellfish
Columbia Analytical Services

SDG	Sample ID	Lab ID	PCB Aroclor
K0900138	EW-08-MS-WB-COMP1	K0900138-001	x
	EW-08-MS-WB-COMP2	K0900138-002	x
	EW-08-MS-WB-COMP3	K0900138-003	x
	EW-08-MS-WB-COMP4	K0900138-004	x
	EW-08-MS-WB-COMP5	K0900138-005	x
	EW-08-MS-WB-COMP6	K0900138-006	x
	EW-08-MS-WB-COMP7	K0900138-007	x
	EW-08-MS-WB-COMP8	K0900138-008	x
	EW-08-MS-WB-COMP9	K0900138-009	x
	EW-08-MS-WB-COMP10	K0900138-010	x
	EW-08-MS-WB-COMP11	K0900138-011	x
K0900139	EW-08-DC-HP-COMP1	K0900139-002	x
	EW-08-DC-EM-COMP1	K0900139-003	x
K0900140	EW-08-SS-WB-COMP1	K0900140-001	x
	EW-08-SS-WB-COMP2	K0900140-002	x
	EW-08-SS-WB-COMP3	K0900140-003	x
	EW-08-SS-WB-COMP4	K0900140-004	x
	EW-08-SS-WB-COMP5	K0900140-005	x
	EW-08-SS-WB-COMP6	K0900140-006	x
	EW-08-SS-WB-COMP7	K0900140-007	x
	EW-08-SS-WB-COMP8	K0900140-008	x
K0900873	EW-08-SR-WB-COMP1	K0900873-001	x

SAMPLE INDEX
East Waterway - Fish and Shellfish
Brooks Rand Laboratory

SDG	Sample ID	Lab ID	Total Arsenic	Inorganic Arsenic
0902011	EW-08-DC-EM-COMP1	0902011-69	x	x
0902011	EW-08-DC-HP-COMP1	0902011-68	x	x
0902011	EW-08-ES-FL-COMP1	0902011-50	x	x
0902011	EW-08-ES-FL-COMP10	0902011-58	x	x
0902011	EW-08-ES-FL-COMP11	0902011-59	x	x
0902011	EW-08-ES-FL-COMP2	0902011-51	x	x
0902011	EW-08-ES-FL-COMP3	0902011-52	x	x
0902011	EW-08-ES-FL-COMP4	0902011-53	x	x
0902011	EW-08-ES-FL-COMP5	0902011-54	x	x
0902011	EW-08-ES-FL-COMP6	0902011-55	x	x
0902011	EW-08-ES-FL-COMP7	0902011-56	x	x
0902011	EW-08-ES-FL-COMP8	0902011-57	x	x
0902011	EW-08-ES-FL-COMP9	0902011-70	x	x
0902011	EW-08-ES-WB-COMP1	0902011-39	x	x
0902011	EW-08-ES-WB-COMP10	0902011-48	x	x
0902011	EW-08-ES-WB-COMP11	0902011-49	x	x
0902011	EW-08-ES-WB-COMP2	0902011-40	x	x
0902011	EW-08-ES-WB-COMP3	0902011-41	x	x
0902011	EW-08-ES-WB-COMP4	0902011-42	x	x
0902011	EW-08-ES-WB-COMP5	0902011-43	x	x
0902011	EW-08-ES-WB-COMP6	0902011-44	x	x
0902011	EW-08-ES-WB-COMP7	0902011-45	x	x
0902011	EW-08-ES-WB-COMP8	0902011-46	x	x
0902011	EW-08-ES-WB-COMP9	0902011-47	x	x
0902011	EW-08-MS-WB-COMP1	0902011-16	x	x
0902011	EW-08-MS-WB-COMP10	0902011-25	x	x
0902011	EW-08-MS-WB-COMP11	0902011-26	x	x
0902011	EW-08-MS-WB-COMP2	0902011-17	x	x
0902011	EW-08-MS-WB-COMP3	0902011-18	x	x
0902011	EW-08-MS-WB-COMP4	0902011-19	x	x
0902011	EW-08-MS-WB-COMP5	0902011-20	x	x
0902011	EW-08-MS-WB-COMP6	0902011-21	x	x
0902011	EW-08-MS-WB-COMP7	0902011-22	x	x
0902011	EW-08-MS-WB-COMP8	0902011-23	x	x
0902011	EW-08-MS-WB-COMP9	0902011-24	x	x
0902011	EW-08-RR-EM-COMP1	0902011-01	x	x
0902011	EW-08-RR-EM-COMP2	0902011-02	x	x
0902011	EW-08-RR-EM-COMP3	0902011-03	x	x
0902011	EW-08-RR-EM-COMP4	0902011-04	x	x
0902011	EW-08-RR-EM-COMP5	0902011-05	x	x
0902011	EW-08-RR-EM-COMP6	0902011-06	x	x
0902011	EW-08-RR-EM-COMP7	0902011-07	x	x
0902011	EW-08-RR-EM-COMP8	0902011-71	x	x
0902011	EW-08-RR-HP-COMP1	0902011-08	x	x
0902011	EW-08-RR-HP-COMP2	0902011-09	x	x
0902011	EW-08-RR-HP-COMP3	0902011-10	x	x
0902011	EW-08-RR-HP-COMP4	0902011-11	x	x
0902011	EW-08-RR-HP-COMP5	0902011-12	x	x
0902011	EW-08-RR-HP-COMP6	0902011-13	x	x

SAMPLE INDEX
East Waterway - Fish and Shellfish
Brooks Rand Laboratory

SDG	Sample ID	Lab ID	Total Arsenic	Inorganic Arsenic
0902011	EW-08-RR-HP-COMP7	0902011-14	x	x
0902011	EW-08-RR-HP-COMP8	0902011-15	x	x
0902011	EW-08-SB002-BR-01	0902011-27	x	x
0902011	EW-08-SB002-BR-02	0902011-28	x	x
0902011	EW-08-SB003-BR-03	0902011-29	x	x
0902011	EW-08-SB004-BR-04	0902011-30	x	x
0902011	EW-08-SB005-BR-05	0902011-31	x	x
0902011	EW-08-SB006-BR-06	0902011-32	x	x
0902011	EW-08-SB007-BR-07	0902011-33	x	x
0902011	EW-08-SB008-BR-08	0902011-72	x	x
0902011	EW-08-SB009-BR-09	0902011-34	x	x
0902011	EW-08-SB011-BR-11	0902011-36	x	x
0902011	EW-08-SB012-BR-10	0902011-35	x	x
0902011	EW-08-SB012-BR-12	0902011-37	x	x
0902011	EW-08-SB013-BR-13	0902011-38	x	x
0902011	EW-08-SS-WB-COMP1	0902011-60	x	x
0902011	EW-08-SS-WB-COMP2	0902011-61	x	x
0902011	EW-08-SS-WB-COMP3	0902011-62	x	x
0902011	EW-08-SS-WB-COMP4	0902011-63	x	x
0902011	EW-08-SS-WB-COMP5	0902011-64	x	x
0902011	EW-08-SS-WB-COMP6	0902011-65	x	x
0902011	EW-08-SS-WB-COMP7	0902011-66	x	x
0902011	EW-08-SS-WB-COMP8	0902011-67	x	x

DATA VALIDATION REPORT
East Waterway - Fish and Shellfish
Semivolatiles by SW846 Method 8270D

This report documents the review of analytical data from the analysis of tissue samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
OF34	8 Tissue	Summary
OF35	8 Tissue	Full
OF36	11 Tissue	Summary
OF41	13 Tissue	Summary
OF42	11 Tissue	Summary
OF43	11 Tissue	Summary
OG18	8 Tissue	Full
OF20	3 Tissue	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

SDG OF41: The Sample IDs were changed by the client after analysis, therefore the IDs in the EDD differ from those listed on the COC and on the laboratory summary forms.

There was an error in the reporting of the matrix spike/matrix spike duplicate results on the summary forms and in the EDD. Corrections were made to the EDD and not further action was taken.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Preservation	2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	GC/MS Tuning		Internal Standards
1	Initial Calibration (ICAL)		Compound Identification
1	Continuing Calibration (CCAL)		Reporting Limits
1	Laboratory Blanks	2	Reported Results
	Surrogate Compounds	1	Calculation Verification (Full validation only)
2	Laboratory Control Samples (LCS)		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received some sample coolers with temperatures that were outside the control limits.

SDG OF34: The temperature for one cooler was less than the lower control limit (at -0.8°C). Samples were placed into frozen archive upon receipt; no action was taken for the temperature outlier.

SDG OF41: Several cooler temperatures were greater than the upper control limit, ranging to 17°C. The samples were received the same day they were collected and did not have adequate time to equilibrate with the ice in the cooler. Samples were placed into frozen archive upon receipt; therefore no action was taken based on the temperature outliers.

Initial Calibration (ICAL)

A six-point initial calibration (ICAL) was performed. The percent relative standard deviations (%RSD) were within the control limit of ±30%, with the exceptions noted below. The relative response factor (RRF) values were greater than the minimum of 0.05.

SDGs OF34, OF35, OF36, & OF41: The %RSD value for 2,4-dinitrophenol (34.4%) exceeded the control limit of 30%. There were no positive results for this compound in the associated samples; therefore no qualifiers were necessary.

Continuing Calibration (CCAL)

All values for the RRF were greater than the 0.05 minimum control limit. The values for percent difference (%D) were within the ±25% control limits, with some exceptions. All CCAL %D outliers

were indicative of a high bias. There were no positive results associated with the %D outliers, therefore no qualification of data was necessary.

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration reported in the blank (10x for common laboratory contaminants). If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. The following outliers were noted:

SDG OF35: Diethylphthalate was detected in the method blank. No action was required as there were no positive results for this analyte in the associated samples.

SDG OF41: Diethylphthalate was detected in the method blank. The result for this compound in Sample EW-08-RR-HP-COMP4 was qualified not-detected (U-7).

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed at the proper frequency. Recoveries were within the laboratory control limits, with the exceptions noted below. For recovery values greater than the upper control limit, positive results in the associated samples were estimated (J-10) to indicate a potential high bias. No action was taken for non-detects. For recovery values less than the lower control limits, the associated sample results were estimated (J/UJ-10) to indicate a potential low bias. If the recovery was also less than 10%, associated non-detected results were rejected (R-10) due to the extreme low bias. The following outliers resulted in qualification of data:

SDG OF34: The LCS %R value for 2,4-dinitrophenol was greater than the upper control limit of 130%. This analyte was not detected in the associated samples; no qualification of data was necessary.

SDG OF41: The LCS %R values for 2,4-dimethylphenol, 3,3-dichlorobenzidine, and aniline were less than the lower control limit of 30%. There were no positive results for these compounds in the associated samples; reporting limits were estimated (UJ-10).

Matrix Spike/Matrix Spike Duplicate

Matrix spike/matrix spike duplicate samples (MS/MSD) were analyzed at the proper frequency. Recoveries were within the laboratory control limits, with the exceptions noted below. For recovery values greater than the upper control limit, positive results in the parent sample were estimated (J-8) to indicate a potential high bias. No action was taken for non-detects. For recovery values less than the lower control limit, the results in the parent sample were estimated (J/UJ-8) to indicate a potential low bias. If the recoveries were less than 10%, non-detects in the parent sample were

rejected (R-8). If only one of the MS or MSD recoveries was outside of the control limits, then no data were qualified for the single outlier.

The compound aniline was less than the lower control limit or not recovered in most of the MS/MSD analyses. This indicates a problem with recovering this compound form the tissue matrix; therefore all aniline results that weren't previously rejected were estimated (UJ-8).

The MS/MSD relative percent difference (RPD) values were less than the laboratory control limits, with the noted exceptions. There were no positive results associated with the RPD outliers, therefore no qualification was necessary. Quality control samples and associated outliers are noted below:

SDG OF34: QC Sample EW-08-RR-EM-COMP5: benzoic acid - not recovered, rejected (R-8); aniline - (UJ-8) low bias

SDG OF35: QC Sample EW-08-RR-HP-COMP5: aniline, benzoic acid – (UJ-8) low bias; 4-methylphenol, benzoic acid, and hexachlorocyclopentadiene – RPD > control limit, no positive results

SDG OF36: QC Sample EW-08-MS-WB-COMP5: 4-chloroaniline, 4-nitroaniline, 3,3'dichlorobenzidine, aniline - not recovered, rejected (R-8); 3-nitroaniline - (UJ-8) low bias; butylbenzylphthalate – RPD > control limit, no positive results

SDG OF41: QC Sample EW-08-SB002-BR-06: 4-chloroaniline, 3-nitroaniline, 4-nitroaniline, 3,3'dichlorobenzidine, aniline - not recovered, rejected (R-8); butylbenzylphthalate – RPD > control limit, no positive results.

SDG OF42: QC Sample EW-08-ES-WB-COMP3: 3,3'dichlorobenzidine, aniline - not recovered, rejected (R-8); 4-chloroaniline - (UJ-8) low bias

SDG OF43: QC Sample EW-08-ES-FL-COMP7: aniline - not recovered, rejected (R-8); 4-chloroaniline and 3,3'dichlorobenzidine - (UJ-8) low bias

SDG OG18: QC Sample EW-08-SS-WB-COMP8: the MS/MSD samples were diluted (20X) due to matrix interference. This diluted most spike concentrations to less than the reporting limit. No action was taken for recovery outliers.

SDG OG20: QC Sample EW-08-DC-EM-COMP1: benzoic acid – (UJ-8) low bias

Reported Results

SDG OF41: Reporting errors were identified for the MS/MSD samples. Due to necessary dilutions, reporting limits were elevated. All positive results less than the reporting limit (RL) were reported as not detected. A review of the quantitation reports showed that most of these analytes were detected at levels less than the RL, with acceptable spike recoveries and RPDs. Corrections were made to the EDD.

Reporting limits were elevated for bis(2-ethylhexyl)phthalate, di-n-butylphthalate, and butylbenzylphthalate in several samples due to background interferences. These results were flagged "Y" by the laboratory. These "Y" flagged results were qualified as not-detected (U-22).

Calculation Verification (Full validation only)

SDGs OF35 and OG18: Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS, and MS/MSD %R values, with the exceptions noted above. Precision was also acceptable as demonstrated by the RPD values for the MS/MSD analyses, with the exceptions previously noted.

One reporting limit for diethylphthalate was elevated due to method blank contamination. Data were estimated due to LCS %R and MS/MSD %R outliers.

Data were rejected due to MS/MSD %R values less than 10%.

Data that have been rejected should not be used for any purpose. All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway – Fish & Shellfish
Organochlorine Pesticides by EPA Method 8081B

This report documents the review of analytical data from the analyses of tissue samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
OF34	8 Tissue	Summary
OF35	8 Tissue	Full
OF36	11 Tissue	Summary
OF41	13 Tissue	Summary
OF42	11 Tissue	Summary
OF43	11 Tissue	Summary
OG18	8 Tissue	Full
OG20	2 Tissue	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

SDG OF41: The Sample IDs were changed by the client after analysis, therefore the IDs in the EDD differ from those listed on the COC and on the laboratory summary forms.

SDG OF42: The reporting limit for gamma chlordane in Sample EW-08-ES-WB-COMP4 was incorrect in the EDD. The EDD was corrected to match the hardcopy summary form. No other errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are summarized in the following table:

1	Holding Times and Sample Preservation	2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Initial Calibration (ICAL)		Target Analyte List
2	Continuing Calibration (CCAL)	2	Reporting Limits
	Laboratory Blanks	2	Compound Identification
	Surrogate Compounds	2	Reported results
1	Laboratory Control Samples (LCS)	1	Calculation Verification (full validation only)

[1] Quality control results are discussed below, but no data were qualified.
[2] Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received some sample coolers with temperatures that were outside the control limits.

SDG OF34: The temperature for one cooler was less than the lower control limit (at -0.8°C). Samples were placed into frozen archive upon receipt; no action was taken for the temperature outlier.

SDG OF41: Several cooler temperatures were greater than the upper control limit, ranging to 17°C. The samples were received the same day they were collected and did not have adequate time to equilibrate with the ice in the cooler. Samples were placed into frozen archive upon receipt; therefore no action was taken based on the temperature outliers.

Continuing Calibration (CCAL)

SDG OG18 & OG20: Numerous percent difference (%D) outliers were present in the CCAL analyzed on 2/7/09 at 01:27. The endrin breakdown associated with this CCAL was also unacceptable. All of the samples were reanalyzed on 2/11/09, associated with an acceptable CCAL. The data associated with the 2/7/09 CCAL were rejected, as discussed in the ***Reported Results*** section. No further action was necessary.

Laboratory Control Sample

SDG OF36: The hexachlorobutadiene percent recovery (%R) value was greater than the upper control limit in the laboratory control sample (LCS) analysis. This analyte were not detected in the parent sample; no qualifiers were required.

Matrix Spike/Matrix Spike Duplicate

SDG OF36: MS/MSD analyses were performed using Sample EW-08-MS-WB-COMP5. The MS/MSD %R values for hexachlorobutadiene were greater than the upper control limit. This analytes was not detected in the parent sample; no qualifiers were applied.

SDG OF42: MS/MSD analyses were performed using Sample EW-08-ES-WB-COMP3. The MS/MSD %R values for endrin and 4,4'-DDT were greater than the upper control limit. These analytes were not detected in the parent sample; no qualifiers were required. The MSD %R values for heptachlor epoxide and endosulfan II were greater than the upper control limit. No qualifiers were applied for these single outliers. The RPD values for heptachlor epoxide, endosulfan II, and gamma chlordane exceeded the control limit of 50%. These analytes were not detected in the parent sample; no qualifiers were required.

SDG OF43: MS/MSD analyses were performed using Sample EW-08-ES-FL-COMP6. The MS/MSD %R values for 4,4'-DDT were greater than the upper control limit. This analyte was not detected in the parent sample; no qualifiers were applied.

SDG OG18: MS/MSD analyses were performed using Sample EW-08-SS-WB-COMP5. The analytes endrin, endosulfan II, and endrin aldehyde were not recovered in the MS or MSD analyses. These analytes were not detected in the parent sample; the reporting limits were rejected (R-8).

Reporting Limits

Several chromatograms indicated non-target background interference. The reporting limits for these analytes were flagged "Y" by the laboratory to indicate that the reported value is an elevated reporting limit. These "Y" flagged results were qualified as not-detected (U-22). The following results were qualified:

SDG OF34: 4,4'-DDT (5 results), cis-nonachlor (3 results).

SDG OF35: gamma chlordane (1 result).

SDG OF41: 4,4'-DDT (13 results), dieldrin (1 result), endrin (12 results), heptachlor epoxide (4 results), hexachlorobutadiene (3 results), oxychlordane (2 results), trans-nonachlor (1 result).

SDG OF42: 4,4'-DDT (1 result), 2,4'-DDE (4 results), endosulfan II (3 results), gamma chlordane (1 result), heptachlor epoxide (6 results), trans-nonachlor (1 result).

SDG OF43: 2,4'-DDE (1 result), heptachlor epoxide (10 results).

SDG OG18: 4,4'-DDE (8 results), cis-nonachlor (8 results).

SDG OG20: 4,4'-DDE (1 result), cis-nonachlor (1 results).

Compound Identification

PCB aroclors were present in the samples. These are known to cause interferences in the analysis of pesticides which may result in false positives or a high bias. Because of this, all positive pesticide results were estimated (JN-14).

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40%, the reported result was "P" flagged by the laboratory. The elevated RPD value may indicate the presence of an interferent resulting in a high bias. When the RPD value was greater than 40% but less than 60% the reported value was estimated (J). If the RPD value was greater than 60%, the result was qualified as a tentative identification (JN).

The following analytes were qualified based on confirmation outliers:

SDG OF35: 4,4'-DDE (one result estimated JN-3).

SDG OF41: dieldrin (six results estimated J-3; two results tentatively identified NJ-3), 4,4'-DDE (two results estimated J-3).

SDG OF42: 4,4'-DDE (five results estimated J-3).

SDG OF43: 4,4'-DDE (four results estimated J-3).

SDG OG18: 4,4'-DDE (one result estimated JN-3).

SDG OG20: dieldrin (one result estimated JN-3).

Reported Results

SDG OF35: Samples EW-08-RR-HP-COMP3 and EW-08-RR-HP-COMP6 were initially analyzed at a 5x dilution factor. Since no target analyte concentrations were above the linear range, the laboratory reanalyzed the samples at full strength. Since the non-diluted sample results were acceptable, the non-diluted data should be used and the dilution data should not be reported. To indicate which results (of multiple results) should not be used, the results from the dilutions were rejected (R-11). Since a usable result still exists for each compound in each sample, completeness is not affected.

SDGs OG18 and OG20: Eight of the samples were initially analyzed at a 5x dilution on 2/7/09. Since no target analyte concentrations were above the linear range, the laboratory reanalyzed the samples at full strength. Since the non-diluted sample results were acceptable, the non-diluted data should be used and the dilution data should not be reported.

Samples EW-08-SS-WB-COMP1 and EW-08-DC-HP-COMP1 were also reanalyzed, since the original analysis was associated with several CCAL outliers, as discussed in the ***Continuing Calibration (CCAL)*** section. The original results should not be reported; the reanalysis results should be used.

To indicate which results (of multiple results) should not be used, the results from the dilutions were rejected (R-11). Since a usable result still exists for each compound in each sample, completeness is not affected.

Calculation Verification

SDGs OF35 and OG18: Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory performed an appropriate analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS, and MS/MSD %R, with the exceptions noted above. Precision was also acceptable as demonstrated by the MS/MSD RPD values, with the exceptions noted above.

Data were qualified as not detected at elevated reporting limits due to matrix interferences. Data were estimated or tentatively identified due to poor agreement between the primary and secondary columns. All positive results were qualified as estimated and tentatively identified based on PCB aroclor interferences.

Data were rejected based on lack of recovery in the MS/MSD analyses. Data were also rejected to indicate which result (of multiple results) should not be used.

Rejected data should not be used for any purpose. All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway - Fish & Shellfish
PCB Aroclors by EPA Method 8082

This report documents the review of analytical data from the analyses of tissue samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Columbia Analytical Services, Kelso, Washington.

SDG	Number of Samples	Validation Level
K0900129	8 Tissue	Full
K0900132	11 Tissue	Summary
K0900134	11 Tissue	Summary
K0900136	13 Tissue	Summary
K0900137	8 Tissue	Summary
K0900138	11 Tissue	Full
K0900139	2 Tissue	Summary
K0900140	8 Tissue	Summary
K0900873	1 Tissue	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative, with the following exceptions:

SDG K0900132: Sample EW-08-ES-FL-COMP04 was not included on the chain-of-custody (COC). The sample was analyzed by the laboratory and validated as normal.

SDG K0900139: Sample EW-08-SR-WB-COMP1 was lost during GPC cleanup. Additional sample volume was sent to the lab and the sample was analyzed and reported in **SDG K0900873**.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Preservation		Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Initial Calibration (ICAL)		Target Analyte List
	Continuing Calibration (CCAL)	1	Reporting Limits
	Laboratory Blanks	2	Compound Identification
	Surrogate Compounds	1	Calculation Verification (full validation only)
	Laboratory Control Samples (LCS/LCSD)		

[1] Quality control results are discussed below, but no data were qualified.
[2] Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received all sample coolers with temperatures that were less than the lower control limit, ranging down to -0.5°C. Samples were removed from frozen archive and shipped to the laboratory. They were then placed back into frozen archive upon receipt. No action was taken based on the cooler temperatures.

Reporting Limits

The sample chromatograms for various target analytes in several samples indicated non-target background interferences. The reporting limits for these compounds were elevated and flagged "Ui" by the laboratory.

SDG K0900132: Samples EW-08-ES-FL-COMP05 and EW-08-ES-FL-COMP09 were analyzed at a 5x dilution; reporting limits were elevated accordingly.

SDG K0900134: Ten samples were analyzed at 10x dilutions and Sample EW-08-ES-WB-COMP01 was analyzed at a 5x dilution; reporting limits were elevated accordingly.

SDG K0900136: Six samples were analyzed at 10x dilutions; reporting limits were elevated accordingly.

SDG K0900139: Sample EW-08-DC-EM-COMP1 was analyzed at a 5x dilution; reporting limits were elevated accordingly.

SDG K0900140: Six samples were analyzed at 10x dilutions; reporting limits were elevated accordingly.

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the relative percent difference (RPD) value between the two columns was greater than 40%, the reported result was "P" flagged by the laboratory. The elevated RPD value may indicate the presence of an interferent resulting in a high bias. When the RPD value was greater than 40% but less than 60% the reported value was estimated (J-3). If the RPD value was greater than 60%, the result was qualified as a tentative identification (NJ-3). The following Aroclors were qualified in one or more samples:

SDG K0900129: Aroclor 1260 (5 results) – (J-3)

SDG K0900136: Aroclor 1260 (6 results) – (J-3)

SDG K0900137: Aroclor 1260 (3 results) – (J-3); Aroclor 1254 (1 result) – (J-3)

SDG K0900138: Aroclor 1260 (2 results) – (J-3); Aroclor 1260 (9 results) – (NJ-3)

SDG K0900140: Aroclor 1254 (1 result) – (J-3); Aroclor 1254 (1 result)- (NJ-3)

SDG K0900873: Aroclor 1260 (1 result) - (J-3).

Calculation Verification

SDGs K0900129 and K0900138: Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory performed an appropriate analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample/laboratory control sample duplicate (LCS/LCSD), and matrix spike/matrix spike duplicate (MS/MSD) percent recoveries. Precision was also acceptable as demonstrated by the LCS/LCSD and MS/MSD RPD values.

Data were qualified as estimated or tentatively identified due to poor agreement between the two analytical columns.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway – Fish & Shellfish
Tributyl Tins by Krone 1989-SIM

This report documents the review of analytical data from the analyses of tissue samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
OF34	8 Tissue	Summary
OF35	8 Tissue	Full
OF36	11 Tissue	Summary
OF41	13 Tissue	Summary
OF42	11 Tissue	Summary
OF43	11 Tissue	Summary
OG18	8 Tissue	Full
OG20	2 Tissue	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

SDG OF41: The laboratory flag for dibutyltin tin in Sample EW-08-SB005-BR-05 was a "U" in the EDD, instead of "Y" as indicated by the hardcopy sample summary form. The laboratory flag was corrected in the EDD.

Many of the sample IDs were changed by the client after the analyses were performed by the laboratory. The client updated the EDD with the corrected sample IDs; therefore, the IDs on the EDD differ from those listed on the COC and laboratory form ones. No action was taken, other than to note the discrepancy.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are summarized in the following table:

1	Holding Times and Sample Preservation	2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	GC/MS Instrument Performance Check		Internal Standards
1	Initial Calibration (ICAL)	2	Reported Results
1	Continuing Calibration (CCAL)		Compound Identification
	Blanks (Laboratory and Field)		Reporting Limits
2	Surrogate Compounds	1	Calculation Verification (full validation only)
2	Laboratory Control Samples (LCS/LCSD)		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received some sample coolers with temperatures that were outside the control limits.

SDG OF34: The temperature for one cooler was less than the lower control limit (at -0.8°C). Samples were placed into frozen archive upon receipt; no action was taken for the temperature outlier.

SDG OF41: Several cooler temperatures were greater than the upper control limit, ranging to 17°C. The samples were received the same day they were collected and did not have adequate time to equilibrate with the ice in the cooler. Samples were placed into frozen archive upon receipt; therefore no action was taken based on the temperature outliers.

Initial Calibration

The relative response factor (RRF) for dibutyl tin was less than the minimum control limit. No qualifiers were assigned as the response is historically low and the response is stable, as indicated by the acceptable percent relative standard deviation (%RSD) values in the initial calibration.

Continuing Calibration

The RRF value for dibutyl tin was less than the minimum control limit. No qualifiers were assigned as response is historically low and the response is stable, as indicated by the acceptable percent difference (%D) values in the continuing calibrations.

Surrogate Compounds

SDG OF41: The percent recovery (%R) value for tripentyl tin chloride was greater than the upper control limit in Sample EW-08-SB002-BR-04, indicating a potential high bias. Positive results were estimated (J-13); no action was taken for non-detected compounds.

SDG OF42: The %R value for tripentyl tin chloride was less than the lower control limit in Samples EW-08-ES-WB-COMP2 and EW-08-ES-WB-COMP3, indicating a potential low bias. All detected results and reporting limits were estimated (J/UJ-13) in these samples.

SDG OG18: The %R value for tripentyl tin chloride was less than the lower control limit in Sample EW-08-SS-WB-COMP8, indicating a potential low bias. All detected results and reporting limits were estimated (J/UJ-13) in this sample.

Laboratory Control Sample

SDG OF34: The %R value for butyltin was less than the lower control limit of 30%. The sample results were estimated (UJ-10).

SDG OF35: The %R value for butyltin was less than the lower control limit of 30%. The sample results were estimated (UJ-10).

SDG OF36: The %R value for butyltin was less than the lower control limit of 30%. The sample results were estimated (UJ-10).

Matrix Spike/Matrix Spike Duplicate

The recoveries for butyltin were less than the lower control limit in all but one SDG. Because of the apparent systematic problem recovering this compound from the tissue matrix, all butyltin results that were not previously rejected were estimated (UJ-8) to indicate a possible low bias.

SDG OF34: The matrix spike/matrix spike duplicate (MS/MSD) analyses were performed using sample EW-08-RR-EM-COMP4. The MS/MSD %R values for butyltin were less than 10%. The butyltin result in the parent sample was rejected due to the low bias (R-8).

SDG OF35: The MS/MSD analyses were performed using Sample EW-08-RR-HP-COMP5. The MS/MSD %R values for butyltin were less than the lower control limit. The butyltin result in the parent sample was estimated (UJ-8).

SDG OF36: The MS/MSD analyses were performed using Sample EW-08-MS-WB-COMP5. The MS/MSD %R values were less than the lower control limit for butyltin. The butyltin result in the parent sample was estimated (UJ-8).

SDG OF41: MS/MSD analyses were performed using Sample EW-08-SB002-BR-06. All %R values were acceptable. The dibutyl tin relative percent difference (RPD) value was 53%, greater than the 50% upper control limit. Dibutyl tin was not detected in the parent sample. No action was taken. All other RPD values were acceptable.

SDG OF42: The MS/MSD analyses were performed using Sample EW-08-ES-WB-COMP3. The %R values were less than the 30% lower control limit for butyltin. The butyltin result in the parent sample was estimated (UJ-8).

SDG OG18: The MS/MSD analyses were performed using Sample EW-08-SS-WB-COMP2. The %R value was less than the lower control limits for tributyltin and butyltin. The RPD values were greater than the 50% control limit for all compounds.

The tributyltin and butyltin results in the parent sample were estimated (J/UJ-8) due to the potential low bias. The tributyltin result was also estimated (J-9) based on the RPD outlier. Dibutyltin and butyltin were not detected. The reporting limits were not affected by the precision outliers. No further action was taken.

Reported Results

SDGs OF41: The dibutyltin reporting limit in Sample EW-08-SB002-BR-05 was "Y" flagged by the laboratory. This flag indicates that the reporting limit was elevated due to the presence of an interferent. To indicate that the reported result is an elevated reporting limit and not a detect, the dibutyl tin result was qualified as not detected (U-22).

Calculation Verification (Full validation only)

SDGs OF35 and OG18: Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate, laboratory control sample (LCS), and MS/MSD %R values, with the exceptions mentioned above. Precision was also acceptable as demonstrated by the MS/MSD and LCS/LCSD RPD values, with the exception mentioned above.

Data were qualified as not-detected at elevated reporting limits. Data were also estimated based on surrogate, LCS, and MS/MSD recovery outliers and an MS/MSD precision outlier.

Data were rejected due to MS/MSD %R values being less than 10%. Data that has been rejected should not be used for any purpose.

All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway – Fish & Shellfish
Metals Analyses by EPA 200.8 and 6010B, Mercury by 7471A

This report documents the review of analytical data from the analysis of tissue samples and the associated laboratory quality control (QC) samples. Analytical Resources, Incorporated, Tukwila, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
OF34	8 Tissue	Summary
OF35	8 Tissue	Full
OF36	11 Tissue	Summary
OF41	13 Tissue	Summary
OF42	11 Tissue	Summary
OF43	11 Tissue	Summary
OG18	8 Tissue	Full
OG20	3 Tissue	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

SDG OF41: The laboratory incorrectly reported the sampling date for sample EW-08-SB002-BR-13 as 8/13/08. The sampling date listed on the Chain of Custody was 10/24/08.

The Sample IDs were changed by the client after analysis, therefore the IDs in the EDD differ from those listed on the COC and on the laboratory summary forms.

II. EDD TO HARDCOPY VERIFICATION

A verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. All sample results and 10% of the QC results were verified. No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

2	Holding Times and Sample Preservation	2	Matrix Spike/Matrix Spike Duplicates (MS/MSD)
2	Contract Required Detection Limit Standard		ICP Interference Check Samples
	Initial Calibration (ICAL)		Laboratory Duplicates
2	Initial and Continuing Calibration Verification (ICV/CCV)		ICPMS Internal Standards
1	Laboratory Blanks		Reported Results
	Laboratory Control Samples	1	Calculation Verification (Full validation only)

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received some sample coolers with temperatures that were outside the control limits.

SDG OF34: The temperature for one cooler was less than the lower control limit (at -0.8°C). Samples were placed into frozen archive upon receipt; no action was taken for the temperature outlier.

SDG OF41: Several cooler temperatures were greater than the upper control limit, ranging to 17°C. The samples were received the same day they were collected and did not have adequate time to equilibrate with the ice in the cooler. Samples were placed into frozen archive upon receipt; therefore no action was taken based on the temperature outliers.

Contract Required Detection Limit Standard

Contract required detection limit (CRDL) standards were analyzed at the beginning of each analytical sequence. For recovery values greater than upper control limit of 130%, positive results less than two times (<2x) the CRDL are estimated (J) to indicate a potential high bias. For recoveries less than the lower control limit of 70%, positive results less than twice (<2x) the CRDL and non-detects are estimated (J/UJ) to indicate a potential low bias. The following outliers resulted in qualification of data:

SDG OF34: nickel – high bias
SDG OF42: nickel – low bias
SDG OF43: nickel – low bias
SDG OG18 & OG20: chromium, nickel – low bias

Continuing Calibration Verification

Continuing calibration verification (CCV) samples were analyzed at the proper frequency: immediately following the independent calibration verification (ICV), every ten samples, and at the

end of the run. Recoveries were within the control limits of 90%-110%, with the following exception:

SDG OG18 & OG20: The final CCV for the selenium analyses of 1/30/09 was greater than the upper control limit of 110%. All associated positive results were estimated (J-5B) to indicate a potential high bias.

Laboratory Blanks

SDG OF36: Zinc was detected in the method blank at a concentration greater than the method detection limit. In order to determine the effect on the sample data, and action level was established at five times the blank concentration. All associated results were greater than the action level, therefore no qualification of data was necessary.

SDG OF41: Zinc was detected in the method blank at a level greater than the method detection limits (MDL). All associated results were greater than the action level; no qualifiers were required.

SDG OF43: Zinc was detected in the method blank at a level greater than the MDL. All associated results were greater than the action level; no qualifiers were required.

Matrix Spike/Matrix Spike Duplicates

A matrix spike sample (MS) was analyzed at the proper frequency of one per 20 samples or one per batch; whichever was more frequent. The percent recovery (%R) values were within the control limits of 75-125%, with the exceptions noted below. For %R values greater than the upper control limit, the associated positive results were estimated (J-8) to indicate a possible high bias. No action was taken for non-detects. For %R values less than the lower control limit, the associated positive results and non-detects were qualified as estimated (J/UJ-8) to indicate a possible low bias. For cases where the recovery was also less than 30%, the post digestion spike was also evaluated. If the post spike recovery was within 75%-125%, then associated results were estimated (J/UJ). The samples used for the MS analyses and recovery outliers are listed below:

SDG OF34: QC Sample EW-08-RR-EM-COMP1 - silver (37.9%) – low bias

SDG OF35: QC Sample EW-08-RR-HP-COMP1 - silver (17.5%) – low bias, post spike acceptable

SDG OF36: QC Sample EW-08-MS-WB-COMP1 - silver (24.4%) – low bias, post spike acceptable; antimony (74.5%) – low bias

SDG OG20: QC Sample EW-08-SR-WB-COMP1 - silver (12.2%) – low bias, post spike acceptable

Calculation Verification (Full validation only)

SDGs OF35 and OG18: Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the laboratory control sample and MS %R values, with the exceptions noted above. The laboratory duplicate relative percent difference values indicated acceptable precision.

Data were estimated due to CRDL standard recovery, CCV recovery, and MS recovery outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway – Fish & Shellfish
Total Arsenic by EPA 1638M and Inorganic Arsenic by EPA 1632M

This report documents the review of analytical data from the analysis of tissue samples and the associated laboratory quality control (QC) samples. Brooks Rand Labs, Seattle, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
0902011	72 Tissue	Full/Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. All sample results and 10% of the QC results were verified. No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

1	Holding Times and Sample Preservation		Matrix Spike/Matrix Spike Duplicates (MS/MSD)
	Contract Required Detection Limit Standard		ICP Interference Check Samples
	Initial Calibration (ICAL)	2	Laboratory Duplicates
	Calibration Verification (CCV)		ICPMS Internal Standards
	Laboratory Blanks		Reported Results
1	Laboratory Control Samples		Calculation Verification (Full validation only)
1	Standard Reference Material (SRM)		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

All samples were extracted and analyzed past the QAPP specified holding time of 6 months. All tissue samples were stored frozen (-20 ˚C). Puget Sound Estuarine Protocol (PSEP) allows for a holding time of 2 years for samples that have been kept frozen. This 2 year holding time was used to evaluate the samples; therefore no qualification of data was necessary.

Laboratory Control Samples

The laboratory analyzed blank spike (BS) blank spike duplicates (BSD) with each preparation batch. The recoveries were within the QAPP specified control limits of 75%-125%, with the following exception:

For batch B090149, the recovery for inorganic arsenic in B090149-BS3 (126%) was greater than the upper control limit. No action was taken as the recoveries for B090149-BS2, the standard reference materials, and the matrix spike/matrix spike duplicates (MS/MSD) were all within the control limits.

Standard Reference Materials

The lab analyzed the standard reference materials (SRM) MESS-3 for the inorganic arsenic analyses. This SRM has a certified value for total arsenic only. The laboratory has determined the inorganic arsenic content of the SRM, although this should not be considered a certified value. The recoveries for inorganic arsenic were within the laboratory control limits and within ±20% of the 95% confidence interval for total arsenic, therefore no action was necessary.

SRM DOLT-4 and SRM DORM-3 were analyzed for the total arsenic analyses. All recoveries were within acceptance limits.

Laboratory Duplicates

Laboratory duplicate relative percent difference (RPD) values were used to evaluate precision. The RPD values were within the control limit of 30% for total arsenic sample results and 25% for inorganic arsenic (for results less than five times the reporting limit, the difference was less than twice the reporting limit) with the following exception:

For batch B090149 QC Sample EW-08-RR-HP-COMP7, the difference between the sample and duplicate for inorganic arsenic was greater than twice the reporting limit. There was a second duplicate sample for this prep batch with acceptable results, therefore the inorganic arsenic result for the parent sample only was estimated (J-9).

Calculation Verification

Several results were verified by recalculation from the raw data: laboratory batch B090153 (38 samples for arsenic) and laboratory batch B090149 (20 samples for inorganic arsenic. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the BS/BSD, SRM, and MS/MSD recoveries. The laboratory duplicate, BS/BSD, and MS/MSD RPD values indicated acceptable precision, with the exception noted above.

Data were estimated based on a laboratory duplicate precision outlier.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway – Fish & Shellfish
Conventional Analyses

This report documents the review of analytical data from the analysis of tissue samples and the associated laboratory quality control (QC) samples. Analytical Resources, Incorporated, Tukwila, Washington, analyzed the samples. Refer to the **Sample Index** for a list of the individual samples.

SDG	Number of Samples	Validation Level
OF34	8 Tissue	Summary
OF35	8 Tissue	Full
OF36	11 Tissue	Summary
OF41	13 Tissue	Summary
OF42	11 Tissue	Summary
OF43	11 Tissue	Summary
OG18	8 Tissue	Full
OG20	3 Tissue	Summary

The analytical tests that were performed are summarized below:

Parameter	Method
Lipids	Bligh-Dyer modified
Total Solids	EPA 160.3

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all necessary deliverables for a summary validation. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

SDG OF34: Total solids data for the samples in this SDG were submitted 6/9/2009.

SDG OF41: The laboratory incorrectly reported the sampling date for sample EW-08-SB002-BR-13 as 8/13/08. The sampling date listed on the Chain of Custody was 10/24/08. No corrective action was taken by the reviewer.

The Sample IDs were changed by the client after analysis; therefore the IDs in the EDD differ from those listed on the COC and on the laboratory summary forms.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Preservation		Reporting Limits
1	Laboratory Blanks	1	Calculation Verification (Full validation only)
	Laboratory Replicates		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratory received some sample coolers with temperatures that were outside the control limits.

SDG OF34: The temperature for one cooler was less than the lower control limit (at -0.8°C). Samples were placed into frozen archive upon receipt; no action was taken for the temperature outlier.

The total solids analyses were done after the 6 month holding time specified in the QAPP. All tissue samples were stored frozen (-20 ˚C). Puget Sound Estuarine Protocol (PSEP) does not specify a holding time for total solids in tissues, however the holding time for lipids is 1 year. The 1 year holding time was used to evaluate the samples; therefore no qualification of data was necessary.

SDG OF41: Several cooler temperatures were greater than the upper control limit, ranging to 17°C. The samples were received the same day they were collected and did not have adequate time to equilibrate with the ice in the cooler. Samples were placed into frozen archive upon receipt; therefore no action was taken based on the temperature outliers.

Laboratory Blanks

SDG OF35 and OF36: The method blank result for the lipids analysis was greater than the method detection limit (MDL). All associated sample results were greater than 5x the blank concentration, therefore no qualification of data was necessary.

SDG OF43: The method blank result for the lipids analysis was greater than the MDL. All associated sample results were greater than 5x the blank concentration, therefore no qualification of data was necessary.

Calculation Verification (Full validation only)

SDGs OF35 and OG18: Several results were verified by recalculation from the raw data. No calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy could not be determined. Precision was acceptable as demonstrated by the laboratory replicate relative percent difference values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

EcoChem, INC.
Environmental Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS REASON CODES AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

1	Holding Time/Sample Preservation
2	Chromatographic pattern in sample does not match pattern of calibration standard.
3	Compound Confirmation
4	Tentatively Identified Compound (TIC) (associated with NJ only)
5A	Calibration (initial)
5B	Calibration (continuing)
6	Field Blank Contamination
7	Lab Blank Contamination (e.g., method blank, instrument, etc.)
8	Matrix Spike(MS & MSD) Recoveries
9	Precision (all replicates)
10	Laboratory Control Sample Recoveries
11	A more appropriate result is reported (associated with “R” and “DNR” only)
12	Reference Material
13	Surrogate Spike Recoveries (a.k.a., labeled compounds & recovery standards)
14	Other (define in validation report)
15	GFAA Post Digestion Spike Recoveries
16	ICP Serial Dilution % Difference
17	ICP Interference Check Standard Recovery
18	Trip Blank Contamination
19	Internal Standard Performance (e.g., area, retention time, recovery)
20	Linear Range Exceeded
21	Potential False Positives
22	Elevated Detection Limit Due to Interference (i.e., laboratory, chemical and/or matrix)

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	Water: J(+)/UJ(-) if ext. > 7 and < 21 days J(+)/R(-) if ext > 21 days (EcoChem PJ) Solids/Wastes: J(+)/UJ(-) if ext. > 14 and < 42 days J(+)/R(-) if ext. > 42 days (EcoChem PJ) J(+)/UJ(-) if analysis >40 days	1
Tuning	DFTPP Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Field Blanks (Not Required)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS low conc. H2O SVOA	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS regular SVOA (H2O & solid)	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Minimum of 3 acid and 3 base/neutral compounds Use method acceptance criteria	Do not qualify if only 1 acid and/or 1 B/N surrogate is out unless <10% J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) if %R < 10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

EcoChem Validation Guidelines for Pesticides/PCBs by GC/ECD (Based on Organic NFG 1999 & EPA SW-846 Method 8081/8082)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	J(+)/UJ(-) if ext/analyzed > HT J(+)/R(-) if ext/analyzed > 3X HT (EcoChem PJ)	1
Resolution Check	Beginning of ICAL Sequence Within RTW Resolution >90%	Narrate (Use Professional Judgement to qualify)	14
Instrument Performance (Breakdown)	DDT Breakdown: < 20% Endrin Breakdown: <20% Combined Breakdown: <30% Compounds within RTW	J(+) DDT NJ(+) DDD and/or DDE R(-) DDT - If (+) for either DDE or DDD J(+) Endrin NJ(+) EK and/or EA R(-) Endrin - If (+) for either EK or EA	5A
Retention Times	Surrogates: TCX (+/- 0.05); DCB (+/- 0.10) Target compounds: elute before heptachlor epoxide (+/- 0.05) elute after heptachlor epoxide (+/- 0.07)	NJ(+)/R(-) results for analytes with RT shifts For full DV, use PJ based on examination of raw data	5B
Initial Calibration	Pesticides: Low=CRQL, Mid=4X, High=16X Multiresponse - one point Calibration %RSD<20% %RSD<30% for surr; two comp. may exceed if <30% Resolution in Mix A and Mix B >90%	J(+)/UJ(-)	5A
Continuing Calibration	Alternating PEM standard and INDA/INDB standards every 12 hours (each preceeded by an inst. Blank) %D < 25% Resolution >90% in IND mixes; 100% for PEM	J(+)/UJ(-) J(+)R(-) if %D > 90% PJ for resolution	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample result is < CRQL and < 5X rule (raise sample value to CRQL) U(+) if sample result is > or equal to CRQL and < 5X rule (at reported sample value)	7
Instrument Blanks	Analyzed at the beginning of every 12 hour sequence No analyte > 1/2 CRQL	Same as Method Blank	7
Field Blanks	Not addressed by NFG No results > CRQL	Apply 5X rule; U(+) < action level	6

EcoChem Validation Guidelines for Pesticides/PCBs by GC/ECD (Based on Organic NFG 1999 & EPA SW-846 Method 8081/8082)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One set per matrix per batch Method Acceptance Criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One set per matrix per batch Method Acceptance Criteria	J(+) in parent sample if RPD > CL	9
LCS	One per SDG Method Acceptance Criteria	J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) using PJ if %R <<LCL (< 10%)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	TCX and DCB added to every sample %R = 30-150%	J(+)/UJ(-) if both %R = 10 - 60% J(+) if both >150% J(+)/R(-) if any %R <10%	13
Quantitation/ Identification	Quantitated using ICAL calibration factor (CF) RPD between columns <40%	J(+) if RPD = 40 - 60% NJ(+) if RPD >60% EcoChem PJ - See TM-08	3
Two analyses for one sample	Report only one result per analyte	"DNR" results that should not be used to avoid reporting two results for one sample	11
Sample Clean-up	GPC required for soil samples Florisil required for all samples Sulfur is optional Clean-up standard check %R within CLP limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL	14
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate (Qualifiy if required by project QAPP)	9

EcoChem Validation Guidelines for Metals Analysis by ICP
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration Tissues: Frozen	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r > 0.995	J(+)/UJ(-) if r < 0.995 (multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run %R within ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blank (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		(Refer to TM-02 for additional information)
			7

Reporting Limit Standard	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Sb, Pb, Tl)	R(-)/J(+) < 2x RL if %R <50% (< 30% Sb, Pb, Tl) J(+) < 2x RL, UJ(-) if %R 50-69% (30-49% Sb, Pb,Tl) J(+) < 2x RL if %R 130-180% (150-200% Sb, Pb, Tl) R(+) < 2x RL if %R > 180% (200% Sb, Pb, Tl)	14
Interference Check Samples (ICSA/ICSAB)	ICSAB %R 80 - 120% for all spiked elements | ICSA | < MDL for all unspiked elements except: K, Na	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R= 50 to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7

EcoChem Validation Guidelines for Metals Analysis by ICP (Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Control Sample (LCS)	One per matrix per batch Blank Spike: %R within 80-120% CRM: Result within manufacturer's certified acceptance range or project guidelines	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120% J(+)/UJ(-) if < LCL, J(+) if > UCL	10
Matrix Spikes	One per matrix per batch 75-125% for samples less than 4x spike level	J(+) if %R > 125% J(+)/UJ(-) if %R < 75% J(+)/R(-) if %R < 30% or J(+)/UJ(-) if Post Spike %R 75-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, spike at twice the sample conc.	No qualifiers assigned based on this element	
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples >RL and < 5x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL (2x RL for solids) qualify all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample conc. > 50x MDL	J(+)/UJ(-) if %D >10% qualify all samples in batch	16
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	180 days from date sampled Frozen tissues - HT extended to 2 years	J(+)/UJ(-) if holding time exceeded	1
Tune	Prior to ICAL monitoring compounds analyzed 5 times wih Std Dev. ≤ 5% mass calibration <0.1 amu from True Value Resolution < 0.9 AMU @ 10% peak height or <0.75 amu @ 5% peak height	Use Professional Judgment to evaluate tune J(+)/UJ(-) if tune criteria not met	5A
Initial Calibration	Blank + minimum 1 standard If more than 1 standard, r>0.995	J(+)/UJ(-) if r<0.995 (for multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±10% of true value	J(+)/UJ(-) if %R 75-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run ±10% of true value	J(+)/UJ(-) if %R = 75-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRI)	2x RL analyzed beginning of run Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Co,Mn, Zn)	R(-),(+) < 2x RL if %R < 50% (< 30% Co,Mn, Zn) J(+) < 2x RL, UJ(-) if %R 50-69% (30%-49% Co,Mn, Zn) J(+) < 2x RL if %R 130%-180% (150%-200% Co,Mn, Zn) R(+) < 2x RL if %R > 180% (200% Co, Mn, Zn)	14
Interference Check Samples (ICSA/ICSAB)	Required by SW 6020, but not 200.8 ICSAB %R 80% - 120% for all spiked elements | ICSA | < IDL (MDL) for all unspiked elements	For samples with Al, Ca, Fe, or Mg > ICS levels R(+/-) if %R < 50% J(+) if %R >120% J(+)/UJ(-) if %R = 50% to 79% Use Professional Judgment for ICSA to determine if bias is present see TM-09 for additional details	17
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7
Laboratory Control Sample (LCS)	One per matrix per batch Blank Spike: %R within 80%-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/ Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 75-125% for samples where results do not exceed 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% or J(+)/UJ(-) if Post Spike %R 75%-125% Qualify all samples in batch	8
Post-digestion Spike	If Matrix Spike is outside 75-125%, Spike parent sample at 2x the sample conc.	No qualifiers assigned based on this element	

EcoChem Validation Guidelines for Metals Analysis by ICP-MS
(Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5 x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9
Serial Dilution	5x dilution one per matrix %D < 10% for original sample values > 50x MDL	J(+)/UJ(-) if %D >10% All samples in batch	16
Internal Standards	Every sample SW6020: 60%-125% of cal blank IS 200.8: 30%-120% of cal blank IS	J (+)/UJ (-) all analytes associated with IS outlier	19
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < AL in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff < RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9
Linear Range	Sample concentrations must fall within range	J values over range	20

EcoChem Validation Guidelines for Mercury Analysis by CVAA (Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler temperature: 4°C ±2° Waters: Nitric Acid to pH < 2 For Dissolved Metals: 0.45um filter & preserve after filtration	EcoChem Professional Judgment - no qualification based on cooler temperature outliers J(+)/UJ(-) if pH preservation requirements are not met	1
Holding Time	28 days from date sampled Frozen tissues: HT extended to 6 months	J(+)/UJ(-) if holding time exceeded	1
Initial Calibration	Blank + 4 standards, one at RL r > 0.995	J(+)/UJ(-) if r<0.995	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ±20% of true value	J(+)/UJ(-) if %R = 65%-79% J(+) if %R = 121-135% R(+/-) if %R < 65% R(+) if %R > 135%	5A
Continuing Calibration Verification (CCV)	Every ten samples, immediately following ICV/ICB and at end of run %R within ±20% of true value	J(+)/UJ(-) if %R = 65%-79% J(+) if %R = 121-135% R(+/-) if %R < 65% R(+) if %R > 135%	5B

Initial and Continuing Calibration Blanks (ICB/CCB)	after each ICV and CCV
	every ten samples and end of run
	| blank | < IDL (MDL)
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Reporting Limit Standard (CRA)	conc at RL - analyzed beginning of run %R = 70-130%	R(-),(+)<2xRL if %R <50% J(+)<2x RL, UJ(-) if %R 50-69% J(+) <2x RL if %R 130-180% R(+)<2x RL if %R>180%	14
Method Blank	One per matrix per batch (batch not to exceed 20 samples) blank < MDL	Action level is 5x blank concentration U(+) results < action level	7
Laboratory Control Sample (LCS)	One per matrix per batch		10
	Blank Spike: %R within 80-120%	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	
	CRM: Result within manufacturer's certified acceptance range or project guidelines	J(+)/UJ(-) if < LCL, J(+) if > UCL	
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One per matrix per batch 5% frequency 75-125% for samples less than 4x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30% all samples in batch	8
Laboratory Duplicate (or MS/MSD)	One per matrix per batch RPD < 20% for samples > 5x RL Diff < RL for samples > RL and < 5x RL (Diff < 2x RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9

EcoChem Validation Guidelines for Mercury Analysis by CVAA (Based on Inorganic NFG 1994 & 2004)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Field Blank	Blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5x RL: Water: RPD < 35% Solid: RPD < 50% For results < 5x RL: Water: Diff<RL Solid: Diff < 2x RL	J(+)/UJ(-) in parent samples only	9

EcoChem Validation Guidelines for Conventional Chemistry Analysis (Based on EPA Standard Methods)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	Cooler Temperature 4°C ±2°C Preservation: Method Specific	Use Professional Judgment to qualify based to qualify for coole temp outliers J(+)/UJ(-) if preservation requirements not met	1
Holding Time	Method Specific	Professional Judgment J(+)/UJ(-) if holding time exceeded J(+)/R(-) if HT exceeded by > 3X	1
Initial Calibration	Method specific r>0.995	Use professional judgment J(+)/UJ(-) for r < 0.995	5A
Initial Calibration Verification (ICV)	Where applicable to method Independent source analyzed immediately after calibration %R method specific, usually 90% - 110%	R(+/-) if %R significantly < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R significantly > UCL	5A
Continuing Cal Verification (CCV)	Where applicable to method Every ten samples, immed. following ICV/ICB and end of run %R method specific, usually 90% - 110%	R(+/-) if %R significantly < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R significantly > UCL	5B

Initial and Continuing Cal Blanks (ICB/CCB)	Where applicable to method
	After each ICV and CCV every ten samples and end of run
	| blank| < MDL
		Action level is 5x absolute value of blank conc.
		For (+) blanks, U(+) results < action level
		For (-) blanks, J(+)/UJ(-) results < action level
		refer to TM-02 for additional details
			7

Method Blank	One per matrix per batch
	(not to exceed 20 samples)
	blank < MDL
		Action level is 5x absolute value of blank conc.
		For (+) blk value, U(+) results < action level
		For (-) blk value, J(+)/UJ(-) results < action level
			7

Laboratory Control Sample	Waters: One per matrix per batch %R (80-120%)	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	Soils: One per matrix per batch Result within manufacturer's certified acceptance range	J(+)/UJ(-) if < LCL, J(+) if > UCL	10
Matrix Spike	One per matrix per batch; 5% frequency 75-125% for samples less than 4 x spike level	J(+) if %R > 125% or < 75% UJ(-) if %R = 30-74% R(+/-) results < IDL if %R < 30%	8
Laboratory Duplicate	One per matrix per batch RPD <20% for samples > 5x RL Diff <RL for samples >RL and <5 x RL (may use RPD < 35%, Diff < 2X RL for solids)	J(+)/UJ(-) if RPD > 20% or diff > RL all samples in batch	9

EcoChem Validation Guidelines for Conventional Chemistry Analysis (Based on EPA Standard Methods)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Field Blank	blank < MDL	Action level is 5x blank conc. U(+) sample values < action level in associated field samples only	6
Field Duplicate	For results > 5X RL: Water: RPD < 35% Solid: RPD < 50% For results < 5 x RL: Water: Diff<RL Solid: Diff < 2X RL	J(+)/UJ(-) in parent samples only	9

EcoChem, INC.
Environmental Data Quality

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

QUALIFIED DATA SUMMARY TABLE
East Waterway - Fish and Shellfish

SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
0902011	0902011-14	EW-08-RR-HP-COMP7	EPA 1632 M	Inorganic Arsenic	0.078	mg/kg	J	J	9
K0900129	K0900129-001	EW-08-RR-HP-COMP1	SW8082	Aroclor 1260	380	ug/kg	P	J	3
K0900129	K0900129-002	EW-08-RR-HP-COMP2	SW8082	Aroclor 1260	450	ug/kg	P	J	3
K0900129	K0900129-004	EW-08-RR-HP-COMP4	SW8082	Aroclor 1260	440	ug/kg	P	J	3
K0900129	K0900129-005	EW-08-RR-HP-COMP5	SW8082	Aroclor 1260	330	ug/kg	P	J	3
K0900129	K0900129-007	EW-08-RR-HP-COMP7	SW8082	Aroclor 1260	310	ug/kg	P	J	3
K0900136	K0900136-002	EW-08-SB002-BR-02	SW8082	Aroclor 1260	740	ug/kg	P	J	3
K0900136	K0900136-003	EW-08-SB003-BR-03	SW8082	Aroclor 1260	1700	ug/kg	PD	J	3
K0900136	K0900136-005	EW-08-SB005-BR-05	SW8082	Aroclor 1260	610	ug/kg	P	J	3
K0900136	K0900136-006	EW-08-SB006-BR-06	SW8082	Aroclor 1260	500	ug/kg	P	J	3
K0900136	K0900136-012	EW-08-SB012-BR-12	SW8082	Aroclor 1260	570	ug/kg	P	J	3
K0900136	K0900136-013	EW-08-SB013-BR-13	SW8082	Aroclor 1260	400	ug/kg	P	J	3
K0900137	K0900137-003	EW-08-RR-EM-COMP3	SW8082	Aroclor 1260	48	ug/kg	P	J	3
K0900137	K0900137-004	EW-08-RR-EM-COMP4	SW8082	Aroclor 1260	130	ug/kg	P	J	3
K0900137	K0900137-005	EW-08-RR-EM-COMP5	SW8082	Aroclor 1254	54	ug/kg	P	J	3
K0900137	K0900137-007	EW-08-RR-EM-COMP7	SW8082	Aroclor 1260	98	ug/kg	P	J	3
K0900138	K0900138-001	EW-08-MS-WB-COMP1	SW8082	AROCLOR-1260	22	ug/kg	P	J	3
K0900138	K0900138-002	EW-08-MS-WB-COMP2	SW8082	AROCLOR-1260	44	ug/kg	P	J	3
K0900138	K0900138-003	EW-08-MS-WB-COMP3	SW8082	AROCLOR-1260	28	ug/kg	P	NJ	3
K0900138	K0900138-004	EW-08-MS-WB-COMP4	SW8082	AROCLOR-1260	31	ug/kg	P	NJ	3
K0900138	K0900138-005	EW-08-MS-WB-COMP5	SW8082	AROCLOR-1260	29	ug/kg	P	NJ	3
K0900138	K0900138-006	EW-08-MS-WB-COMP6	SW8082	AROCLOR-1260	34	ug/kg	P	NJ	3
K0900138	K0900138-007	EW-08-MS-WB-COMP7	SW8082	AROCLOR-1260	35	ug/kg	P	NJ	3
K0900138	K0900138-008	EW-08-MS-WB-COMP8	SW8082	AROCLOR-1260	26	ug/kg	P	NJ	3
K0900138	K0900138-009	EW-08-MS-WB-COMP9	SW8082	AROCLOR-1260	32	ug/kg	P	NJ	3
K0900138	K0900138-010	EW-08-MS-WB-COMP10	SW8082	AROCLOR-1260	26	ug/kg	P	NJ	3
K0900138	K0900138-011	EW-08-MS-WB-COMP11	SW8082	AROCLOR-1260	19	ug/kg	P	NJ	3
K0900140	K0900140-007	EW-08-SS-WB-COMP7	SW8082	Aroclor 1254	560	ug/kg	PD	J	3
K0900140	K0900140-008	EW-08-SS-WB-COMP8	SW8082	Aroclor 1254	140	ug/kg	P	NJ	3
K0900873	K0900873-001	EW-08-SR-WB-COMP1	SW8082	AROCLOR-1260	220	ug/kg	P	J	3
OF34	08-34458-OF34A	EW-08-RR-EM-COMP1	EPA 6010B	Nickel	0.2	mg/kg		J	14
OF34	08-34458-OF34A	EW-08-RR-EM-COMP1	EPA 6010B	Silver	0.15	mg/kg		J	8
OF34	08-34458-OF34A	EW-08-RR-EM-COMP1	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF34	08-34458-OF34A	EW-08-RR-EM-COMP1	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF34	08-34458-OF34ALR	EW-08-RR-EM-COMP1LR	EPA 6010B	Nickel	0.3	mg/kg		J	14
OF34	08-34458-OF34ALR	EW-08-RR-EM-COMP1LR	EPA 6010B	Silver	0.17	mg/kg		J	8
OF34	08-34459-OF34B	EW-08-RR-EM-COMP2	EPA 6010B	Silver	0.16	mg/kg		J	8
OF34	08-34459-OF34B	EW-08-RR-EM-COMP2	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF34	08-34459-OF34B	EW-08-RR-EM-COMP2	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF34	08-34459-OF34B	EW-08-RR-EM-COMP2	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF34	08-34460-OF34C	EW-08-RR-EM-COMP3	EPA 6010B	Nickel	0.2	mg/kg		J	14
OF34	08-34460-OF34C	EW-08-RR-EM-COMP3	EPA 6010B	Silver	0.15	mg/kg		J	8
OF34	08-34460-OF34C	EW-08-RR-EM-COMP3	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF34	08-34460-OF34C	EW-08-RR-EM-COMP3	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF34	08-34460-OF34C	EW-08-RR-EM-COMP3	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF34	08-34461-OF34D	EW-08-RR-EM-COMP4	EPA 6010B	Silver	0.11	mg/kg		J	8
OF34	08-34461-OF34D	EW-08-RR-EM-COMP4	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF34	08-34461-OF34D	EW-08-RR-EM-COMP4	EPA 8081B	cis-Nonachlor		ug/kg	Y	U	22
OF34	08-34461-OF34D	EW-08-RR-EM-COMP4	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF34	08-34461-OF34D	EW-08-RR-EM-COMP4	Krone et al. 1989	Butyltin Ion		ug/kg	U	R	8
OF34	08-34462-OF34E	EW-08-RR-EM-COMP5	EPA 6010B	Nickel	0.2	mg/kg		J	14
OF34	08-34462-OF34E	EW-08-RR-EM-COMP5	EPA 6010B	Silver	0.13	mg/kg		J	8
OF34	08-34462-OF34E	EW-08-RR-EM-COMP5	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF34	08-34462-OF34E	EW-08-RR-EM-COMP5	EPA 8081B	cis-Nonachlor		ug/kg	Y	U	22
OF34	08-34462-OF34E	EW-08-RR-EM-COMP5	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF34	08-34462-OF34E	EW-08-RR-EM-COMP5	EPA 8270D	Benzoic Acid		ug/kg	U	R	8
OF34	08-34462-OF34E	EW-08-RR-EM-COMP5	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF34	08-34463-OF34F	EW-08-RR-EM-COMP6	EPA 6010B	Silver	0.14	mg/kg		J	8
OF34	08-34463-OF34F	EW-08-RR-EM-COMP6	EPA 8270D	Aniline		ug/kg	U	UJ	8

QUALIFIED DATA SUMMARY TABLE
East Waterway - Fish and Shellfish

SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OF34	08-34463-OF34F	EW-08-RR-EM-COMP6	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF34	08-34464-OF34G	EW-08-RR-EM-COMP7	EPA 6010B	Nickel	0.3	mg/kg		J	14
OF34	08-34464-OF34G	EW-08-RR-EM-COMP7	EPA 6010B	Silver	0.11	mg/kg		J	8
OF34	08-34464-OF34G	EW-08-RR-EM-COMP7	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF34	08-34464-OF34G	EW-08-RR-EM-COMP7	EPA 8081B	cis-Nonachlor		ug/kg	Y	U	22
OF34	08-34464-OF34G	EW-08-RR-EM-COMP7	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF34	08-34464-OF34G	EW-08-RR-EM-COMP7	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF34	08-34465-OF34H	EW-08-RR-EM-COMP8	EPA 6010B	Silver	0.14	mg/kg		J	8
OF34	08-34465-OF34H	EW-08-RR-EM-COMP8	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF34	08-34465-OF34H	EW-08-RR-EM-COMP8	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF35	08-34474-OF35A	EW-08-RR-HP-COMP1	EPA 6010B	Silver	0.35	mg/kg		J	8
OF35	08-34474-OF35A	EW-08-RR-HP-comp1	EPA 8081B	4,4'-DDT	37	ug/kg		JN	14
OF35	08-34474-OF35A	EW-08-RR-HP-comp1	EPA 8081B	cis-Nonachlor	29	ug/kg		JN	14
OF35	08-34474-OF35A	EW-08-RR-HP-COMP1	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF35	08-34474-OF35A	EW-08-RR-HP-COMP1	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF35	08-34474-OF35ALR	EW-08-RR-HP-COMP1LR	EPA 6010B	Silver	0.38	mg/kg		J	8
OF35	08-34475-OF35B	EW-08-RR-HP-COMP2	EPA 6010B	Silver	0.35	mg/kg		J	8
OF35	08-34475-OF35B	EW-08-RR-HP-comp2	EPA 8081B	4,4'-DDT	26	ug/kg		JN	14
OF35	08-34475-OF35B	EW-08-RR-HP-comp2	EPA 8081B	cis-Nonachlor	18	ug/kg		JN	14
OF35	08-34475-OF35B	EW-08-RR-HP-COMP2	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF35	08-34475-OF35B	EW-08-RR-HP-COMP2	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF35	08-34476-OF35C	EW-08-RR-HP-COMP3	EPA 6010B	Silver	0.33	mg/kg		J	8
OF35	08-34476-OF35C	EW-08-RR-HP-comp3	EPA 8081B	4,4'-DDT	51	ug/kg		JN	14
OF35	08-34476-OF35C	EW-08-RR-HP-comp3	EPA 8081B	cis-Nonachlor	32	ug/kg	J	JN	14
OF35	08-34476-OF35C	EW-08-RR-HP-COMP3	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF35	08-34476-OF35C	EW-08-RR-HP-COMP3	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Mirex		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Aldrin		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	beta-BHC		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	delta-BHC		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	4,4'-DDT	77	ug/kg		R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Dieldrin		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Endrin		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Heptachlor		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Toxaphene		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OF35	08-34476-OF35CDL	EW-08-RR-HP-COMP3	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OF35	08-34477-OF35D	EW-08-RR-HP-COMP4	EPA 6010B	Silver	0.28	mg/kg		J	8
OF35	08-34477-OF35D	EW-08-RR-HP-comp4	EPA 8081B	4,4'-DDT	35	ug/kg		JN	14
OF35	08-34477-OF35D	EW-08-RR-HP-comp4	EPA 8081B	cis-Nonachlor	26	ug/kg		JN	14

QUALIFIED DATA SUMMARY TABLE
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SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OF35	08-34477-OF35D	EW-08-RR-HP-comp4	EPA 8081B	4,4'-DDE	15	ug/kg		JN	14
OF35	08-34477-OF35D	EW-08-RR-HP-COMP4	EPA 8270D	Diethylphthalate	450	ug/kg	B	U	7
OF35	08-34477-OF35D	EW-08-RR-HP-COMP4	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF35	08-34477-OF35D	EW-08-RR-HP-COMP4	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF35	08-34478-OF35E	EW-08-RR-HP-COMP5	EPA 6010B	Silver	0.37	mg/kg		J	8
OF35	08-34478-OF35E	EW-08-RR-HP-comp5	EPA 8081B	4,4'-DDT	23	ug/kg		JN	14
OF35	08-34478-OF35E	EW-08-RR-HP-comp5	EPA 8081B	cis-Nonachlor	14	ug/kg		JN	14
OF35	08-34478-OF35E	EW-08-RR-HP-COMP5	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF35	08-34478-OF35E	EW-08-RR-HP-COMP5	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	8
OF35	08-34478-OF35E	EW-08-RR-HP-COMP5	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8,10
OF35	08-34479-OF35F	EW-08-RR-HP-COMP6	EPA 6010B	Silver	0.40	mg/kg		J	8
OF35	08-34479-OF35F	EW-08-RR-HP-COMP6	EPA 8081B	4,4'-DDE	28	ug/kg	P	JN	3,14
OF35	08-34479-OF35F	EW-08-RR-HP-comp6	EPA 8081B	4,4'-DDT	80	ug/kg		JN	14
OF35	08-34479-OF35F	EW-08-RR-HP-comp6	EPA 8081B	cis-Nonachlor	47	ug/kg	J	JN	14
OF35	08-34479-OF35F	EW-08-RR-HP-COMP6	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF35	08-34479-OF35F	EW-08-RR-HP-COMP6	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Mirex		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Aldrin		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	beta-BHC		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	delta-BHC		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	4,4'-DDT	110	ug/kg		R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	cis-Nonachlor	98	ug/kg	J	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Dieldrin		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Endrin		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Heptachlor		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Toxaphene		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OF35	08-34479-OF35FDL	EW-08-RR-HP-COMP6	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OF35	08-34480-OF35G	EW-08-RR-HP-COMP7	EPA 6010B	Silver	0.48	mg/kg		J	8
OF35	08-34480-OF35G	EW-08-RR-HP-comp7	EPA 8081B	4,4'-DDT	29	ug/kg		JN	14
OF35	08-34480-OF35G	EW-08-RR-HP-comp7	EPA 8081B	cis-Nonachlor	19	ug/kg		JN	14
OF35	08-34480-OF35G	EW-08-RR-HP-COMP7	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF35	08-34480-OF35G	EW-08-RR-HP-COMP7	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF35	08-34481-OF35H	EW-08-RR-HP-COMP8	EPA 6010B	Silver	0.35	mg/kg		J	8
OF35	08-34481-OF35H	EW-08-RR-HP-COMP8	EPA 8081B	gamma Chlordane		ug/kg	Y	U	22
OF35	08-34481-OF35H	EW-08-RR-HP-comp8	EPA 8081B	4,4'-DDT	27	ug/kg		JN	14
OF35	08-34481-OF35H	EW-08-RR-HP-comp8	EPA 8081B	cis-Nonachlor	19	ug/kg	J	JN	14
OF35	08-34481-OF35H	EW-08-RR-HP-COMP8	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF35	08-34481-OF35H	EW-08-RR-HP-COMP8	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF36	08-34482-OF36A	EW-08-MS-WB-COMP1	EPA 200.8	Antimony	0.01	mg/kg		J	8
OF36	08-34482-OF36A	EW-08-MS-WB-COMP1	EPA 6010B	Silver		mg/kg	U	UJ	8

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SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OF36	08-34482-OF36A	EW-08-MS-WB-COMP1	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF36	08-34482-OF36A	EW-08-MS-WB-COMP1	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF36	08-34482-OF36ADUP	EW-08-MS-WB-COMP1LR	EPA 200.8	Antimony		mg/kg	U	UJ	8
OF36	08-34482-OF36ALR	EW-08-MS-WB-COMP1LR	EPA 6010B	Silver		mg/kg	U	UJ	8
OF36	08-34483-OF36B	EW-08-MS-WB-COMP2	EPA 200.8	Antimony	0.005	mg/kg		J	8
OF36	08-34483-OF36B	EW-08-MS-WB-COMP2	EPA 6010B	Silver		mg/kg	U	UJ	8
OF36	08-34483-OF36B	EW-08-MS-WB-COMP2	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF36	08-34483-OF36B	EW-08-MS-WB-COMP2	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF36	08-34484-OF36C	EW-08-MS-WB-COMP3	EPA 200.8	Antimony		mg/kg	U	UJ	8
OF36	08-34484-OF36C	EW-08-MS-WB-COMP3	EPA 6010B	Silver		mg/kg	U	UJ	8
OF36	08-34484-OF36C	EW-08-MS-WB-COMP3	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF36	08-34484-OF36C	EW-08-MS-WB-COMP3	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF36	08-34485-OF36D	EW-08-MS-WB-COMP4	EPA 200.8	Antimony		mg/kg	U	UJ	8
OF36	08-34485-OF36D	EW-08-MS-WB-COMP4	EPA 6010B	Silver		mg/kg	U	UJ	8
OF36	08-34485-OF36D	EW-08-MS-WB-COMP4	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF36	08-34485-OF36D	EW-08-MS-WB-COMP4	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF36	08-34486-OF36E	EW-08-MS-WB-COMP5	EPA 200.8	Antimony	0.004	mg/kg		J	8
OF36	08-34486-OF36E	EW-08-MS-WB-COMP5	EPA 6010B	Silver		mg/kg	U	UJ	8
OF36	08-34486-OF36E	EW-08-MS-WB-COMP5	EPA 8270D	4-Nitroaniline		ug/kg	U	R	8
OF36	08-34486-OF36E	EW-08-MS-WB-COMP5	EPA 8270D	4-Chloroaniline		ug/kg	U	R	8
OF36	08-34486-OF36E	EW-08-MS-WB-COMP5	EPA 8270D	Aniline		ug/kg	U	R	8
OF36	08-34486-OF36E	EW-08-MS-WB-COMP5	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	8
OF36	08-34486-OF36E	EW-08-MS-WB-COMP5	EPA 8270D	3-Nitroaniline		ug/kg	U	UJ	8
OF36	08-34486-OF36E	EW-08-MS-WB-COMP5	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8,10
OF36	08-34487-OF36F	EW-08-MS-WB-COMP6	EPA 200.8	Antimony	0.005	mg/kg		J	8
OF36	08-34487-OF36F	EW-08-MS-WB-COMP6	EPA 6010B	Silver		mg/kg	U	UJ	8
OF36	08-34487-OF36F	EW-08-MS-WB-COMP6	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF36	08-34487-OF36F	EW-08-MS-WB-COMP6	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF36	08-34488-OF36G	EW-08-MS-WB-COMP7	EPA 200.8	Antimony	0.006	mg/kg		J	8
OF36	08-34488-OF36G	EW-08-MS-WB-COMP7	EPA 6010B	Silver		mg/kg	U	UJ	8
OF36	08-34488-OF36G	EW-08-MS-WB-COMP7	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF36	08-34488-OF36G	EW-08-MS-WB-COMP7	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF36	08-34489-OF36H	EW-08-MS-WB-COMP8	EPA 200.8	Antimony	0.004	mg/kg		J	8
OF36	08-34489-OF36H	EW-08-MS-WB-COMP8	EPA 6010B	Silver		mg/kg	U	UJ	8
OF36	08-34489-OF36H	EW-08-MS-WB-COMP8	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF36	08-34489-OF36H	EW-08-MS-WB-COMP8	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF36	08-34490-OF36I	EW-08-MS-WB-COMP9	EPA 200.8	Antimony	0.005	mg/kg		J	8
OF36	08-34490-OF36I	EW-08-MS-WB-COMP9	EPA 6010B	Silver		mg/kg	U	UJ	8
OF36	08-34490-OF36I	EW-08-MS-WB-COMP9	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF36	08-34490-OF36I	EW-08-MS-WB-COMP9	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF36	08-34491-OF36J	EW-08-MS-WB-COMP10	EPA 200.8	Antimony	0.008	mg/kg		J	8
OF36	08-34491-OF36J	EW-08-MS-WB-COMP10	EPA 6010B	Silver		mg/kg	U	UJ	8
OF36	08-34491-OF36J	EW-08-MS-WB-COMP10	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF36	08-34491-OF36J	EW-08-MS-WB-COMP10	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF36	08-34492-OF36K	EW-08-MS-WB-COMP11	EPA 200.8	Antimony	0.005	mg/kg		J	8
OF36	08-34492-OF36K	EW-08-MS-WB-COMP11	EPA 6010B	Silver		mg/kg	U	UJ	8
OF36	08-34492-OF36K	EW-08-MS-WB-COMP11	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF36	08-34492-OF36K	EW-08-MS-WB-COMP11	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	10
OF41	08-34547-OF41A	EW-08-SB002-BR-01	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF41	08-34547-OF41A	EW-08-SB002-BR-01	EPA 8081B	Dieldrin	24	ug/kg	P	JN	3,14
OF41	08-34547-OF41A	EW-08-SB002-BR-01	EPA 8081B	Endrin		ug/kg	Y	U	22
OF41	08-34547-OF41A	EW-08-SB002-BR-01	EPA 8081B	4,4'-DDE	15	ug/kg		JN	14
OF41	08-34547-OF41A	EW-08-SB002-BR-01	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
OF41	08-34547-OF41A	EW-08-SB002-BR-01	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
OF41	08-34547-OF41A	EW-08-SB002-BR-01	EPA 8270D	Aniline		ug/kg	U	UJ	10
OF41	08-34547-OF41A	EW-08-SB002-BR-01	EPA 8270D	Di-n-Butylphthalate		ug/kg	Y	U	22
OF41	08-34547-OF41A	EW-08-SB002-BR-01	EPA 8270D	Butylbenzylphthalate		ug/kg	Y	U	22
OF41	08-34547-OF41A	EW-08-SB002-BR-01	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	10
OF41	08-34547-OF41A	EW-08-SB002-BR-01	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8

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SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OF41	08-34548-OF41B	EW-08-SB002-BR-02	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF41	08-34548-OF41B	EW-08-SB002-BR-02	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF41	08-34548-OF41B	EW-08-SB002-BR-02	EPA 8081B	Dieldrin	32	ug/kg	P	JN	3,14
OF41	08-34548-OF41B	EW-08-SB002-BR-02	EPA 8081B	Endrin		ug/kg	Y	U	22
OF41	08-34548-OF41B	EW-08-SB002-BR-02	EPA 8081B	4,4'-DDE	24	ug/kg	P	JN	3,14
OF41	08-34548-OF41B	EW-08-SB002-BR-02	EPA 8081B	Hexachlorobutadiene		ug/kg	Y	U	22
OF41	08-34548-OF41B	EW-08-SB002-BR-02	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
OF41	08-34548-OF41B	EW-08-SB002-BR-02	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
OF41	08-34548-OF41B	EW-08-SB002-BR-02	EPA 8270D	Aniline		ug/kg	U	UJ	10
OF41	08-34548-OF41B	EW-08-SB002-BR-02	EPA 8270D	Di-n-Butylphthalate		ug/kg	Y	U	22
OF41	08-34548-OF41B	EW-08-SB002-BR-02	EPA 8270D	Butylbenzylphthalate		ug/kg	Y	U	22
OF41	08-34548-OF41B	EW-08-SB002-BR-02	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	10
OF41	08-34548-OF41B	EW-08-SB002-BR-02	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF41	08-34549-OF41C	EW-08-SB003-BR-03	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF41	08-34549-OF41C	EW-08-SB003-BR-03	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF41	08-34549-OF41C	EW-08-SB003-BR-03	EPA 8081B	Dieldrin	33	ug/kg	P	JN	3,14
OF41	08-34549-OF41C	EW-08-SB003-BR-03	EPA 8081B	Endrin		ug/kg	Y	U	22
OF41	08-34549-OF41C	EW-08-SB003-BR-03	EPA 8081B	4,4'-DDE	26	ug/kg		JN	14
OF41	08-34549-OF41C	EW-08-SB003-BR-03	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
OF41	08-34549-OF41C	EW-08-SB003-BR-03	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
OF41	08-34549-OF41C	EW-08-SB003-BR-03	EPA 8270D	Aniline		ug/kg	U	UJ	10
OF41	08-34549-OF41C	EW-08-SB003-BR-03	EPA 8270D	Di-n-Butylphthalate		ug/kg	Y	U	22
OF41	08-34549-OF41C	EW-08-SB003-BR-03	EPA 8270D	Butylbenzylphthalate		ug/kg	Y	U	22
OF41	08-34549-OF41C	EW-08-SB003-BR-03	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	10
OF41	08-34549-OF41C	EW-08-SB003-BR-03	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF41	08-34550-OF41D	EW-08-SB004-BR-04	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF41	08-34550-OF41D	EW-08-SB004-BR-04	EPA 8081B	Dieldrin	20	ug/kg	P	JN	3,14
OF41	08-34550-OF41D	EW-08-SB004-BR-04	EPA 8081B	Endrin		ug/kg	Y	U	22
OF41	08-34550-OF41D	EW-08-SB004-BR-04	EPA 8081B	Hexachlorobutadiene		ug/kg	Y	U	22
OF41	08-34550-OF41D	EW-08-SB004-BR-04	EPA 8081B	4,4'-DDE	22	ug/kg		JN	14
OF41	08-34550-OF41D	EW-08-SB004-BR-04	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
OF41	08-34550-OF41D	EW-08-SB004-BR-04	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
OF41	08-34550-OF41D	EW-08-SB004-BR-04	EPA 8270D	Aniline		ug/kg	U	UJ	10
OF41	08-34550-OF41D	EW-08-SB004-BR-04	EPA 8270D	Di-n-Butylphthalate		ug/kg	Y	U	22
OF41	08-34550-OF41D	EW-08-SB004-BR-04	EPA 8270D	Butylbenzylphthalate		ug/kg	Y	U	22
OF41	08-34550-OF41D	EW-08-SB004-BR-04	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	10
OF41	08-34550-OF41D	EW-08-SB004-BR-04	Krone et al. 1989	Tributyltin Ion	61	ug/kg		J	13
OF41	08-34550-OF41D	EW-08-SB004-BR-04	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF41	08-34551-OF41E	EW-08-SB005-BR-05	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF41	08-34551-OF41E	EW-08-SB005-BR-05	EPA 8081B	Endrin		ug/kg	Y	U	22
OF41	08-34551-OF41E	EW-08-SB005-BR-05	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
OF41	08-34551-OF41E	EW-08-SB005-BR-05	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
OF41	08-34551-OF41E	EW-08-SB005-BR-05	EPA 8270D	Aniline		ug/kg	U	UJ	10
OF41	08-34551-OF41E	EW-08-SB005-BR-05	EPA 8270D	Di-n-Butylphthalate		ug/kg	Y	U	22
OF41	08-34551-OF41E	EW-08-SB005-BR-05	EPA 8270D	Butylbenzylphthalate		ug/kg	Y	U	22
OF41	08-34551-OF41E	EW-08-SB005-BR-05	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	10
OF41	08-34551-OF41E	EW-08-SB005-BR-05	Krone et al. 1989	Dibutyltin Ion		ug/kg	Y	U	22
OF41	08-34551-OF41E	EW-08-SB005-BR-05	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF41	08-34552-OF41F	EW-08-SB006-BR-06	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF41	08-34552-OF41F	EW-08-SB006-BR-06	EPA 8270D	4-Nitroaniline		ug/kg	U	R	8
OF41	08-34552-OF41F	EW-08-SB006-BR-06	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
OF41	08-34552-OF41F	EW-08-SB006-BR-06	EPA 8270D	4-Chloroaniline		ug/kg	U	R	8
OF41	08-34552-OF41F	EW-08-SB006-BR-06	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
OF41	08-34552-OF41F	EW-08-SB006-BR-06	EPA 8270D	Aniline		ug/kg	U	R	8
OF41	08-34552-OF41F	EW-08-SB006-BR-06	EPA 8270D	N-Nitrosodimethylamine		ug/kg	U	UJ	10
OF41	08-34552-OF41F	EW-08-SB006-BR-06	EPA 8270D	Di-n-Butylphthalate		ug/kg	Y	U	22
OF41	08-34552-OF41F	EW-08-SB006-BR-06	EPA 8270D	Butylbenzylphthalate		ug/kg	Y	U	22
OF41	08-34552-OF41F	EW-08-SB006-BR-06	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	8
OF41	08-34552-OF41F	EW-08-SB006-BR-06	EPA 8270D	3-Nitroaniline		ug/kg	U	R	8

QUALIFIED DATA SUMMARY TABLE
East Waterway - Fish and Shellfish

SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OF41	08-34552-OF41F	EW-08-SB006-BR-06	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF41	08-34553-OF41G	EW-08-SB007-BR-07	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF41	08-34553-OF41G	EW-08-SB007-BR-07	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF41	08-34553-OF41G	EW-08-SB007-BR-07	EPA 8081B	Dieldrin	26	ug/kg	P	JN	3,14
OF41	08-34553-OF41G	EW-08-SB007-BR-07	EPA 8081B	Endrin		ug/kg	Y	U	22
OF41	08-34553-OF41G	EW-08-SB007-BR-07	EPA 8081B	4,4'-DDE	20	ug/kg		JN	14
OF41	08-34553-OF41G	EW-08-SB007-BR-07	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
OF41	08-34553-OF41G	EW-08-SB007-BR-07	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
OF41	08-34553-OF41G	EW-08-SB007-BR-07	EPA 8270D	Aniline		ug/kg	U	UJ	10
OF41	08-34553-OF41G	EW-08-SB007-BR-07	EPA 8270D	Di-n-Butylphthalate		ug/kg	Y	U	22
OF41	08-34553-OF41G	EW-08-SB007-BR-07	EPA 8270D	Butylbenzylphthalate		ug/kg	Y	U	22
OF41	08-34553-OF41G	EW-08-SB007-BR-07	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	10
OF41	08-34553-OF41G	EW-08-SB007-BR-07	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF41	08-34554-OF41H	EW-08-SB008-BR-08	EPA 8081B	oxy Chlordane		ug/kg	Y	U	22
OF41	08-34554-OF41H	EW-08-SB008-BR-08	EPA 8081B	trans-Nonachlor		ug/kg	Y	U	22
OF41	08-34554-OF41H	EW-08-SB008-BR-08	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF41	08-34554-OF41H	EW-08-SB008-BR-08	EPA 8081B	Dieldrin	53	ug/kg	P	JN	3,14
OF41	08-34554-OF41H	EW-08-SB008-BR-08	EPA 8081B	Endrin		ug/kg	Y	U	22
OF41	08-34554-OF41H	EW-08-SB008-BR-08	EPA 8081B	4,4'-DDE	79	ug/kg		JN	14
OF41	08-34554-OF41H	EW-08-SB008-BR-08	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
OF41	08-34554-OF41H	EW-08-SB008-BR-08	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
OF41	08-34554-OF41H	EW-08-SB008-BR-08	EPA 8270D	Aniline		ug/kg	U	UJ	10
OF41	08-34554-OF41H	EW-08-SB008-BR-08	EPA 8270D	Di-n-Butylphthalate		ug/kg	Y	U	22
OF41	08-34554-OF41H	EW-08-SB008-BR-08	EPA 8270D	Butylbenzylphthalate		ug/kg	Y	U	22
OF41	08-34554-OF41H	EW-08-SB008-BR-08	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	10
OF41	08-34554-OF41H	EW-08-SB008-BR-08	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF41	08-34555-OF41I	EW-08-SB009-BR-09	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF41	08-34555-OF41I	EW-08-SB009-BR-09	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF41	08-34555-OF41I	EW-08-SB009-BR-09	EPA 8081B	Endrin		ug/kg	Y	U	22
OF41	08-34555-OF41I	EW-08-SB009-BR-09	EPA 8081B	Dieldrin	29	ug/kg		JN	14
OF41	08-34555-OF41I	EW-08-SB009-BR-09	EPA 8081B	4,4'-DDE	19	ug/kg		JN	14
OF41	08-34555-OF41I	EW-08-SB009-BR-09	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
OF41	08-34555-OF41I	EW-08-SB009-BR-09	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
OF41	08-34555-OF41I	EW-08-SB009-BR-09	EPA 8270D	Aniline		ug/kg	U	UJ	10
OF41	08-34555-OF41I	EW-08-SB009-BR-09	EPA 8270D	Di-n-Butylphthalate		ug/kg	Y	U	22
OF41	08-34555-OF41I	EW-08-SB009-BR-09	EPA 8270D	Butylbenzylphthalate		ug/kg	Y	U	22
OF41	08-34555-OF41I	EW-08-SB009-BR-09	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	10
OF41	08-34555-OF41I	EW-08-SB009-BR-09	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF41	08-34556-OF41J	EW-08-SB012-BR-10	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF41	08-34556-OF41J	EW-08-SB012-BR-10	EPA 8081B	Dieldrin	20	ug/kg	P	JN	3,14
OF41	08-34556-OF41J	EW-08-SB012-BR-10	EPA 8081B	Endrin		ug/kg	Y	U	22
OF41	08-34556-OF41J	EW-08-SB012-BR-10	EPA 8081B	4,4'-DDE	28	ug/kg	P	JN	3,14
OF41	08-34556-OF41J	EW-08-SB012-BR-10	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
OF41	08-34556-OF41J	EW-08-SB012-BR-10	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
OF41	08-34556-OF41J	EW-08-SB012-BR-10	EPA 8270D	Aniline		ug/kg	U	UJ	10
OF41	08-34556-OF41J	EW-08-SB012-BR-10	EPA 8270D	Di-n-Butylphthalate		ug/kg	Y	U	22
OF41	08-34556-OF41J	EW-08-SB012-BR-10	EPA 8270D	Butylbenzylphthalate		ug/kg	Y	U	22
OF41	08-34556-OF41J	EW-08-SB012-BR-10	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	10
OF41	08-34556-OF41J	EW-08-SB012-BR-10	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF41	08-34557-OF41K	EW-08-SB011-BR-11	EPA 8081B	oxy Chlordane		ug/kg	Y	U	22
OF41	08-34557-OF41K	EW-08-SB011-BR-11	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF41	08-34557-OF41K	EW-08-SB011-BR-11	EPA 8081B	Dieldrin	33	ug/kg	P	JN	3,14
OF41	08-34557-OF41K	EW-08-SB011-BR-11	EPA 8081B	Endrin		ug/kg	Y	U	22
OF41	08-34557-OF41K	EW-08-SB011-BR-11	EPA 8081B	Hexachlorobutadiene		ug/kg	Y	U	22
OF41	08-34557-OF41K	EW-08-SB011-BR-11	EPA 8081B	4,4'-DDE	27	ug/kg		JN	14
OF41	08-34557-OF41K	EW-08-SB011-BR-11	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
OF41	08-34557-OF41K	EW-08-SB011-BR-11	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
OF41	08-34557-OF41K	EW-08-SB011-BR-11	EPA 8270D	Aniline		ug/kg	U	UJ	10
OF41	08-34557-OF41K	EW-08-SB011-BR-11	EPA 8270D	Di-n-Butylphthalate		ug/kg	Y	U	22

QUALIFIED DATA SUMMARY TABLE
East Waterway - Fish and Shellfish

SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OF41	08-34557-OF41K	EW-08-SB011-BR-11	EPA 8270D	Butylbenzylphthalate		ug/kg	Y	U	22
OF41	08-34557-OF41K	EW-08-SB011-BR-11	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	10
OF41	08-34557-OF41K	EW-08-SB011-BR-11	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF41	08-34558-OF41L	EW-08-SB012-BR-12	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF41	08-34558-OF41L	EW-08-SB012-BR-12	EPA 8081B	Endrin		ug/kg	Y	U	22
OF41	08-34558-OF41L	EW-08-SB012-BR-12	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
OF41	08-34558-OF41L	EW-08-SB012-BR-12	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
OF41	08-34558-OF41L	EW-08-SB012-BR-12	EPA 8270D	Aniline		ug/kg	U	UJ	10
OF41	08-34558-OF41L	EW-08-SB012-BR-12	EPA 8270D	Di-n-Butylphthalate		ug/kg	Y	U	22
OF41	08-34558-OF41L	EW-08-SB012-BR-12	EPA 8270D	Butylbenzylphthalate		ug/kg	Y	U	22
OF41	08-34558-OF41L	EW-08-SB012-BR-12	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	10
OF41	08-34558-OF41L	EW-08-SB012-BR-12	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF41	08-34559-OF41M	EW-08-SB013-BR-13	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF41	08-34559-OF41M	EW-08-SB013-BR-13	EPA 8081B	Dieldrin		ug/kg	Y	U	22
OF41	08-34559-OF41M	EW-08-SB013-BR-13	EPA 8081B	Endrin		ug/kg	Y	U	22
OF41	08-34559-OF41M	EW-08-SB013-BR-13	EPA 8081B	4,4'-DDE	20	ug/kg		JN	14
OF41	08-34559-OF41M	EW-08-SB013-BR-13	EPA 8270D	2,4-Dimethylphenol		ug/kg	U	UJ	10
OF41	08-34559-OF41M	EW-08-SB013-BR-13	EPA 8270D	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
OF41	08-34559-OF41M	EW-08-SB013-BR-13	EPA 8270D	Aniline		ug/kg	U	UJ	10
OF41	08-34559-OF41M	EW-08-SB013-BR-13	EPA 8270D	Di-n-Butylphthalate		ug/kg	Y	U	22
OF41	08-34559-OF41M	EW-08-SB013-BR-13	EPA 8270D	Butylbenzylphthalate		ug/kg	Y	U	22
OF41	08-34559-OF41M	EW-08-SB013-BR-13	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	10
OF41	08-34559-OF41M	EW-08-SB013-BR-13	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF42	08-34571-OF42A	EW-08-ES-WB-comp1	EPA 8081B	4,4'-DDE	24	ug/kg		JN	14
OF42	08-34571-OF42A	EW-08-ES-WB-COMP1	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF42	08-34571-OF42A	EW-08-ES-WB-COMP1	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF42	08-34571-OF42ALR	EW-08-ES-WB-COMP1LR	EPA 6010B	Nickel	0.3	mg/kg		J	14
OF42	08-34572-OF42B	EW-08-ES-WB-COMP2	EPA 6010B	Nickel		mg/kg	U	UJ	14
OF42	08-34572-OF42B	EW-08-ES-WB-COMP2	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF42	08-34572-OF42B	EW-08-ES-WB-COMP2	EPA 8081B	Endosulfan II		ug/kg	Y	U	22
OF42	08-34572-OF42B	EW-08-ES-WB-COMP2	EPA 8081B	2,4'-DDE		ug/kg	Y	U	22
OF42	08-34572-OF42B	EW-08-ES-WB-COMP2	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OF42	08-34572-OF42B	EW-08-ES-WB-comp2	EPA 8081B	4,4'-DDE	46	ug/kg		JN	14
OF42	08-34572-OF42B	EW-08-ES-WB-COMP2	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF42	08-34572-OF42B	EW-08-ES-WB-COMP2	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	UJ	13
OF42	08-34572-OF42B	EW-08-ES-WB-COMP2	Krone et al. 1989	Tributyltin Ion	36	ug/kg		J	13
OF42	08-34572-OF42B	EW-08-ES-WB-COMP2	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	13
OF42	08-34573-OF42C	EW-08-ES-WB-COMP3	EPA 6010B	Nickel	0.2	mg/kg		J	14
OF42	08-34573-OF42C	EW-08-ES-WB-COMP3	EPA 8081B	4,4'-DDE	24	ug/kg	P	JN	3,14
OF42	08-34573-OF42C	EW-08-ES-WB-COMP3	EPA 8270D	4-Chloroaniline		ug/kg	U	UJ	8
OF42	08-34573-OF42C	EW-08-ES-WB-COMP3	EPA 8270D	Aniline		ug/kg	U	R	8
OF42	08-34573-OF42C	EW-08-ES-WB-COMP3	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	R	8
OF42	08-34573-OF42C	EW-08-ES-WB-COMP3	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	UJ	13
OF42	08-34573-OF42C	EW-08-ES-WB-COMP3	Krone et al. 1989	Tributyltin Ion	22	ug/kg		J	13
OF42	08-34573-OF42C	EW-08-ES-WB-COMP3	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8,13
OF42	08-34574-OF42D	EW-08-ES-WB-COMP4	EPA 6010B	Nickel		mg/kg	U	UJ	14
OF42	08-34574-OF42D	EW-08-ES-WB-COMP4	EPA 8081B	Endosulfan II		ug/kg	Y	U	22
OF42	08-34574-OF42D	EW-08-ES-WB-COMP4	EPA 8081B	2,4'-DDE		ug/kg	Y	U	22
OF42	08-34574-OF42D	EW-08-ES-WB-COMP4	EPA 8081B	trans-Nonachlor		ug/kg	Y	U	22
OF42	08-34574-OF42D	EW-08-ES-WB-COMP4	EPA 8081B	gamma Chlordane		ug/kg	Y	U	22
OF42	08-34574-OF42D	EW-08-ES-WB-comp4	EPA 8081B	4,4'-DDE	43	ug/kg		JN	14
OF42	08-34574-OF42D	EW-08-ES-WB-COMP4	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF42	08-34574-OF42D	EW-08-ES-WB-COMP4	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF42	08-34575-OF42E	EW-08-ES-WB-COMP5	EPA 6010B	Nickel	0.2	mg/kg		J	14
OF42	08-34575-OF42E	EW-08-ES-WB-COMP5	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF42	08-34575-OF42E	EW-08-ES-WB-COMP5	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF42	08-34576-OF42F	EW-08-ES-WB-COMP6	EPA 6010B	Nickel		mg/kg	U	UJ	14
OF42	08-34576-OF42F	EW-08-ES-WB-COMP6	EPA 8081B	Endosulfan II		ug/kg	Y	U	22
OF42	08-34576-OF42F	EW-08-ES-WB-COMP6	EPA 8081B	2,4'-DDE		ug/kg	Y	U	22

QUALIFIED DATA SUMMARY TABLE
East Waterway - Fish and Shellfish

SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OF42	08-34576-OF42F	EW-08-ES-WB-comp6	EPA 8081B	4,4'-DDE	37	ug/kg		JN	14
OF42	08-34576-OF42F	EW-08-ES-WB-COMP6	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF42	08-34576-OF42F	EW-08-ES-WB-COMP6	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF42	08-34577-OF42G	EW-08-ES-WB-COMP7	EPA 6010B	Nickel	0.3	mg/kg		J	14
OF42	08-34577-OF42G	EW-08-ES-WB-COMP7	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF42	08-34577-OF42G	EW-08-ES-WB-COMP7	EPA 8081B	2,4'-DDE		ug/kg	Y	U	22
OF42	08-34577-OF42G	EW-08-ES-WB-COMP7	EPA 8081B	4,4'-DDE	32	ug/kg	P	JN	3,14
OF42	08-34577-OF42G	EW-08-ES-WB-COMP7	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF42	08-34577-OF42G	EW-08-ES-WB-COMP7	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF42	08-34578-OF42H	EW-08-ES-WB-COMP8	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF42	08-34578-OF42H	EW-08-ES-WB-COMP8	EPA 8081B	4,4'-DDE	22	ug/kg	P	JN	3,14
OF42	08-34578-OF42H	EW-08-ES-WB-COMP8	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF42	08-34578-OF42H	EW-08-ES-WB-COMP8	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF42	08-34579-OF42I	EW-08-ES-WB-COMP9	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF42	08-34579-OF42I	EW-08-ES-WB-COMP9	EPA 8081B	4,4'-DDE	22	ug/kg	P	JN	3,14
OF42	08-34579-OF42I	EW-08-ES-WB-COMP9	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF42	08-34579-OF42I	EW-08-ES-WB-COMP9	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF42	08-34580-OF42J	EW-08-ES-WB-COMP10	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF42	08-34580-OF42J	EW-08-ES-WB-COMP10	EPA 8081B	4,4'-DDE	21	ug/kg	P	JN	3,14
OF42	08-34580-OF42J	EW-08-ES-WB-COMP10	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF42	08-34580-OF42J	EW-08-ES-WB-COMP10	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF42	08-34581-OF42K	EW-08-ES-WB-COMP11	EPA 6010B	Nickel	0.2	mg/kg		J	14
OF42	08-34581-OF42K	EW-08-ES-WB-COMP11	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF42	08-34581-OF42K	EW-08-ES-WB-COMP11	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF42	08-34581-OF42K	EW-08-ES-WB-COMP11	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF43	08-34593-OF43A	EW-08-ES-FL-COMP1	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF43	08-34593-OF43A	EW-08-ES-FL-COMP1	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF43	08-34593-OF43A	EW-08-ES-FL-COMP1	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF43	08-34593-OF43ALR	EW-08-ES-FL-COMP1LR	EPA 6010B	Nickel	0.3	mg/kg		J	14
OF43	08-34594-OF43B	EW-08-ES-FL-COMP2	EPA 6010B	Nickel		mg/kg	U	UJ	14
OF43	08-34594-OF43B	EW-08-ES-FL-COMP2	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF43	08-34594-OF43B	EW-08-ES-FL-COMP2	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF43	08-34594-OF43B	EW-08-ES-FL-COMP2	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF43	08-34595-OF43C	EW-08-ES-FL-COMP3	EPA 6010B	Nickel		mg/kg	U	UJ	14
OF43	08-34595-OF43C	EW-08-ES-FL-COMP3	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF43	08-34595-OF43C	EW-08-ES-FL-COMP3	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF43	08-34595-OF43C	EW-08-ES-FL-COMP3	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF43	08-34596-OF43D	EW-08-ES-FL-COMP4	EPA 6010B	Nickel		mg/kg	U	UJ	14
OF43	08-34596-OF43D	EW-08-ES-FL-COMP4	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF43	08-34596-OF43D	EW-08-ES-FL-COMP4	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF43	08-34596-OF43D	EW-08-ES-FL-COMP4	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF43	08-34597-OF43E	EW-08-ES-FL-COMP5	EPA 6010B	Nickel		mg/kg	U	UJ	14
OF43	08-34597-OF43E	EW-08-ES-FL-COMP5	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF43	08-34597-OF43E	EW-08-ES-FL-COMP5	EPA 8081B	2,4'-DDE		ug/kg	Y	U	22
OF43	08-34597-OF43E	EW-08-ES-FL-COMP5	EPA 8081B	4,4'-DDE	28	ug/kg	P	JN	3,14
OF43	08-34597-OF43E	EW-08-ES-FL-COMP5	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF43	08-34597-OF43E	EW-08-ES-FL-COMP5	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF43	08-34598-OF43F	EW-08-ES-FL-COMP6	EPA 6010B	Nickel		mg/kg	U	UJ	14
OF43	08-34598-OF43F	EW-08-ES-FL-COMP6	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF43	08-34598-OF43F	EW-08-ES-FL-COMP6	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF43	08-34598-OF43F	EW-08-ES-FL-COMP6	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF43	08-34599-OF43G	EW-08-ES-FL-COMP7	EPA 6010B	Nickel		mg/kg	U	UJ	14
OF43	08-34599-OF43G	EW-08-ES-FL-COMP7	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF43	08-34599-OF43G	EW-08-ES-FL-COMP7	EPA 8270D	4-Chloroaniline		ug/kg	U	UJ	8
OF43	08-34599-OF43G	EW-08-ES-FL-COMP7	EPA 8270D	Aniline		ug/kg	U	R	8
OF43	08-34599-OF43G	EW-08-ES-FL-COMP7	EPA 8270D	3,3'-Dichlorobenzidine		ug/kg	U	UJ	8
OF43	08-34599-OF43G	EW-08-ES-FL-COMP7	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF43	08-34600-OF43H	EW-08-ES-FL-COMP8	EPA 6010B	Nickel		mg/kg	U	UJ	14
OF43	08-34600-OF43H	EW-08-ES-FL-COMP8	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22

QUALIFIED DATA SUMMARY TABLE
East Waterway - Fish and Shellfish

SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OF43	08-34600-OF43H	EW-08-ES-FL-COMP8	EPA 8081B	4,4'-DDE	23	ug/kg	P	JN	3,14
OF43	08-34600-OF43H	EW-08-ES-FL-COMP8	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF43	08-34600-OF43H	EW-08-ES-FL-COMP8	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF43	08-34601-OF43I	EW-08-ES-FL-COMP9	EPA 6010B	Nickel		mg/kg	U	UJ	14
OF43	08-34601-OF43I	EW-08-ES-FL-COMP9	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF43	08-34601-OF43I	EW-08-ES-FL-COMP9	EPA 8081B	4,4'-DDE	23	ug/kg	P	JN	3,14
OF43	08-34601-OF43I	EW-08-ES-FL-COMP9	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF43	08-34601-OF43I	EW-08-ES-FL-COMP9	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF43	08-34602-OF43J	EW-08-ES-FL-COMP10	EPA 6010B	Nickel		mg/kg	U	UJ	14
OF43	08-34602-OF43J	EW-08-ES-FL-COMP10	EPA 8081B	Heptachlor Epoxide		ug/kg	Y	U	22
OF43	08-34602-OF43J	EW-08-ES-FL-COMP10	EPA 8081B	4,4'-DDE	20	ug/kg	P	JN	3,14
OF43	08-34602-OF43J	EW-08-ES-FL-COMP10	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF43	08-34602-OF43J	EW-08-ES-FL-COMP10	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OF43	08-34603-OF43K	EW-08-ES-FL-COMP11	EPA 6010B	Nickel		mg/kg	U	UJ	14
OF43	08-34603-OF43K	EW-08-ES-FL-COMP11	EPA 8270D	Aniline		ug/kg	U	UJ	8
OF43	08-34603-OF43K	EW-08-ES-FL-COMP11	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 6010B	Chromium	0.3	mg/kg		J	14
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 6010B	Nickel		mg/kg	U	UJ	14
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	cis-Nonachlor		ug/kg	Y	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Mirex		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	beta-BHC		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	delta-BHC		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Heptachlor		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Aldrin		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Dieldrin		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	4,4'-DDE	17	ug/kg		R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Endrin		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	4,4'-DDT		ug/kg	Y	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Toxaphene		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	EPA 8270D	Aniline		ug/kg	U	UJ	8
OG18	09-136-OG18A	EW-08-SS-WB-COMP1	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OG18	09-136-OG18ALR	EW-08-SS-WB-COMP1LR	EPA 6010B	Chromium	0.2	mg/kg		J	14
OG18	09-136-OG18ALR	EW-08-SS-WB-COMP1LR	EPA 6010B	Nickel		mg/kg	U	UJ	14
OG18	09-136-OG18ARE	EW-08-SS-WB-COMP1	EPA 8081B	4,4'-DDE	18	ug/kg	JP	JN	3,14
OG18	09-136-OG18ARE	EW-08-SS-WB-COMP1	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OG18	09-136-OG18ARE	EW-08-SS-WB-COMP1	EPA 8081B	cis-Nonachlor		ug/kg	Y	U	22
OG18	09-137-OG18B	EW-08-SS-WB-COMP2	EPA 200.8	Selenium	0.6	mg/kg		J	5B
OG18	09-137-OG18B	EW-08-SS-WB-COMP2	EPA 6010B	Nickel		mg/kg	U	UJ	14
OG18	09-137-OG18B	EW-08-SS-WB-COMP2	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OG18	09-137-OG18B	EW-08-SS-WB-COMP2	EPA 8081B	cis-Nonachlor		ug/kg	Y	U	22

QUALIFIED DATA SUMMARY TABLE
East Waterway - Fish and Shellfish

SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OG18	09-137-OG18B	EW-08-SS-WB-comp2	EPA 8081B	Dieldrin	12	ug/kg		JN	14
OG18	09-137-OG18B	EW-08-SS-WB-comp2	EPA 8081B	4,4'-DDE	23	ug/kg		JN	14
OG18	09-137-OG18B	EW-08-SS-WB-COMP2	EPA 8270D	Aniline		ug/kg	U	UJ	8
OG18	09-137-OG18B	EW-08-SS-WB-COMP2	Krone et al. 1989	Tributyltin Ion	67	ug/kg		J	8,9
OG18	09-137-OG18B	EW-08-SS-WB-COMP2	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	beta-BHC		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	delta-BHC		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Heptachlor		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Aldrin		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Dieldrin		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Endrin		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	4,4'-DDT		ug/kg	Y	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Toxaphene		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OG18	09-137-OG18BDL	EW-08-SS-WB-COMP2	EPA 8081B	Mirex		ug/kg	U	R	11
OG18	09-138-OG18C	EW-08-SS-WB-COMP3	EPA 200.8	Selenium	0.6	mg/kg		J	5B
OG18	09-138-OG18C	EW-08-SS-WB-COMP3	EPA 6010B	Chromium	0.2	mg/kg		J	14
OG18	09-138-OG18C	EW-08-SS-WB-COMP3	EPA 6010B	Nickel		mg/kg	U	UJ	14
OG18	09-138-OG18C	EW-08-SS-WB-COMP3	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OG18	09-138-OG18C	EW-08-SS-WB-COMP3	EPA 8081B	cis-Nonachlor		ug/kg	Y	U	22
OG18	09-138-OG18C	EW-08-SS-WB-comp3	EPA 8081B	Dieldrin	10	ug/kg		JN	14
OG18	09-138-OG18C	EW-08-SS-WB-COMP3	EPA 8270D	Aniline		ug/kg	U	UJ	8
OG18	09-138-OG18C	EW-08-SS-WB-COMP3	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	beta-BHC		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	delta-BHC		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Heptachlor		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Aldrin		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Dieldrin		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Endrin		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Methoxychlor		ug/kg	U	R	11

QUALIFIED DATA SUMMARY TABLE
East Waterway - Fish and Shellfish

SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Toxaphene		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OG18	09-138-OG18CDL	EW-08-SS-WB-COMP3	EPA 8081B	Mirex		ug/kg	U	R	11
OG18	09-139-OG18D	EW-08-SS-WB-COMP4	EPA 6010B	Chromium		mg/kg	U	UJ	14
OG18	09-139-OG18D	EW-08-SS-WB-COMP4	EPA 6010B	Nickel		mg/kg	U	UJ	14
OG18	09-139-OG18D	EW-08-SS-WB-COMP4	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OG18	09-139-OG18D	EW-08-SS-WB-COMP4	EPA 8081B	cis-Nonachlor		ug/kg	Y	U	22
OG18	09-139-OG18D	EW-08-SS-WB-COMP4	EPA 8270D	Aniline		ug/kg	U	UJ	8
OG18	09-139-OG18D	EW-08-SS-WB-COMP4	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	beta-BHC		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	delta-BHC		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Heptachlor		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Aldrin		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Dieldrin		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Endrin		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Toxaphene		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OG18	09-139-OG18DDL	EW-08-SS-WB-COMP4	EPA 8081B	Mirex		ug/kg	U	R	11
OG18	09-140-OG18E	EW-08-SS-WB-COMP5	EPA 6010B	Nickel		mg/kg	U	UJ	14
OG18	09-140-OG18E	EW-08-SS-WB-COMP5	EPA 8081B	Endrin		ug/kg	U	R	8
OG18	09-140-OG18E	EW-08-SS-WB-COMP5	EPA 8081B	Endosulfan II		ug/kg	U	R	8
OG18	09-140-OG18E	EW-08-SS-WB-COMP5	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	8
OG18	09-140-OG18E	EW-08-SS-WB-COMP5	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OG18	09-140-OG18E	EW-08-SS-WB-COMP5	EPA 8081B	cis-Nonachlor		ug/kg	Y	U	22
OG18	09-140-OG18E	EW-08-SS-WB-COMP5	EPA 8270D	Aniline		ug/kg	U	UJ	8
OG18	09-140-OG18E	EW-08-SS-WB-COMP5	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	alpha-BHC		ug/kg	U	R	11

QUALIFIED DATA SUMMARY TABLE
East Waterway - Fish and Shellfish

SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	beta-BHC		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	delta-BHC		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Heptachlor		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Aldrin		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Dieldrin		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Endrin		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	4,4'-DDT		ug/kg	Y	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Toxaphene		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OG18	09-140-OG18EDL	EW-08-SS-WB-COMP5	EPA 8081B	Mirex		ug/kg	U	R	11
OG18	09-141-OG18F	EW-08-SS-WB-COMP6	EPA 6010B	Chromium	0.2	mg/kg		J	14
OG18	09-141-OG18F	EW-08-SS-WB-COMP6	EPA 6010B	Nickel		mg/kg	U	UJ	14
OG18	09-141-OG18F	EW-08-SS-WB-COMP6	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OG18	09-141-OG18F	EW-08-SS-WB-COMP6	EPA 8081B	cis-Nonachlor		ug/kg	Y	U	22
OG18	09-141-OG18F	EW-08-SS-WB-COMP6	EPA 8270D	Aniline		ug/kg	U	UJ	8
OG18	09-141-OG18F	EW-08-SS-WB-COMP6	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	beta-BHC		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	delta-BHC		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Heptachlor		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Aldrin		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Dieldrin		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Endrin		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Toxaphene		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	2,4'-DDT		ug/kg	U	R	11

QUALIFIED DATA SUMMARY TABLE
East Waterway - Fish and Shellfish

SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OG18	09-141-OG18FDL	EW-08-SS-WB-COMP6	EPA 8081B	Mirex		ug/kg	U	R	11
OG18	09-142-OG18G	EW-08-SS-WB-COMP7	EPA 6010B	Chromium		mg/kg	U	UJ	14
OG18	09-142-OG18G	EW-08-SS-WB-COMP7	EPA 6010B	Nickel		mg/kg	U	UJ	14
OG18	09-142-OG18G	EW-08-SS-WB-COMP7	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OG18	09-142-OG18G	EW-08-SS-WB-COMP7	EPA 8081B	cis-Nonachlor		ug/kg	Y	U	22
OG18	09-142-OG18G	EW-08-SS-WB-COMP7	EPA 8270D	Aniline		ug/kg	U	UJ	8
OG18	09-142-OG18G	EW-08-SS-WB-COMP7	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	beta-BHC		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	delta-BHC		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Heptachlor		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Aldrin		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Dieldrin		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Endrin		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Toxaphene		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OG18	09-142-OG18GDL	EW-08-SS-WB-COMP7	EPA 8081B	Mirex		ug/kg	U	R	11
OG18	09-143-OG18H	EW-08-SS-WB-COMP8	EPA 6010B	Nickel		mg/kg	U	UJ	14
OG18	09-143-OG18H	EW-08-SS-WB-COMP8	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OG18	09-143-OG18H	EW-08-SS-WB-COMP8	EPA 8081B	cis-Nonachlor		ug/kg	Y	U	22
OG18	09-143-OG18H	EW-08-SS-WB-COMP8	EPA 8270D	Aniline		ug/kg	U	UJ	8
OG18	09-143-OG18H	EW-08-SS-WB-COMP8	Krone et al. 1989	Tributyltin Ion	30	ug/kg		J	13
OG18	09-143-OG18H	EW-08-SS-WB-COMP8	Krone et al. 1989	Dibutyltin Ion		ug/kg	U	UJ	13
OG18	09-143-OG18H	EW-08-SS-WB-COMP8	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	13
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	beta-BHC		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	delta-BHC		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Heptachlor		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Aldrin		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Dieldrin		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	4,4'-DDE		ug/kg	U	R	11

QUALIFIED DATA SUMMARY TABLE
East Waterway - Fish and Shellfish

SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Endrin		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Toxaphene		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OG18	09-143-OG18HDL	EW-08-SS-WB-COMP8	EPA 8081B	Mirex		ug/kg	U	R	11
OG20	09-164-OG20A	EW-08-SR-WB-COMP1	EPA 200.8	Selenium	0.5	mg/kg		J	5B
OG20	09-164-OG20A	EW-08-SR-WB-COMP1	EPA 6010B	Silver	0.2	mg/kg		J	8
OG20	09-164-OG20A	EW-08-SR-WB-COMP1	EPA 8270D	Aniline		ug/kg	U	UJ	8
OG20	09-164-OG20ADUP	EW-08-SR-WB-COMP1LR	EPA 200.8	Selenium	0.4	mg/kg		J	5B
OG20	09-164-OG20ALR	EW-08-SR-WB-COMP1LR	EPA 6010B	Silver	0.1	mg/kg		J	8
OG20	09-164-OG20ALR	EW-08-SR-WB-COMP1LR	EPA 6010B	Chromium		mg/kg	U	UJ	14
OG20	09-165-OG20B	EW-08-DC-HP-COMP1	EPA 200.8	Selenium	1.3	mg/kg		J	5B
OG20	09-165-OG20B	EW-08-DC-HP-COMP1	EPA 6010B	Nickel		mg/kg	U	UJ	14
OG20	09-165-OG20B	EW-08-DC-HP-COMP1	EPA 6010B	Silver	0.53	mg/kg		J	8
OG20	09-165-OG20B	EW-08-DC-HP-COMP1	EPA 6010B	Chromium		mg/kg	U	UJ	14
OG20	09-165-OG20B	EW-08-DC-HP-COMP1	EPA 8081B	4,4'-DDT		ug/kg	Y	U	22
OG20	09-165-OG20B	EW-08-DC-HP-COMP1	EPA 8081B	cis-Nonachlor		ug/kg	Y	U	22
OG20	09-165-OG20B	EW-08-DC-HP-COMP1	EPA 8081B	Dieldrin	47	ug/kg	P	JN	3,14
OG20	09-165-OG20B	EW-08-DC-HP-comp1	EPA 8081B	4,4'-DDE	55	ug/kg		JN	14
OG20	09-165-OG20B	EW-08-DC-HP-COMP1	EPA 8270D	Aniline		ug/kg	U	UJ	8
OG20	09-165-OG20B	EW-08-DC-HP-COMP1	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Mirex		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Aldrin		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	beta-BHC		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	delta-BHC		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	4,4'-DDT		ug/kg	Y	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	cis-Nonachlor		ug/kg	Y	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Dieldrin		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Endrin		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	4,4'-DDD		ug/kg	U	R	11

QUALIFIED DATA SUMMARY TABLE
East Waterway - Fish and Shellfish

SDG	Lab ID	Sample ID	Method	Analyte	Result	Units	Lab Qualifier	DV Qualifier	DV Qual Reason
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Heptachlor		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Toxaphene		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OG20	09-165-OG20BDL	EW-08-DC-HP-COMP1	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 200.8	Selenium	0.9	mg/kg		J	5B
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 6010B	Nickel		mg/kg	U	UJ	14
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 6010B	Silver	0.18	mg/kg		J	8
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 6010B	Chromium		mg/kg	U	UJ	14
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Heptachlor Epoxide		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Endosulfan Sulfate		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Hexachlorobenzene		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Mirex		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	oxy Chlordane		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Aldrin		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	alpha-BHC		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	beta-BHC		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	delta-BHC		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Endosulfan II		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	2,4'-DDE		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	trans-Nonachlor		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	4,4'-DDT		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	alpha Chlordane		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	cis-Nonachlor		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	gamma Chlordane		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	2,4'-DDD		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Endrin Ketone		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	gamma-BHC (Lindane)		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Dieldrin		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Endrin		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Methoxychlor		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	4,4'-DDD		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	4,4'-DDE		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Endrin Aldehyde		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Heptachlor		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	2,4'-DDT		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Toxaphene		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Hexachlorobutadiene		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8081B	Endosulfan I		ug/kg	U	R	11
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8270D	Benzoic Acid		ug/kg	U	UJ	8
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	EPA 8270D	Aniline		ug/kg	U	UJ	8
OG20	09-166-OG20C	EW-08-DC-EM-COMP1	Krone et al. 1989	Butyltin Ion		ug/kg	U	UJ	8

EcoChem, INC.
Environmental Data Quality

DATA VALIDATION REPORT

East Waterway – Fish and Shellfish

Prepared for:

Windward Environmental, LLC
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Prepared by:

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EcoChem Project: C22016-3

October 29, 2009

Approved for Release:

Eric Strout
Project Manager
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of full validation or summary validation performed on fish and shellfish tissue samples and quality control sample data for the East Waterway Fish and Shellfish Study. A complete list of samples is provided in the **SAMPLE INDEX**.

Samples were analyzed by Columbia Analytical Services, Kelso, Washington and Analytical Resources, Inc. (ARI), Tukwila, Washington. The analytical methods and EcoChem project chemists are listed below.

Analysis	Method	Primary Review	Secondary Review
Polynuclear Aromatic Hydrocarbons	EPA 8270C-SIM	Lucy Panteleeff	Eric Strout
Bis(2-Ethylhexyl)phthalate	EPA 8270D-SIM	Megan Kilner	
Pentachlorophenol	EPA 8041	Lucy Panteleeff	

The data were reviewed using guidance and quality control criteria documented in the analytical methods; the quality assurance project plan (QAPP) from the *East Waterway Operable Unit Supplemental RIFS, Fish and Shellfish Tissue Collection and Chemical Analysis* (December, 2008), and *National Functional Guidelines for Organic Data Review* (USEPA 1999).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values are assigned an R, the data are to be rejected and should not be used for any site evaluation purposes. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Data qualifier definitions, reason codes, and validation criteria are included as **APPENDIX A**. A Qualified Data Summary Table is included in **APPENDIX B**. Data Validation Worksheets will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

Sample Index
Windward
East Waterway - Fish and Shellfish Study

SDG	Sample ID	Laboratory ID	PAH	Pentachlorophenol	Bis(2-Ethylhexyl)phthalate
PJ35	EW-08-SB002-BR-01	09-18387-PJ35A		✓	✓
PJ35	EW-08-SB002-BR-02	09-18388-PJ35B		✓	✓
PJ35	EW-08-SB003-BR-03	09-18389-PJ35C		✓	✓
PJ35	EW-08-SB004-BR-04	09-18390-PJ35D		✓	✓
PJ35	EW-08-SB005-BR-05	09-18391-PJ35E		✓	✓
PJ35	EW-08-SB006-BR-06	09-18392-PJ35F		✓	✓
PJ35	EW-08-SB007-BR-07	09-18393-PJ35G		✓	✓
PJ35	EW-08-SB008-BR-08	09-18394-PJ35H		✓	✓
PJ35	EW-08-SB009-BR-09	09-18395-PJ35I		✓	✓
PJ35	EW-08-SB012-BR-10	09-18396-PJ35J		✓	✓
PJ35	EW-08-SB011-BR-11	09-18397-PJ35K		✓	✓
PJ35	EW-08-SB012-BR-12	09-18398-PJ35L		✓	✓
PJ35	EW-08-SB013-BR-13	09-18399-PJ35M		✓	✓
PL64	EW08-RRDC-EM-SUPCOMP1	09-19742-PL64A		✓	✓
PL64	EW08-RRDC-EM-SUPCOMP2	09-19743-PL64B		✓	✓
PL64	EW08-RRDC-EM-SUPCOMP3	09-19744-PL64C		✓	✓
PL64	EW08-RRDC-HP-SUPCOMP1	09-19745-PL64D		✓	✓
PL64	EW08-RRDC-HP-SUPCOMP2	09-19746-PL64E		✓	✓
PL64	EW08-RRDC-HP-SUPCOMP3	09-19747-PL64F		✓	✓
PL64	EW08-ES-FL-SUPCOMP1	09-19748-PL64G		✓	✓
PL64	EW08-ES-FL-SUPCOMP2	09-19749-PL64H		✓	✓
PL64	EW08-ES-FL-SUPCOMP3	09-19750-PL64I		✓	✓
PL64	EW08-ES-WB-SUPCOMP1	09-19751-PL64J		✓	✓
PL64	EW08-ES-WB-SUPCOMP2	09-19752-PL64K		✓	✓
PL64	EW08-ES-WB-SUPCOMP3	09-19753-PL64L		✓	✓
PL64	EW08-SS-WB-SUPCOMP1	09-19754-PL64M		✓	✓
PL64	EW08-SS-WB-SUPCOMP2	09-19755-PL64N		✓	✓
PL64	EW08-SS-WB-SUPCOMP3	09-19756-PL64O		✓	✓
PL68	EW08-MS-WB-SUPCOMP1	09-19776-PL68A		✓	✓
PL68	EW08-MS-WB-SUPCOMP2	09-19777-PL68B		✓	✓
PL68	EW08-MS-WB-SUPCOMP3	09-19778-PL68C		✓	✓
K0907127	EW-08-SB002-BR-02	K0907127-002	✓		
K0907127	EW-08-SB003-BR-03	K0907127-003	✓		
K0907127	EW-08-SB004-BR-04	K0907127-004	✓		
K0907127	EW-08-SB005-BR-05	K0907127-005	✓		
K0907127	EW-08-SB006-BR-06	K0907127-006	✓		
K0907127	EW-08-SB007-BR-07	K0907127-007	✓		
K0907127	EW-08-SB008-BR-08	K0907127-008	✓		
K0907127	EW-08-SB009-BR-09	K0907127-009	✓		
K0907127	EW-08-SB012-BR-10	K0907127-010	✓		
K0907127	EW-08-SB011-BR-11	K0907127-011	✓		
K0907127	EW-08-SB012-BR-12	K0907127-012	✓		
K0907127	EW-08-SB013-BR-13	K0907127-013	✓		
K0907551	EW-08-DC-EM-COMP1	K0907551-002	✓		
K0907551	EW-08-RR-EM-COMP1	K0907551-003	✓		
K0907551	EW-08-RR-EM-COMP2	K0907551-004	✓		
K0907551	EW-08-RR-EM-COMP3	K0907551-005	✓		
K0907551	EW-08-RR-EM-COMP4	K0907551-006	✓		
K0907551	EW-08-RR-EM-COMP5	K0907551-007	✓		
K0907551	EW-08-RR-EM-COMP6	K0907551-008	✓		
K0907551	EW-08-RR-EM-COMP7	K0907551-009	✓		

Sample Index
Windward
East Waterway - Fish and Shellfish Study

SDG	Sample ID	Laboratory ID	PAH	Pentachlorophenol	Bis(2-Ethylhexyl)phthalate
K0907551	EW-08-RR-EM-COMP8	K0907551-010	✓		
K0907551	EW-08-RR-HP-COMP1	K0907551-011	✓		
K0907551	EW-08-RR-HP-COMP2	K0907551-012	✓		
K0907551	EW-08-RR-HP-COMP3	K0907551-013	✓		
K0907551	EW-08-RR-HP-COMP4	K0907551-014	✓		
K0907551	EW-08-RR-HP-COMP5	K0907551-015	✓		
K0907551	EW-08-RR-HP-COMP7	K0907551-016	✓		
K0907551	EW-08-RR-HP-COMP8	K0907551-017	✓		
K0907551	EW-08-ES-FL-COMP1	K0907551-019	✓		
K0907551	EW-08-ES-FL-COMP2	K0907551-020	✓		
K0907551	EW-08-ES-FL-COMP3	K0907551-021	✓		
K0907551	EW-08-ES-FL-COMP5	K0907551-022	✓		
K0907551	EW-08-ES-FL-COMP6	K0907551-023	✓		
K0907551	EW-08-ES-FL-COMP7	K0907551-024	✓		
K0907551	EW-08-ES-FL-COMP8	K0907551-025	✓		
K0907551	EW-08-ES-FL-COMP9	K0907551-026	✓		
K0907551	EW-08-ES-FL-COMP10	K0907551-027	✓		
K0907551	EW-08-ES-FL-COMP11	K0907551-028	✓		
K0907551	EW-08-ES-FL-COMP4	K0907551-029	✓		
K0907551	EW-08-ES-WB-COMP1	K0907551-030	✓		
K0907551	EW-08-ES-WB-COMP3	K0907551-032	✓		
K0907551	EW-08-ES-WB-COMP4	K0907551-033	✓		
K0907551	EW-08-ES-WB-COMP5	K0907551-034	✓		
K0907551	EW-08-ES-WB-COMP6	K0907551-035	✓		
K0907551	EW-08-ES-WB-COMP7	K0907551-036	✓		
K0907551	EW-08-ES-WB-COMP8	K0907551-037	✓		
K0907551	EW-08-ES-WB-COMP9	K0907551-038	✓		
K0907551	EW-08-ES-WB-COMP10	K0907551-039	✓		
K0907551	EW-08-ES-WB-COMP11	K0907551-040	✓		
K0907551	EW-08-SS-WB-COMP1	K0907551-041	✓		
K0907551	EW-08-SS-WB-COMP2	K0907551-042	✓		
K0907551	EW-08-SS-WB-COMP3	K0907551-043	✓		
K0907551	EW-08-SS-WB-COMP4	K0907551-044	✓		
K0907551	EW-08-SS-WB-COMP5	K0907551-045	✓		
K0907551	EW-08-SS-WB-COMP6	K0907551-046	✓		
K0907551	EW-08-SS-WB-COMP7	K0907551-047	✓		
K0907551	EW-08-SS-WB-COMP8	K0907551-048	✓		
K0907575	EW-08-MS-WB-COMP1	K0907575-001	✓		
K0907575	EW-08-MS-WB-COMP2	K0907575-002	✓		
K0907575	EW-08-MS-WB-COMP3	K0907575-003	✓		
K0907575	EW-08-MS-WB-COMP4	K0907575-004	✓		
K0907575	EW-08-MS-WB-COMP5	K0907575-005	✓		
K0907575	EW-08-MS-WB-COMP6	K0907575-006	✓		
K0907575	EW-08-MS-WB-COMP7	K0907575-007	✓		
K0907575	EW-08-MS-WB-COMP8	K0907575-008	✓		
K0907575	EW-08-MS-WB-COMP9	K0907575-009	✓		
K0907575	EW-08-MS-WB-COMP10	K0907575-010	✓		
K0907575	EW-08-MS-WB-COMP11	K0907575-011	✓		

DATA VALIDATION REPORT
East Waterway - Fish and Shellfish
PAH by SW846 Method 8270C-SIM

This report documents the review of analytical data from the analysis of tissue samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Columbia Analytical Services, Inc. (CAS), Kelso, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
K0907127	12 Tissue	Summary
K0907551 – Batch KWG0907417	18 Tissue	Full
K0907551 – Batch KWG0907418	19 Tissue	Summary
K0907551 – Batch KWG0907419	8 Tissue	Summary
K0907575	11 Tissue	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data packages. All sample results were verified along with ten percent of the QC results.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1 Holding Times and Sample Preservation
GC/MS Tuning
Initial Calibration (ICAL)
Continuing Calibration (CCAL)
2 Laboratory Blanks
2 Surrogate Compounds
Laboratory Control Samples (LCS)
Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
1 Internal Standards
Compound Identification
1 Reporting Limits
Reported Results
1 Calculation Verification (Full validation only)

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[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

Several of the cooler temperatures were less than the advisory 2°C lower control limit, at temperatures ranging from -0.8°C to 1.6°C. Since the samples were immediately transferred to an archive (-20°C) storage freezer upon receipt at the laboratory, the lower cooler temperatures should have no affect on the reported results. No action was taken.

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. Various target analytes were detected in the method blanks; most frequently naphthalene and 2-methylnaphthalene. The detected analytes, concentrations, associated samples, and action levels are documented in the data validation worksheets. However, however only the following analytes required qualification in one or more samples in the associated data sets:

SDG K0907127: perylene (12 results), phenanthrene (12 results), benzo(k)fluoranthene (4 results), benzo(b)fluoranthene (3 results), benzo(g,h,i)perylene (3 results), indeno(1,2,3-cd)pyrene (2 results), fluoranthene (2 results), dibenzo(a,h)anthracene, benzo(a)anthracene, benzo(a)pyrene, and pyrene (1 result each)

SDG K0907551: 1-methylnaphthalene (18 results), 2-methylnapthalene (21 results), and naphthalene (41 results)

SDG K0907575: 2-methylnapthalene (2 results) and naphthalene (11 results)

Surrogate Compounds

SDG K0907127: All surrogate percent recovery (%R) values were less than the lower control limits in Sample EW-08-SB013-BR-13. All positive results and the reporting limits for non-detected results were estimated (J/UJ-13) due to the potential low bias.

Internal Standards

SDG K0907551: The recoveries for the internal standards chrysene-d12 and perylene-d12 were less than the 50% control limit in Sample EW-08-SS-WB-COMP1. The recoveries for the internal standards chrysene-d12 were less than the 50% control limit in Samples EW-08-SS-WB-COMP7 and EW-08-SS-WB-COMP8. The samples were re-analyzed at a 5x dilution. All internal standard recoveries were acceptable in the dilution analyses.

For each sample, the laboratory only reported the most appropriate results, so the affected analytes were reported with elevated detection limits. No further action was necessary.

Reporting Limits

SDG K0907127: The reporting limits for some target analytes were elevated and flagged as "Ui" to indicate the presence of non-target background interference. No further action was necessary.

SDG K0907551: Several samples were analyzed at a 5x dilution. Reporting limits were elevated accordingly. The laboratory flagged some reporting limits as "Ui" to indicate the presence of non-target background interference. No further action was necessary.

Calculation Verification (Full validation only)

SDG K0907551 (batch KWG0907417): Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample/ laboratory control sample duplicate (LCS/LCSD), and matrix spike/matrix spike duplicate (MS/MSD) %R values, with the exceptions noted above. Precision was also acceptable as demonstrated by the RPD values for the MS/MSD analyses, with the exceptions previously noted.

Data were qualified as not detected based on method blank contamination. Data were estimated due to surrogate accuracy outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway - Fish and Shellfish
Bis(2-ethylhexyl)phthalate by SW846 8270D-SIM

This report documents the review of analytical data from the analysis of tissue samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc. (ARI), Tukwila, Washington. Refer to the **Sample Index** for a list of samples reviewed.

SDG	Number of Samples	Validation Level
PJ35	13 Tissue	Full
PL64	15 Tissue	Summary
PL68	3 Tissue	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A verification of the electronic data deliverable (EDD) was performed by comparison to the hardcopy laboratory data packages. All sample results and ten percent of the QC results were verified.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1 Holding Times and Sample Preservation
GC/MS Tuning
Initial Calibration (ICAL)
Continuing Calibration (CCAL)
2 Laboratory Blanks
2 Surrogate Compounds
Laboratory Control Samples (LCS/LCSD)
2 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
2 Internal Standards
2 Reporting Limits
Reported Results
Compound Identification
1 Calculation Verification (Full validation only)

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[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratories received some sample coolers with temperatures that were outside the control limits, as noted below.

SDG PJ35: For the samples collected 8/11/08, the cooler temperature was recorded as 12°C upon receipt at the laboratory. However, the samples were collected the same day and hand delivered to the laboratory. The laboratory cooler receipt form notes that the samples were well iced. The samples were immediately transferred to an archive (-20°C) storage freezer.

Since the samples were hand-delivered the same day as collection and sufficient ice was present in the cooler, the samples should not have been affected by the elevated temperature. No action was taken.

SDG PL64/PL68: Several of the cooler temperatures were less than the advisory 2°C lower control limit, at temperatures ranging from -0.8°C to 1.6°C. Since the samples were immediately transferred to an archive (-20°C) storage freezer upon receipt at the laboratory, the lower cooler temperatures should have no affect on the reported results. No action was taken.

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at ten times the concentration detected in the blank. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. Bis(2-ethylhexyl)phthalate was detected in all method blanks. The following data points were qualified with U-7:

SDG PJ35: 1 result

SDG PL64 & PL68: All associated positive results (18 results)

Surrogate Compounds

SDG PJ35: The d14-p-terphenyl surrogate percent recovery (%R) value was less than the 30% lower control limit in Samples EW-08-SB002-BR01 and EW-08-SB002-BR-02. Bis(2-ethylhexyl) phthalate was not detected in either sample; the reporting limits were estimated (UJ-13) due to the potential low bias.

The surrogate %R value was also less than the lower control limit in Sample EW-08-SB006-BR-06. This sample was reanalyzed at a 5x dilution. The surrogate %R value was acceptable in the dilution. The original results were qualified as do-not-report (DNR-11) and should not be used. The results from the dilution are acceptable as reported. See the ***Internal Standards*** section for further discussion.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)

SDG PL64 & PL68: MS/MSD analyses were performed using Sample EW-08-MS-WB-SUPCOMP1. The MS/MSD %R values for bis(2-ethylhexyl)phthalate were negative, as the concentration in the

parent sample was greater than the MS and MSD concentrations. Since the parent sample concentration (200 µg/Kg) was not significantly greater than the spike amount (160 µg/Kg), this may indicate a lack of sample homogeneity or other matrix issues. The bis(2-ethylhexyl)phthalate result in the parent sample was qualified as not detected based on method blank contamination, and was also estimated due to the matrix spike recovery outliers (UJ-7,8).

Internal Standards

SDG PJ35: Internal standard outliers were noted in nine of the 13 samples. The reporting limits were also elevated in these samples, indicating matrix interferences. The samples were reanalyzed as 5x dilutions. The internal standard areas were acceptable in the dilution analyses. For six of the reanalyses, the dilution also mitigated the interference, resulting in lower detection limits than the original (non-diluted) analyses.

The original results were all qualified do-not report (DNR-11), and should not be used. The data from the dilutions are acceptable as reported.

Reporting Limits

SDG PJ35: As discussed in the ***Internal Standards*** section, nine of the samples were analyzed at a 5x dilution. Reporting limits were elevated accordingly. Due to matrix interference, the laboratory applied a "Y" flag to the Samples EW-08-SB002-BR-01 and EW-08-SB003-BR-03 reporting limits. To indicate that the reported result is an elevated reporting limit and not a detected analyte, the results were qualified as not detected (U-22).

SDG PL64: Due to limited sample volume, 6 to 7 grams of sample were extracted for Samples EW-08-SS-WB–SUPCOMP1, EW-08-SS-WB–SUPCOMP2, and EW-08-SS-WB–SUPCOMP3, rather than the 15 gram sample size used for the other samples. This resulted in elevated reporting limits (37, 36, and 46 µg/Kg verses approximately 16 µg/Kg for the other samples). No action was taken, other than to note the elevated reporting limits.

Calculation Verification (Full validation only)

SDG PJ35: Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory LCS, and MS/MSD %R values, with the exceptions noted above. Precision was also acceptable as demonstrated by the RPD values for the MS/MSD analyses.

Data were qualified as not detected based on method blank contamination. Data were estimated based on surrogate and MS/MSD accuracy outliers.

Data were qualified as do-not-report (DNR) to indicate which result (of multiple results) should not be used. Since a usable data point remains for each analyte in each sample, completeness is not affected.

Data that have been qualified DNR should not be used for any purpose. All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
East Waterway - Fish and Shellfish
Pentachlorophenol by EPA Method 8041

This report documents the review of analytical data from tissue samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc., Tukwila, Washington. Refer to the **SAMPLE INDEX** for a list of the individual samples.

SDG	Number of Samples	Validation Level
PJ35	13 Tissue	Full
PL64	15 Tissue	Summary
PL68	3 Tissue	Summary

I. DATA PACKAGE COMPLETENESS

The laboratories submitted all required deliverables. The laboratories followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Preservation		Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Initial Calibration (ICAL)		Target Analyte List
	Continuing Calibration (CCAL)	1	Reporting Limits
	Laboratory Blanks		Compound Identification
2	Surrogate Compounds		Reported Results
	Laboratory Control Samples (LCS/LCSD)	1	Calculation Verification (Full validation only)

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The laboratories received some sample coolers with temperatures that were outside the control limits, as noted below.

SDG PJ35: For the samples collected 8/11/08, the cooler temperature was recorded as 12°C upon receipt at the laboratory. However, the samples were collected the same day and hand delivered to the laboratory. The laboratory cooler receipt form notes that the samples were well iced. The samples were immediately transferred to an archive (-20°C) storage freezer.

Since the samples were hand-delivered the same day as collection and sufficient ice was present in the cooler, the samples should not have been affected by the elevated temperature. No action was taken.

SDG PL64/PL68: Several of the cooler temperatures were less than the advisory 2°C lower control limit, at temperatures ranging from -0.8°C to 1.6°C. Since the samples were immediately transferred to an archive (-20°C) storage freezer upon receipt at the laboratory, the lower cooler temperatures should have no affect on the reported results. No action was taken.

Surrogate Compounds

SDG PJ35: The surrogate percent recovery (%R) values for Samples EW-08-SB002-BR-01 and EW-08-SB002-BR-02 were less than the 30% lower control limit, at 29.4% and 29.2%. Pentachlorophenol was not detected in either sample. The pentachlorophenol reporting limits were estimated (UJ-13).

Reporting Limits

SDG PL64: Due to limited sample volume, 6 to 7 grams of sample were extracted for Samples EW-08-SS-WB–SUPCOMP1, EW-08-SS-WB–SUPCOMP2, and EW-08-SS-WB–SUPCOMP3, rather than the 15 gram sample size used for the other samples. This resulted in elevated reporting limits (9.2, 9, and 11 µg/Kg verses approximately 4 µg/Kg for the other samples). No action was taken, other than to note the elevated reporting limits.

Calculation Verification (Full validation only)

SDG PJ35: Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory performed an appropriate analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample (LCS), and matrix spike/matrix spike duplicate (MS/MSD) percent recovery values, with the above noted exceptions. Precision was also acceptable as demonstrated by the RPD values for the MS/MSD analysis.

Data were estimated with a possible low bias based on surrogate recovery outliers.

Data, as qualified, are acceptable for use.

EcoChem, INC.
Environmental Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS REASON CODES AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

1	Holding Time/Sample Preservation
2	Chromatographic pattern in sample does not match pattern of calibration standard.
3	Compound Confirmation
4	Tentatively Identified Compound (TIC) (associated with NJ only)
5A	Calibration (initial)
5B	Calibration (continuing)
6	Field Blank Contamination
7	Lab Blank Contamination (e.g., method blank, instrument, etc.)
8	Matrix Spike(MS & MSD) Recoveries
9	Precision (all replicates)
10	Laboratory Control Sample Recoveries
11	A more appropriate result is reported (associated with “R” and “DNR” only)
12	Reference Material
13	Surrogate Spike Recoveries (a.k.a., labeled compounds & recovery standards)
14	Other (define in validation report)
15	GFAA Post Digestion Spike Recoveries
16	ICP Serial Dilution % Difference
17	ICP Interference Check Standard Recovery
18	Trip Blank Contamination
19	Internal Standard Performance (e.g., area, retention time, recovery)
20	Linear Range Exceeded
21	Potential False Positives
22	Elevated Detection Limit Due to Interference (i.e., laboratory, chemical and/or matrix)

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	Water: J(+)/UJ(-) if ext. > 7 and < 21 days J(+)/R(-) if ext > 21 days (EcoChem PJ) Solids/Wastes: J(+)/UJ(-) if ext. > 14 and < 42 days J(+)/R(-) if ext. > 42 days (EcoChem PJ) J(+)/UJ(-) if analysis >40 days	1
Tuning	DFTPP Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Field Blanks (Not Required)	No results > CRQL	Apply 5X/10X rule; U(+) < action level	6

EcoChem Validation Guidelines for Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) in parent sample if RPD > CL	9
LCS low conc. H2O SVOA	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS regular SVOA (H2O & solid)	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% (EcoChem PJ)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	Minimum of 3 acid and 3 base/neutral compounds Use method acceptance criteria	Do not qualify if only 1 acid and/or 1 B/N surrogate is out unless <10% J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) if %R < 10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% RT>30 seconds, narrate and Notify PM	19
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate and qualify if required by project (EcoChem PJ)	9
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NJ the TIC unless: R(+) common laboratory contaminants See Technical Director for ID issues	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	See Technical Director if outliers	14 21 (false +)

EcoChem Validation Guidelines for Pesticides, PCBs, Herbicides, and Phenol by GC/ECD (Based on Organic NFG 1999 & EPA SW-846 Methods 8081/8082/8041/8151)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	J(+)/UJ(-) if ext/analyzed > HT J(+)/R(-) if ext/analyzed > 3X HT (EcoChem PJ)	1
Resolution Check	Beginning of ICAL Sequence Within RTW Resolution >90%	Narrate (Use Professional Judgement to qualify)	14
Instrument Performance (Breakdown)	DDT Breakdown: < 20% Endrin Breakdown: <20% Combined Breakdown: <30% Compounds within RTW	J(+) DDT NJ(+) DDD and/or DDE R(-) DDT - If (+) for either DDE or DDD J(+) Endrin NJ(+) EK and/or EA R(-) Endrin - If (+) for either EK or EA	5A
Retention Times	Surrogates: TCX (+/- 0.05); DCB (+/- 0.10) Target compounds: elute before heptachlor epoxide (+/- 0.05) elute after heptachlor epoxide (+/- 0.07)	NJ(+)/R(-) results for analytes with RT shifts For full DV, use PJ based on examination of raw data	5B
Initial Calibration	Pesticides: Low=CRQL, Mid=4X, High=16X Multiresponse - one point Calibration %RSD<20% %RSD<30% for surr; two comp. may exceed if <30% Resolution in Mix A and Mix B >90%	J(+)/UJ(-)	5A
Continuing Calibration	Alternating PEM standard and INDA/INDB standards every 12 hours (each preceeded by an inst. Blank) %D < 25% Resolution >90% in IND mixes; 100% for PEM	J(+)/UJ(-) J(+)R(-) if %D > 90% PJ for resolution	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample result is < CRQL and < 5X rule (raise sample value to CRQL) U(+) if sample result is > or equal to CRQL and < 5X rule (at reported sample value)	7
Instrument Blanks	Analyzed at the beginning of every 12 hour sequence No analyte > 1/2 CRQL	Same as Method Blank	7
Field Blanks	Not addressed by NFG No results > CRQL	Apply 5X rule; U(+) < action level	6

EcoChem Validation Guidelines for Pesticides, PCBs, Herbicides, and Phenol by GC/ECD (Based on Organic NFG 1999 & EPA SW-846 Methods 8081/8082/8041/8151)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One set per matrix per batch Method Acceptance Criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8
MS/MSD (RPD)	One set per matrix per batch Method Acceptance Criteria	J(+) in parent sample if RPD > CL	9
LCS	One per SDG Method Acceptance Criteria	J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) using PJ if %R <<LCL (< 10%)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+)/UJ(-) assoc. cmpd. in all samples	9
Surrogates	TCX and DCB added to every sample %R = 30-150%	J(+)/UJ(-) if both %R = 10 - 60% J(+) if both >150% J(+)/R(-) if any %R <10%	13
Quantitation/ Identification	Quantitated using ICAL calibration factor (CF) RPD between columns <40%	J(+) if RPD = 40 - 60% NJ(+) if RPD >60% EcoChem PJ - See TM-08	3
Two analyses for one sample	Report only one result per analyte	"DNR" results that should not be used to avoid reporting two results for one sample	11
Sample Clean-up	GPC required for soil samples Florisil required for all samples Sulfur is optional Clean-up standard check %R within CLP limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL	14
Field Duplicates	Use QAPP limits. If no QAPP: Solids: RPD <50% OR absolute diff. < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR absolute diff. < 1X RL (for results < 5X RL)	Narrate (Qualifiy if required by project QAPP)	9

EcoChem, INC.
Environmental Data Quality

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

Qualified Data Summary Table
Windward
East Waterway - Fish and Shellfish Tissue

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qual	Val Qual	Val Reason
K0907127	EW-08-SB002-BR-02_T3	K0907127-002	EPA 8270C-SIM	Benzo(b)fluoranthene	0.42	ug/kg	J	U	7
K0907127	EW-08-SB002-BR-02_T3	K0907127-002	EPA 8270C-SIM	Benzo(g,h,i)perylene	0.068	ug/kg	J	U	7
K0907127	EW-08-SB002-BR-02_T3	K0907127-002	EPA 8270C-SIM	PHENANTHRENE	2	ug/kg		U	7
K0907127	EW-08-SB002-BR-02_T3	K0907127-002	EPA 8270C-SIM	PERYLENE	0.24	ug/kg	J	U	7
K0907127	EW-08-SB003-BR-03_T3	K0907127-003	EPA 8270C-SIM	PHENANTHRENE	1.7	ug/kg		U	7
K0907127	EW-08-SB003-BR-03_T3	K0907127-003	EPA 8270C-SIM	PERYLENE	0.31	ug/kg	J	U	7
K0907127	EW-08-SB004-BR-04_T3	K0907127-004	EPA 8270C-SIM	PERYLENE	0.17	ug/kg	J	U	7
K0907127	EW-08-SB004-BR-04_T3	K0907127-004	EPA 8270C-SIM	PHENANTHRENE	1.6	ug/kg		U	7
K0907127	EW-08-SB004-BR-04_T3	K0907127-004	EPA 8270C-SIM	Dibenzo(a,h)anthracene	0.18	ug/kg	J	U	7
K0907127	EW-08-SB004-BR-04_T3	K0907127-004	EPA 8270C-SIM	BENZO(k)FLUORANTHENE	0.17	ug/kg	J	U	7
K0907127	EW-08-SB004-BR-04_T3	K0907127-004	EPA 8270C-SIM	Benzo(b)fluoranthene	0.16	ug/kg	J	U	7
K0907127	EW-08-SB004-BR-04_T3	K0907127-004	EPA 8270C-SIM	Indeno(1,2,3-cd)pyrene	0.25	ug/kg	J	U	7
K0907127	EW-08-SB004-BR-04_T3	K0907127-004	EPA 8270C-SIM	Benzo(g,h,i)perylene	0.14	ug/kg	J	U	7
K0907127	EW-08-SB005-BR-05_T3	K0907127-005	EPA 8270C-SIM	PHENANTHRENE	1.2	ug/kg		U	7
K0907127	EW-08-SB005-BR-05_T3	K0907127-005	EPA 8270C-SIM	PERYLENE	0.21	ug/kg	J	U	7
K0907127	EW-08-SB006-BR-06_T3	K0907127-006	EPA 8270C-SIM	Benzo(g,h,i)perylene	0.16	ug/kg	J	U	7
K0907127	EW-08-SB006-BR-06_T3	K0907127-006	EPA 8270C-SIM	Indeno(1,2,3-cd)pyrene	0.32	ug/kg	J	U	7
K0907127	EW-08-SB006-BR-06_T3	K0907127-006	EPA 8270C-SIM	PERYLENE	0.12	ug/kg	J	U	7
K0907127	EW-08-SB006-BR-06_T3	K0907127-006	EPA 8270C-SIM	Benzo(b)fluoranthene	0.68	ug/kg		U	7
K0907127	EW-08-SB006-BR-06_T3	K0907127-006	EPA 8270C-SIM	Benzo(a)pyrene	0.31	ug/kg	J	U	7
K0907127	EW-08-SB006-BR-06_T3	K0907127-006	EPA 8270C-SIM	PHENANTHRENE	1.1	ug/kg		U	7
K0907127	EW-08-SB007-BR-07_T3	K0907127-007	EPA 8270C-SIM	BENZO(k)FLUORANTHENE	0.26	ug/kg	J	U	7
K0907127	EW-08-SB007-BR-07_T3	K0907127-007	EPA 8270C-SIM	PERYLENE	0.21	ug/kg	J	U	7
K0907127	EW-08-SB007-BR-07_T3	K0907127-007	EPA 8270C-SIM	PHENANTHRENE	1.3	ug/kg		U	7
K0907127	EW-08-SB008-BR-08_T3	K0907127-008	EPA 8270C-SIM	PERYLENE	0.19	ug/kg	J	U	7
K0907127	EW-08-SB008-BR-08_T3	K0907127-008	EPA 8270C-SIM	PHENANTHRENE	1.5	ug/kg		U	7
K0907127	EW-08-SB009-BR-09_T3	K0907127-009	EPA 8270C-SIM	PHENANTHRENE	0.85	ug/kg		U	7
K0907127	EW-08-SB009-BR-09_T3	K0907127-009	EPA 8270C-SIM	PERYLENE	0.17	ug/kg	J	U	7
K0907127	EW-08-SB012-BR-10_T3	K0907127-010	EPA 8270C-SIM	BENZO(k)FLUORANTHENE	0.31	ug/kg	J	U	7
K0907127	EW-08-SB012-BR-10_T3	K0907127-010	EPA 8270C-SIM	PERYLENE	0.25	ug/kg	J	U	7
K0907127	EW-08-SB012-BR-10_T3	K0907127-010	EPA 8270C-SIM	PHENANTHRENE	1.3	ug/kg		U	7
K0907127	EW-08-SB011-BR-11_T3	K0907127-011	EPA 8270C-SIM	PERYLENE	0.26	ug/kg	J	U	7
K0907127	EW-08-SB011-BR-11_T3	K0907127-011	EPA 8270C-SIM	FLUORANTHENE	0.29	ug/kg	J	U	7
K0907127	EW-08-SB011-BR-11_T3	K0907127-011	EPA 8270C-SIM	PHENANTHRENE	1.1	ug/kg		U	7
K0907127	EW-08-SB012-BR-12_T3	K0907127-012	EPA 8270C-SIM	PERYLENE	0.24	ug/kg	J	U	7
K0907127	EW-08-SB012-BR-12_T3	K0907127-012	EPA 8270C-SIM	PHENANTHRENE	0.9	ug/kg		U	7
K0907127	EW-08-SB012-BR-12_T3	K0907127-012	EPA 8270C-SIM	BENZO(k)FLUORANTHENE	0.32	ug/kg	J	U	7
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	2-METHYLNAPHTHALENE	3.5	ug/kg		J	13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	Dibenzo(a,h)anthracene		ug/kg	U	UJ	13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	NAPHTHALENE	4.7	ug/kg		J	13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	FLUORENE	3	ug/kg		J	13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	PHENANTHRENE	2	ug/kg		UJ	7,13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	Benzo(a)anthracene	0.26	ug/kg	J	UJ	7,13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	Benzo(g,h,i)perylene		ug/kg	U	UJ	13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	Benzo(a)pyrene		ug/kg	U	UJ	13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	Chrysene		ug/kg	U	UJ	13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	ACENAPHTHYLENE	0.31	ug/kg	J	J	13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	BENZO(k)FLUORANTHENE		ug/kg	U	UJ	13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	Benzo(b)fluoranthene		ug/kg	U	UJ	13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	Indeno(1,2,3-cd)pyrene		ug/kg	U	UJ	13

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SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qual	Val Qual	Val Reason
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	ANTHRACENE	0.56	ug/kg		J	13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	PYRENE	0.14	ug/kg	J	UJ	7,13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	DIBENZOFURAN	4.3	ug/kg		J	13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	ACENAPHTHENE	8.5	ug/kg		J	13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	PERYLENE	0.24	ug/kg	J	UJ	7,13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	FLUORANTHENE	0.48	ug/kg	J	UJ	7,13
K0907127	EW-08-SB013-BR-13_T3	K0907127-013	EPA 8270C-SIM	1-METHYLNAPHTHALENE	2.7	ug/kg		J	13
K0907551	EW-08-DC-EM-COMP1_T3	K0907551-002	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.81	ug/kg	JD	U	7
K0907551	EW-08-DC-EM-COMP1_T3	K0907551-002	EPA 8270C-SIM	NAPHTHALENE	2.1	ug/kg	JD	U	7
K0907551	EW-08-DC-EM-COMP1_T3	K0907551-002	EPA 8270C-SIM	2-METHYLNAPHTHALENE	1.2	ug/kg	JD	U	7
K0907551	EW-08-RR-EM-COMP1_T3	K0907551-003	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.48	ug/kg	J	U	7
K0907551	EW-08-RR-EM-COMP1_T3	K0907551-003	EPA 8270C-SIM	NAPHTHALENE	2.1	ug/kg		U	7
K0907551	EW-08-RR-EM-COMP1_T3	K0907551-003	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.31	ug/kg	J	U	7
K0907551	EW-08-RR-EM-COMP2_T3	K0907551-004	EPA 8270C-SIM	NAPHTHALENE	1.5	ug/kg		U	7
K0907551	EW-08-RR-EM-COMP2_T3	K0907551-004	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.32	ug/kg	J	U	7
K0907551	EW-08-RR-EM-COMP2_T3	K0907551-004	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.57	ug/kg	J	U	7
K0907551	EW-08-RR-EM-COMP4_T3	K0907551-006	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.28	ug/kg	J	U	7
K0907551	EW-08-RR-EM-COMP4_T3	K0907551-006	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.49	ug/kg	J	U	7
K0907551	EW-08-RR-EM-COMP4_T3	K0907551-006	EPA 8270C-SIM	NAPHTHALENE	1.6	ug/kg		U	7
K0907551	EW-08-RR-EM-COMP5_T3	K0907551-007	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.52	ug/kg	J	U	7
K0907551	EW-08-RR-EM-COMP5_T3	K0907551-007	EPA 8270C-SIM	NAPHTHALENE	2.8	ug/kg		U	7
K0907551	EW-08-RR-EM-COMP5_T3	K0907551-007	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.31	ug/kg	J	U	7
K0907551	EW-08-RR-EM-COMP6_T3	K0907551-008	EPA 8270C-SIM	NAPHTHALENE	1.4	ug/kg		U	7
K0907551	EW-08-RR-EM-COMP6_T3	K0907551-008	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.35	ug/kg	J	U	7
K0907551	EW-08-RR-EM-COMP6_T3	K0907551-008	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.19	ug/kg	J	U	7
K0907551	EW-08-RR-EM-COMP7_T3	K0907551-009	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.51	ug/kg	J	U	7
K0907551	EW-08-RR-EM-COMP7_T3	K0907551-009	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.36	ug/kg	J	U	7
K0907551	EW-08-RR-EM-COMP7_T3	K0907551-009	EPA 8270C-SIM	NAPHTHALENE	2.1	ug/kg		U	7
K0907551	EW-08-RR-EM-COMP8_T3	K0907551-010	EPA 8270C-SIM	NAPHTHALENE	1.9	ug/kg		U	7
K0907551	EW-08-RR-EM-COMP8_T3	K0907551-010	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.62	ug/kg	J	U	7
K0907551	EW-08-RR-EM-COMP8_T3	K0907551-010	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.4	ug/kg	J	U	7
K0907551	EW-08-RR-HP-COMP1_T3	K0907551-011	EPA 8270C-SIM	NAPHTHALENE	1.9	ug/kg		U	7
K0907551	EW-08-RR-HP-COMP2_T3	K0907551-012	EPA 8270C-SIM	NAPHTHALENE	2.3	ug/kg		U	7
K0907551	EW-08-RR-HP-COMP3_T3	K0907551-013	EPA 8270C-SIM	NAPHTHALENE	2	ug/kg	JD	U	7
K0907551	EW-08-RR-HP-COMP3_T3	K0907551-013	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.98	ug/kg	JD	U	7
K0907551	EW-08-RR-HP-COMP3_T3	K0907551-013	EPA 8270C-SIM	2-METHYLNAPHTHALENE	1.3	ug/kg	JD	U	7
K0907551	EW-08-RR-HP-COMP4_T3	K0907551-014	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.61	ug/kg	J	U	7
K0907551	EW-08-RR-HP-COMP4_T3	K0907551-014	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.39	ug/kg	J	U	7
K0907551	EW-08-RR-HP-COMP4_T3	K0907551-014	EPA 8270C-SIM	NAPHTHALENE	1.3	ug/kg		U	7
K0907551	EW-08-ES-FL-COMP1_T3	K0907551-019	EPA 8270C-SIM	NAPHTHALENE	2.9	ug/kg		U	7
K0907551	EW-08-ES-FL-COMP1_T3	K0907551-019	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.68	ug/kg	J	U	7
K0907551	EW-08-ES-FL-COMP1_T3	K0907551-019	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.46	ug/kg	J	U	7
K0907551	EW-08-ES-FL-COMP2_T3	K0907551-020	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.6	ug/kg	J	U	7
K0907551	EW-08-ES-FL-COMP2_T3	K0907551-020	EPA 8270C-SIM	NAPHTHALENE	2.4	ug/kg		U	7
K0907551	EW-08-ES-FL-COMP3_T3	K0907551-021	EPA 8270C-SIM	NAPHTHALENE	1.6	ug/kg	B	U	7
K0907551	EW-08-ES-FL-COMP5_T3	K0907551-022	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.59	ug/kg	J	U	7
K0907551	EW-08-ES-FL-COMP5_T3	K0907551-022	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.41	ug/kg	J	U	7
K0907551	EW-08-ES-FL-COMP5_T3	K0907551-022	EPA 8270C-SIM	NAPHTHALENE	1.6	ug/kg	B	U	7
K0907551	EW-08-ES-FL-COMP6_T3	K0907551-023	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.85	ug/kg	J	U	7
K0907551	EW-08-ES-FL-COMP6_T3	K0907551-023	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.58	ug/kg	J	U	7
K0907551	EW-08-ES-FL-COMP6_T3	K0907551-023	EPA 8270C-SIM	NAPHTHALENE	2.4	ug/kg	B	U	7
K0907551	EW-08-ES-FL-COMP7_T3	K0907551-024	EPA 8270C-SIM	NAPHTHALENE	1.5	ug/kg	B	U	7
K0907551	EW-08-ES-FL-COMP7_T3	K0907551-024	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.61	ug/kg	J	U	7

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SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qual	Val Qual	Val Reason
K0907551	EW-08-ES-FL-COMP7_T3	K0907551-024	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.39	ug/kg	J	U	7
K0907551	EW-08-ES-FL-COMP8_T3	K0907551-025	EPA 8270C-SIM	NAPHTHALENE	1.8	ug/kg	B	U	7
K0907551	EW-08-ES-FL-COMP9_T3	K0907551-026	EPA 8270C-SIM	NAPHTHALENE	2.1	ug/kg	B	U	7
K0907551	EW-08-ES-FL-COMP10_T3	K0907551-027	EPA 8270C-SIM	NAPHTHALENE	1.7	ug/kg	B	U	7
K0907551	EW-08-ES-FL-COMP11_T3	K0907551-028	EPA 8270C-SIM	NAPHTHALENE	2.5	ug/kg	B	U	7
K0907551	EW-08-ES-FL-COMP4_T3	K0907551-029	EPA 8270C-SIM	NAPHTHALENE	1.9	ug/kg	B	U	7
K0907551	EW-08-ES-WB-COMP1_T3	K0907551-030	EPA 8270C-SIM	2-METHYLNAPHTHALENE	1.1	ug/kg	JD	U	7
K0907551	EW-08-ES-WB-COMP1_T3	K0907551-030	EPA 8270C-SIM	NAPHTHALENE	2.2	ug/kg	BJD	U	7
K0907551	EW-08-ES-WB-COMP1_T3	K0907551-030	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.75	ug/kg	JD	U	7
K0907551	EW-08-ES-WB-COMP3_T3	K0907551-032	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.87	ug/kg	JD	U	7
K0907551	EW-08-ES-WB-COMP3_T3	K0907551-032	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.82	ug/kg	JD	U	7
K0907551	EW-08-ES-WB-COMP3_T3	K0907551-032	EPA 8270C-SIM	NAPHTHALENE	1.3	ug/kg	BJD	U	7
K0907551	EW-08-ES-WB-COMP4_T3	K0907551-033	EPA 8270C-SIM	NAPHTHALENE	1.4	ug/kg	BJD	U	7
K0907551	EW-08-ES-WB-COMP4_T3	K0907551-033	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.87	ug/kg	JD	U	7
K0907551	EW-08-ES-WB-COMP5_T3	K0907551-034	EPA 8270C-SIM	NAPHTHALENE	3.2	ug/kg	B	U	7
K0907551	EW-08-ES-WB-COMP6_T3	K0907551-035	EPA 8270C-SIM	NAPHTHALENE	1.7	ug/kg	BJD	U	7
K0907551	EW-08-ES-WB-COMP6_T3	K0907551-035	EPA 8270C-SIM	2-METHYLNAPHTHALENE	1.2	ug/kg	JD	U	7
K0907551	EW-08-ES-WB-COMP7_T3	K0907551-036	EPA 8270C-SIM	2-METHYLNAPHTHALENE	2.1	ug/kg	JD	U	7
K0907551	EW-08-ES-WB-COMP7_T3	K0907551-036	EPA 8270C-SIM	1-METHYLNAPHTHALENE	0.92	ug/kg	JD	U	7
K0907551	EW-08-ES-WB-COMP7_T3	K0907551-036	EPA 8270C-SIM	NAPHTHALENE	2.3	ug/kg	BJD	U	7
K0907551	EW-08-ES-WB-COMP8_T3	K0907551-037	EPA 8270C-SIM	1-METHYLNAPHTHALENE	1.7	ug/kg	JD	U	7
K0907551	EW-08-ES-WB-COMP8_T3	K0907551-037	EPA 8270C-SIM	NAPHTHALENE	3.6	ug/kg	BJD	U	7
K0907551	EW-08-ES-WB-COMP8_T3	K0907551-037	EPA 8270C-SIM	2-METHYLNAPHTHALENE	1.8	ug/kg	JD	U	7
K0907551	EW-08-ES-WB-COMP9_T3	K0907551-038	EPA 8270C-SIM	NAPHTHALENE	2.3	ug/kg	B	U	7
K0907551	EW-08-ES-WB-COMP10_T3	K0907551-039	EPA 8270C-SIM	NAPHTHALENE	1.7	ug/kg	B	U	7
K0907551	EW-08-ES-WB-COMP11_T3	K0907551-040	EPA 8270C-SIM	NAPHTHALENE	3.7	ug/kg	B	U	7
K0907551	EW-08-SS-WB-COMP1_T3	K0907551-041	EPA 8270C-SIM	NAPHTHALENE	3.3	ug/kg		U	7
K0907551	EW-08-SS-WB-COMP2_T3	K0907551-042	EPA 8270C-SIM	NAPHTHALENE	2.5	ug/kg		U	7
K0907551	EW-08-SS-WB-COMP3_T3	K0907551-043	EPA 8270C-SIM	NAPHTHALENE	4.2	ug/kg		U	7
K0907551	EW-08-SS-WB-COMP4_T3	K0907551-044	EPA 8270C-SIM	NAPHTHALENE	4.8	ug/kg		U	7
K0907551	EW-08-SS-WB-COMP5_T3	K0907551-045	EPA 8270C-SIM	NAPHTHALENE	5.3	ug/kg		U	7
K0907551	EW-08-SS-WB-COMP6_T3	K0907551-046	EPA 8270C-SIM	NAPHTHALENE	5.8	ug/kg		U	7
K0907551	EW-08-SS-WB-COMP7_T3	K0907551-047	EPA 8270C-SIM	NAPHTHALENE	3.3	ug/kg		U	7
K0907551	EW-08-SS-WB-COMP8_T3	K0907551-048	EPA 8270C-SIM	NAPHTHALENE	4.4	ug/kg		U	7
K0907575	EW-08-MS-WB-COMP1_T3	K0907575-001	EPA 8270C-SIM	NAPHTHALENE	1.1	ug/kg		U	7
K0907575	EW-08-MS-WB-COMP2_T3	K0907575-002	EPA 8270C-SIM	NAPHTHALENE	1.6	ug/kg		U	7
K0907575	EW-08-MS-WB-COMP3_T3	K0907575-003	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.55	ug/kg	J	U	7
K0907575	EW-08-MS-WB-COMP3_T3	K0907575-003	EPA 8270C-SIM	NAPHTHALENE	0.83	ug/kg	J	U	7
K0907575	EW-08-MS-WB-COMP4_T3	K0907575-004	EPA 8270C-SIM	NAPHTHALENE	0.95	ug/kg	J	U	7
K0907575	EW-08-MS-WB-COMP4_T3	K0907575-004	EPA 8270C-SIM	2-METHYLNAPHTHALENE	0.66	ug/kg	J	U	7
K0907575	EW-08-MS-WB-COMP5_T3	K0907575-005	EPA 8270C-SIM	NAPHTHALENE	1.2	ug/kg		U	7
K0907575	EW-08-MS-WB-COMP6_T3	K0907575-006	EPA 8270C-SIM	NAPHTHALENE	1.6	ug/kg		U	7
K0907575	EW-08-MS-WB-COMP7_T3	K0907575-007	EPA 8270C-SIM	NAPHTHALENE	1.7	ug/kg		U	7
K0907575	EW-08-MS-WB-COMP8_T3	K0907575-008	EPA 8270C-SIM	NAPHTHALENE	1.6	ug/kg		U	7
K0907575	EW-08-MS-WB-COMP9_T3	K0907575-009	EPA 8270C-SIM	NAPHTHALENE	1.2	ug/kg		U	7
K0907575	EW-08-MS-WB-COMP10_T3	K0907575-010	EPA 8270C-SIM	NAPHTHALENE	1.2	ug/kg		U	7
K0907575	EW-08-MS-WB-COMP11_T3	K0907575-011	EPA 8270C-SIM	NAPHTHALENE	1.6	ug/kg		U	7
PJ35	EW-08-SB002-BR-01_T3	09-18387-PJ35A	EPA 8041	Pentachlorophenol		ug/kg	U	UJ	13
PJ35	EW-08-SB002-BR-02_T3	09-18388-PJ35B	EPA 8041	Pentachlorophenol		ug/kg	U	UJ	13
PJ35	EW-08-SB002-BR-01_T3	09-18387-PJ35A	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate		ug/kg	Y	UJ	13,22
PJ35	EW-08-SB002-BR-02_T3	09-18388-PJ35B	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate		ug/kg	U	UJ	13
PJ35	EW-08-SB003-BR-03_T3	09-18389-PJ35C	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate		ug/kg	Y	U	22
PJ35	EW-08-SB004-BR-04_T3	09-18390-PJ35D	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	22	ug/kg	B	U	7

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East Waterway - Fish and Shellfish Tissue

SDG	Sample ID	Lab ID	Method	Analyte	Result	Units	Lab Qual	Val Qual	Val Reason
PJ35	EW-08-SB005-BR-05_T3	09-18391-PJ35E	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate		ug/kg	Y	DNR	11
PJ35	EW-08-SB006-BR-06_T3	09-18392-PJ35F	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate		ug/kg	Y	DNR	11
PJ35	EW-08-SB007-BR-07_T3	09-18393-PJ35G	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate		ug/kg	Y	DNR	11
PJ35	EW-08-SB008-BR-08_T3	09-18394-PJ35H	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate		ug/kg	Y	DNR	11
PJ35	EW-08-SB009-BR-09_T3	09-18395-PJ35I	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate		ug/kg	Y	DNR	11
PJ35	EW-08-SB012-BR-10_T3	09-18396-PJ35J	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate		ug/kg	Y	DNR	11
PJ35	EW-08-SB011-BR-11_T3	09-18397-PJ35K	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate		ug/kg	Y	DNR	11
PJ35	EW-08-SB012-BR-12_T3	09-18398-PJ35L	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate		ug/kg	Y	DNR	11
PJ35	EW-08-SB013-BR-13_T3	09-18399-PJ35M	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate		ug/kg	Y	DNR	11
PL64	EW08-RRDC-EM-	09-19742-PL64A	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	56	ug/kg	B	U	7
PL64	EW08-RRDC-EM-	09-19743-PL64B	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	57	ug/kg	B	U	7
PL64	EW08-RRDC-EM-	09-19744-PL64C	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	37	ug/kg	B	U	7
PL64	EW08-RRDC-HP-	09-19745-PL64D	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	67	ug/kg	B	U	7
PL64	EW08-RRDC-HP-	09-19746-PL64E	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	120	ug/kg	B	U	7
PL64	EW08-RRDC-HP-	09-19747-PL64F	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	44	ug/kg	B	U	7
PL64	EW08-ES-FL-SUPCOMP1_T3	09-19748-PL64G	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	40	ug/kg	B	U	7
PL64	EW08-ES-FL-SUPCOMP2_T3	09-19749-PL64H	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	100	ug/kg	B	U	7
PL64	EW08-ES-FL-SUPCOMP3_T3	09-19750-PL64I	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	72	ug/kg	B	U	7
PL64	EW08-ES-WB-SUPCOMP1_T3	09-19751-PL64J	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	66	ug/kg	B	U	7
PL64	EW08-ES-WB-SUPCOMP2_T3	09-19752-PL64K	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	55	ug/kg	B	U	7
PL64	EW08-ES-WB-SUPCOMP3_T3	09-19753-PL64L	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	36	ug/kg	B	U	7
PL64	EW08-SS-WB-SUPCOMP1_T3	09-19754-PL64M	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	240	ug/kg	B	U	7
PL64	EW08-SS-WB-SUPCOMP2_T3	09-19755-PL64N	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	120	ug/kg	B	U	7
PL64	EW08-SS-WB-SUPCOMP3_T3	09-19756-PL64O	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	200	ug/kg	B	U	7
PL68	EW08-MS-WB-SUPCOMP1	09-19776-PL68A	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	200	ug/kg	B	UJ	7,8
PL68	EW08-MS-WB-SUPCOMP2	09-19777-PL68B	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	57	ug/kg	B	U	7
PL68	EW08-MS-WB-SUPCOMP3	09-19778-PL68C	EPA 8270D-SIM	bis(2-Ethylhexyl)phthalate	98	ug/kg	B	U	7