

# APPENDIX E: RAW LABORATORY DATA

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### **Inorganic Data Qualifiers**

- \* The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
  - i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

### **Metals Data Qualifiers**

- # The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
  - i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- \* The duplicate analysis not within control limits. See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

### **Organic Data Qualifiers**

- \* The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
  - i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

### **Additional Petroleum Hydrocarbon Specific Qualifiers**

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

### **Inorganic Data Qualifiers**

- \* The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
  - i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

### **Metals Data Qualifiers**

- # The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
  - i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- \* The duplicate analysis not within control limits. See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

### **Organic Data Qualifiers**

- \* The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
  - i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

### **Additional Petroleum Hydrocarbon Specific Qualifiers**

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Woodward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/12/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/02/2003

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-LWa-W-WF-Comp1  
**Lab Code:** K2307487-004  
**File ID:** J:\GC09\DATA\110103.B\1101F053.D  
**Instrument ID:** GC09.i

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Extraction Lot:** KWG0317027  
**Calibration ID:** CAL3054

**Sample Amount:** 4.87 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	8.3	U	42	8.3	
11104-28-2	Aroclor 1221	13	U	83	13	
11141-16-5	Aroclor 1232	8.3	U	42	8.3	
53469-21-9	Aroclor 1242	15	U	42	15	
12672-29-6	Aroclor 1248	3.2	U	42	3.2	
11097-69-1	Aroclor 1254	130	P	42	6.2	
11096-82-5	Aroclor 1260	61	P	42	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	77	22-172	11/02/03	Acceptable

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/12/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/02/2003

Polychlorinated Biphenyls (PCBs)

Sample Name: LDW-LWa-W-WF-Comp2  
 Lab Code: K2307487-005  
 File ID: J:\GC09\DATA\110103.B\1101F054.D  
 Instrument ID: GC09.i

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8082

Extraction Lot: KWG0317027  
 Calibration ID: CAL3054

Sample Amount: 11.14 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB-35MS  
 Column2: DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	3.6	U	18	3.6	
11104-28-2	Aroclor 1221	5.6	U	36	5.6	
11141-16-5	Aroclor 1232	3.6	U	18	3.6	
53469-21-9	Aroclor 1242	6.3	U	18	6.3	
12672-29-6	Aroclor 1248	1.4	U	18	1.4	
11097-69-1	Aroclor 1254	190	P	18	2.7	
11096-82-5	Aroclor 1260	110	P	18	8.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	74	22-172	11/02/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/12/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/02/2003

Polychlorinated Biphenyls (PCBs)

Sample Name: LDW-LWa-W-WF-Comp3  
 Lab Code: K2307487-006  
 File ID: J:\GC09\DATA\110103.B\1101F055.D  
 Instrument ID: GC09.i

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8082

Extraction Lot: KWG0317027  
 Calibration ID: CAL3054

Sample Amount: 5.15 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB-35MS  
 Column2: DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	7.8	U	39	7.8	
11104-28-2	Aroclor 1221	13	U	78	13	
11141-16-5	Aroclor 1232	7.8	U	39	7.8	
53469-21-9	Aroclor 1242	14	U	39	14	
12672-29-6	Aroclor 1248	3.0	U	39	3.0	
11097-69-1	Aroclor 1254	240	P	39	5.9	
11096-82-5	Aroclor 1260	170	P	39	19	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	82	22-172	11/02/03	Acceptable

Comments:

## QA/QC Report

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/02/2003

**Duplicate Sample Summary**  
**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-LWa-W-WF-Comp3  
**Lab Code:** K2307487-006  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low  
**Extraction Lot:** KWG0317027

Analyte Name	MRL	MDL	Sample Result	LDW-LWa-W-WF-Comp3DUP KWG0317027-5 Duplicate Sample		Relative Percent Difference	RPD Limit
				Result	Average		
Aroclor 1016	24	4.7	ND	ND	ND	-	50
Aroclor 1221	47	7.3	ND	ND	ND	-	50
Aroclor 1232	24	4.7	ND	ND	ND	-	50
Aroclor 1242	24	8.3	ND	ND	ND	-	50
Aroclor 1248	24	1.8	ND	ND	ND	-	50
Aroclor 1254	24	3.6	240	180	210	32	50
Aroclor 1260	24	12	130	87	110	36	50

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/13/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/02/2003

Polychlorinated Biphenyls (PCBs)

Sample Name: LDW-MWa-W-WF-Comp4  
 Lab Code: K2307487-007  
 File ID: J:\GC09\DATA\110103.B\1101F060.D  
 Instrument ID: GC09.i

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8082

Extraction Lot: KWG0317027  
 Calibration ID: CAL3054

Sample Amount: 6.95 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB-35MS  
 Column2: DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	5.8	U	29	5.8	
11104-28-2	Aroclor 1221	9.0	U	58	9.0	
11141-16-5	Aroclor 1232	5.8	U	29	5.8	
53469-21-9	Aroclor 1242	11	U	29	11	
12672-29-6	Aroclor 1248	2.2	U	29	2.2	
<b>11097-69-1</b>	<b>Aroclor 1254</b>	<b>1200</b>		29	4.4	
11096-82-5	Aroclor 1260	14	U	29	14	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	83	22-172	11/02/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/13/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/02/2003

Polychlorinated Biphenyls (PCBs)

Sample Name: LDW-MWb-W-WF-Comp5  
 Lab Code: K2307487-008  
 File ID: J:\GC09\DATA\110103.BA\1101F061.D  
 Instrument ID: GC09.i

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8082

Extraction Lot: KWG0317027  
 Calibration ID: CAL3054

Sample Amount: 5.87 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB-35MS  
 Column2: DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	6.9	U	35	6.9	
11104-28-2	Aroclor 1221	11	U	69	11	
11141-16-5	Aroclor 1232	6.9	U	35	6.9	
53469-21-9	Aroclor 1242	12	U	35	12	
12672-29-6	Aroclor 1248	2.6	U	35	2.6	
11097-69-1	Aroclor 1254	500	P	35	5.2	
11096-82-5	Aroclor 1260	17	U	35	17	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	72	22-172	11/02/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/12/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/02/2003

Polychlorinated Biphenyls (PCBs)

**Sample Name:** LDW-MWc-W-WF-Comp6  
**Lab Code:** K2307487-009  
**File ID:** J:\GC09\DATA\110103.B\1101F062.D  
**Instrument ID:** GC09.i

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Extraction Lot:** KWG0317027  
**Calibration ID:** CAL3054

**Sample Amount:** 6.55 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	6.2	U	31	6.2	
11104-28-2	Aroclor 1221	9.5	U	62	9.5	
11141-16-5	Aroclor 1232	6.2	U	31	6.2	
53469-21-9	Aroclor 1242	11	U	31	11	
12672-29-6	Aroclor 1248	2.4	U	31	2.4	
11097-69-1	Aroclor 1254	210	P	31	4.6	
11096-82-5	Aroclor 1260	84		31	15	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	78	22-172	11/02/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/14/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/02/2003

Polychlorinated Biphenyls (PCBs)

Sample Name: LDW-GR-W-WF-Comp1  
 Lab Code: K2307487-001  
 File ID: J:\GC09\DATA\110103.B\1101F050.D  
 Instrument ID: GC09.i

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8082

Extraction Lot: KWG0317027  
 Calibration ID: CAL3054

Sample Amount: 2.82 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB-35MS  
 Column2: DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	15	U	71	15	
11104-28-2	Aroclor 1221	22	U	150	22	
11141-16-5	Aroclor 1232	15	U	71	15	
53469-21-9	Aroclor 1242	25	U	71	25	
12672-29-6	Aroclor 1248	5.4	U	71	5.4	
11097-69-1	Aroclor 1254	330	P	71	11	
11096-82-5	Aroclor 1260	170	P	71	34	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	80	22-172	11/02/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/14/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/02/2003

Polychlorinated Biphenyls (PCBs)

Sample Name: LDW-GR-W-WF-Comp2  
 Lab Code: K2307487-002  
 File ID: J:\GC09\DATA\110103.B\1101F051.D  
 Instrument ID: GC09.i

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8082

Extraction Lot: KWG0317027  
 Calibration ID: CAL3054

Sample Amount: 8.20 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB-35MS  
 Column2: DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	6.0	Ui	25	6.0	
11104-28-2	Aroclor 1221	31	Ui	49	31	
11141-16-5	Aroclor 1232	11	Ui	25	11	
53469-21-9	Aroclor 1242	8.6	U	25	8.6	
12672-29-6	Aroclor 1248	19	Ui	25	19	
11097-69-1	Aroclor 1254	25	Ui	25	25	
11096-82-5	Aroclor 1260	18	Ui	25	18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	75	22-172	11/02/03	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/14/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/02/2003

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-GR-W-WF-Comp3  
**Lab Code:** K2307487-003  
**File ID:** J:\GC09\DATA\110103.B\1101F052.D  
**Instrument ID:** GC09.i  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Lot:** KWG0317027  
**Calibration ID:** CAL3054

**Sample Amount:** 12.09 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	7.3	Ui	17	7.3	
11104-28-2	Aroclor 1221	5.2	U	34	5.2	
11141-16-5	Aroclor 1232	17	Ui	17	17	
53469-21-9	Aroclor 1242	10	Ui	17	10	
12672-29-6	Aroclor 1248	9.9	Ui	17	9.9	
11097-69-1	Aroclor 1254	17	Ui	17	17	
11096-82-5	Aroclor 1260	13	Ui	17	13	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	79	22-172	11/02/03	Acceptable

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/23/2003  
**Date Analyzed:** 11/02/2003

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-LWa-W-WF-Comp1  
**Lab Code:** K2307475-007  
**File ID:** J:\GC09\DATA\110103.B\1101F023.D  
**Instrument ID:** GC09.i

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Extraction Lot:** KWG0316964  
**Calibration ID:** CAL3054

**Sample Amount:** 20.03 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.0	U	10	2.0	
11104-28-2	Aroclor 1221	3.1	U	20	3.1	
11141-16-5	Aroclor 1232	2.0	U	10	2.0	
53469-21-9	Aroclor 1242	3.5	U	10	3.5	
12672-29-6	Aroclor 1248	0.76	U	10	0.76	
<b>11097-69-1</b>	<b>Aroclor 1254</b>	<b>9.3</b>	<b>J</b>	10	1.5	
11096-82-5	Aroclor 1260	4.7	U	10	4.7	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	83	22-172	11/02/03	Acceptable

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/23/2003  
**Date Analyzed:** 11/02/2003

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-LWa-W-WF-Comp2  
**Lab Code:** K2307475-008  
**File ID:** J:\GC09\DATA\110103.B\1101F024.D  
**Instrument ID:** GC09.i

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Extraction Lot:** KWG0316964  
**Calibration ID:** CAL3054

**Sample Amount:** 10.02 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	4.0	U	20	4.0	
11104-28-2	Aroclor 1221	6.2	U	40	6.2	
11141-16-5	Aroclor 1232	4.0	U	20	4.0	
53469-21-9	Aroclor 1242	7.0	U	20	7.0	
12672-29-6	Aroclor 1248	1.6	U	20	1.6	
11097-69-1	Aroclor 1254	21		20	3.0	
11096-82-5	Aroclor 1260	9.4	U	20	9.4	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	87	22-172	11/02/03	Acceptable

Comments: \_\_\_\_\_



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/23/2003  
**Date Analyzed:** 11/02/2003

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-LWa-W-WF-Comp3  
**Lab Code:** K2307475-009  
**File ID:** J:\GC09\DATA\110103.B\1101F027.D  
**Instrument ID:** GC09.i  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082  
  
**Sample Amount:** 14.00 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Lot:** KWG0316964  
**Calibration ID:** CAL3054  
  
**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.9	U	15	2.9	
11104-28-2	Aroclor 1221	4.5	U	29	4.5	
11141-16-5	Aroclor 1232	2.9	U	15	2.9	
53469-21-9	Aroclor 1242	5.0	U	15	5.0	
12672-29-6	Aroclor 1248	1.1	U	15	1.1	
<b>11097-69-1</b>	<b>Aroclor 1254</b>	<b>27</b>	<b>P</b>	15	2.2	
11096-82-5	Aroclor 1260	6.8	U	15	6.8	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	86	22-172	11/02/03	Acceptable

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/23/2003  
**Date Analyzed:** 11/04/2003

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-MWb-W-WF-Comp1  
**Lab Code:** K2307475-001  
**File ID:** J:\GC09\DATA\110303.B\1103F015.D  
**Instrument ID:** GC09.i

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Extraction Lot:** KWG0316964  
**Calibration ID:** CAL3054

**Sample Amount:** 20.01 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.0	U	10	2.0	
11104-28-2	Aroclor 1221	3.1	U	20	3.1	
11141-16-5	Aroclor 1232	2.0	U	10	2.0	
53469-21-9	Aroclor 1242	3.5	U	10	3.5	
12672-29-6	Aroclor 1248	0.76	U	10	0.76	
<b>11097-69-1</b>	<b>Aroclor 1254</b>	<b>6.9</b>	<b>J</b>	10	1.5	
11096-82-5	Aroclor 1260	4.7	U	10	4.7	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	90	22-172	11/04/03	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Woodward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/23/2003  
**Date Analyzed:** 11/01/2003

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-MWb-W-WF-Comp2  
**Lab Code:** K2307475-002  
**File ID:** J:\GC09\DATA\110103.B\1101F018.D  
**Instrument ID:** GC09.i

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Extraction Lot:** KWG0316964  
**Calibration ID:** CAL3054

**Sample Amount:** 20.07 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.0	U	10	2.0	
11104-28-2	Aroclor 1221	3.1	U	20	3.1	
11141-16-5	Aroclor 1232	2.0	U	10	2.0	
53469-21-9	Aroclor 1242	3.5	U	10	3.5	
12672-29-6	Aroclor 1248	0.76	U	10	0.76	
11097-69-1	<b>Aroclor 1254</b>	10	P	10	1.5	
11096-82-5	Aroclor 1260	4.7	U	10	4.7	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	87	22-172	11/01/03	Acceptable

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/23/2003  
**Date Analyzed:** 11/01/2003

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-MWb-W-WF-Comp3  
**Lab Code:** K2307475-003  
**File ID:** J:\GC09\DATA\110103.B\1101F019.D  
**Instrument ID:** GC09.i

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Extraction Lot:** KWG0316964  
**Calibration ID:** CAL3054

**Sample Amount:** 20.02 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.0	U	10	2.0	
11104-28-2	Aroclor 1221	3.1	U	20	3.1	
11141-16-5	Aroclor 1232	2.0	U	10	2.0	
53469-21-9	Aroclor 1242	3.5	U	10	3.5	
12672-29-6	Aroclor 1248	0.76	U	10	0.76	
<b>11097-69-1</b>	<b>Aroclor 1254</b>	<b>20</b>	<b>P</b>	10	1.5	
11096-82-5	Aroclor 1260	4.7	U	10	4.7	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	86	22-172	11/01/03	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Woodward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/18/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/23/2003  
**Date Analyzed:** 11/02/2003

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-RM18-W-WF-Comp1  
**Lab Code:** K2307475-016  
**File ID:** J:\GC09\DATA\110103.B\1101F038.D  
**Instrument ID:** GC09.i

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Extraction Lot:** KWG0316964  
**Calibration ID:** CAL3054

**Sample Amount:** 20.00 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.0	U	10	2.0	
11104-28-2	Aroclor 1221	3.1	U	20	3.1	
11141-16-5	Aroclor 1232	2.0	U	10	2.0	
53469-21-9	Aroclor 1242	3.5	U	10	3.5	
12672-29-6	Aroclor 1248	0.76	U	10	0.76	
11097-69-1	Aroclor 1254	6.3	JP	10	1.5	
11096-82-5	Aroclor 1260	4.7	U	10	4.7	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	87	22-172	11/02/03	Acceptable

**Comments:** \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/20/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/23/2003  
 Date Analyzed: 11/02/2003

Polychlorinated Biphenyls (PCBs)

Sample Name: LDW-RM18-W-WF-Comp2  
 Lab Code: K2307475-017  
 File ID: J:\GC09\DATA\110103.B\1101F039.D  
 Instrument ID: GC09.i

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8082

Extraction Lot: KWG0316964  
 Calibration ID: CAL3054

Sample Amount: 20.00 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB-35MS  
 Column2: DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.0	U	10	2.0	
11104-28-2	Aroclor 1221	3.1	U	20	3.1	
11141-16-5	Aroclor 1232	2.0	U	10	2.0	
53469-21-9	Aroclor 1242	3.5	U	10	3.5	
12672-29-6	Aroclor 1248	0.76	U	10	0.76	
11097-69-1	Aroclor 1254	6.6	JP	10	1.5	
11096-82-5	Aroclor 1260	4.7	U	10	4.7	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	91	22-172	11/02/03	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/25/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/23/2003  
**Date Analyzed:** 11/02/2003

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-RM18-W-WF-Comp3  
**Lab Code:** K2307475-018  
**File ID:** J:\GC09\DATA\110103.B\1101F040.D  
**Instrument ID:** GC09.i

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Extraction Lot:** KWG0316964  
**Calibration ID:** CAL3054

**Sample Amount:** 20.01 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.0	U	10	2.0	
11104-28-2	Aroclor 1221	3.1	U	20	3.1	
11141-16-5	Aroclor 1232	2.0	U	10	2.0	
53469-21-9	Aroclor 1242	3.5	U	10	3.5	
12672-29-6	Aroclor 1248	0.76	U	10	0.76	
11097-69-1	<b>Aroclor 1254</b>	<b>5.8</b>	<b>JP</b>	10	1.5	
11096-82-5	Aroclor 1260	4.7	U	10	4.7	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	93	22-172	11/02/03	Acceptable

**Comments:** \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: Salmon Collection (LDW)/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307486  
 Date Collected: 05/21/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/02/2003

Polychlorinated Biphenyls (PCBs)

Sample Name: LDW-SC-H-WF-Comp1  
 Lab Code: K2307486-001  
 File ID: J:\GC09\DATA\110103.B\1101F047.D  
 Instrument ID: GC09.i

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8082

Extraction Lot: KWG0317027  
 Calibration ID: CAL3054

Sample Amount: 8.02 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB-35MS  
 Column2: DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	5.0	U	25	5.0	
11104-28-2	Aroclor 1221	7.8	U	50	7.8	
11141-16-5	Aroclor 1232	5.0	U	25	5.0	
53469-21-9	Aroclor 1242	57		25	8.8	
12672-29-6	Aroclor 1248	1.9	U	25	1.9	
11097-69-1	Aroclor 1254	28	P	25	3.8	
11096-82-5	Aroclor 1260	12	U	25	12	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	80	22-172	11/02/03	Acceptable

Comments:



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/23/2003  
**Date Analyzed:** 11/02/2003

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-LWa-H-WF-Comp1  
**Lab Code:** K2307475-004  
**File ID:** J:\GC09\DATA\110103.B\1101F020.D  
**Instrument ID:** GC09.i

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Extraction Lot:** KWG0316964  
**Calibration ID:** CAL3054

**Sample Amount:** 10.03 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	4.0	U	20	4.0	
11104-28-2	Aroclor 1221	6.2	U	40	6.2	
11141-16-5	Aroclor 1232	4.0	U	20	4.0	
53469-21-9	Aroclor 1242	7.0	U	20	7.0	
12672-29-6	Aroclor 1248	1.6	U	20	1.6	
11097-69-1	<b>Aroclor 1254</b>	<b>14</b>	<b>JP</b>	20	3.0	
11096-82-5	Aroclor 1260	9.4	U	20	9.4	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	90	22-172	11/02/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/23/2003  
 Date Analyzed: 11/02/2003

Polychlorinated Biphenyls (PCBs)

Sample Name: LDW-LWa-H-WF-Comp2  
 Lab Code: K2307475-005  
 File ID: J:\GC09\DATA\110103.B\1101F021.D  
 Instrument ID: GC09.i  
 Extraction Method: EPA 3540C  
 Analysis Method: 8082  
 Sample Amount: 10.02 g  
 % Solids: NA  
 Dilution Factor: 1

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Lot: KWG0316964  
 Calibration ID: CAL3054

Column1: DB-35MS  
 Column2: DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	4.0	U	20	4.0	
11104-28-2	Aroclor 1221	6.2	U	40	6.2	
11141-16-5	Aroclor 1232	4.0	U	20	4.0	
53469-21-9	Aroclor 1242	7.0	U	20	7.0	
12672-29-6	Aroclor 1248	1.6	U	20	1.6	
<b>11097-69-1</b>	<b>Aroclor 1254</b>	<b>38</b>		20	3.0	
11096-82-5	Aroclor 1260	9.4	U	20	9.4	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	82	22-172	11/02/03	Acceptable

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Woodward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/23/2003  
**Date Analyzed:** 11/02/2003

Polychlorinated Biphenyls (PCBs)

**Sample Name:** LDW-LWa-H-WF-Comp3  
**Lab Code:** K2307475-006  
**File ID:** J:\GC09\DATA\110103.B\1101F022.D  
**Instrument ID:** GC09.i  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082  
**Sample Amount:** 10.12 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Lot:** KWG0316964  
**Calibration ID:** CAL3054

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	4.0	U	20	4.0	
11104-28-2	Aroclor 1221	6.2	U	40	6.2	
11141-16-5	Aroclor 1232	4.0	U	20	4.0	
53469-21-9	Aroclor 1242	7.0	U	20	7.0	
12672-29-6	Aroclor 1248	1.6	U	20	1.6	
11097-69-1	Aroclor 1254	18	J	20	3.0	
11096-82-5	Aroclor 1260	9.3	U	20	9.3	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	89	22-172	11/02/03	Acceptable

**Comments:** \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/23/2003  
**Date Analyzed:** 11/02/2003

Polychlorinated Biphenyls (PCBs)

**Sample Name:** LDW-MW-H-WF-Comp1  
**Lab Code:** K2307475-010  
**File ID:** J:\GC09\DATA\110103.B\1101F032.D  
**Instrument ID:** GC09.i  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082  
  
**Sample Amount:** 20.01 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low  
  
**Extraction Lot:** KWG0316964  
**Calibration ID:** CAL3054  
  
**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.0	U	10	2.0	
11104-28-2	Aroclor 1221	3.1	U	20	3.1	
11141-16-5	Aroclor 1232	2.0	U	10	2.0	
53469-21-9	Aroclor 1242	3.5	U	10	3.5	
12672-29-6	Aroclor 1248	0.76	U	10	0.76	
11097-69-1	Aroclor 1254	96	P	10	1.5	
11096-82-5	Aroclor 1260	26	P	10	4.7	*

\* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	94	22-172	11/02/03	Acceptable

**Comments:** \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/23/2003  
 Date Analyzed: 11/02/2003

Polychlorinated Biphenyls (PCBs)

Sample Name: LDW-MW-H-WF-Comp2  
 Lab Code: K2307475-011  
 File ID: J:\GC09\DATA\110103.B\1101F033.D  
 Instrument ID: GC09.i

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8082

Extraction Lot: KWG0316964  
 Calibration ID: CAL3054

Sample Amount: 20.03 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB-35MS  
 Column2: DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.0	U	10	2.0	
11104-28-2	Aroclor 1221	3.1	U	20	3.1	
11141-16-5	Aroclor 1232	2.0	U	10	2.0	
53469-21-9	Aroclor 1242	3.5	U	10	3.5	
12672-29-6	Aroclor 1248	0.76	U	10	0.76	
11097-69-1	Aroclor 1254	18	P	10	1.5	
11096-82-5	Aroclor 1260	18	P	10	4.7	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	89	22-172	11/02/03	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/23/2003  
**Date Analyzed:** 11/02/2003

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-MW-H-WF-Comp3  
**Lab Code:** K2307475-012  
**File ID:** J:\GC09\DATA\110103.B\1101F034.D  
**Instrument ID:** GC09.i  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Lot:** KWG0316964  
**Calibration ID:** CAL3054

**Sample Amount:** 20.06 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.0	U	10	2.0	
11104-28-2	Aroclor 1221	3.1	U	20	3.1	
11141-16-5	Aroclor 1232	2.0	U	10	2.0	
53469-21-9	Aroclor 1242	3.5	U	10	3.5	
12672-29-6	Aroclor 1248	0.76	U	10	0.76	
11097-69-1	Aroclor 1254	110	P	10	1.5	
11096-82-5	Aroclor 1260	63		10	4.7	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	93	22-172	11/02/03	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/18/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/23/2003  
**Date Analyzed:** 11/02/2003

**Polychlorinated Biphenyls (PCBs)**

**Sample Name:** LDW-RM18-H-WF-Comp1  
**Lab Code:** K2307475-013  
**File ID:** J:\GC09\DATA\110103.B\1101F035.D  
**Instrument ID:** GC09.i

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8082

**Extraction Lot:** KWG0316964  
**Calibration ID:** CAL3054

**Sample Amount:** 20.02 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB-35MS  
**Column2:** DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.0	U	10	2.0	
11104-28-2	Aroclor 1221	3.1	U	20	3.1	
11141-16-5	Aroclor 1232	2.0	U	10	2.0	
53469-21-9	Aroclor 1242	3.5	U	10	3.5	
12672-29-6	Aroclor 1248	0.76	U	10	0.76	
<b>11097-69-1</b>	<b>Aroclor 1254</b>	<b>9.8</b>	<b>J</b>	10	1.5	
11096-82-5	Aroclor 1260	4.7	U	10	4.7	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	54	22-172	11/02/03	Acceptable

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Woodward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/19/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/23/2003  
 Date Analyzed: 11/02/2003

Polychlorinated Biphenyls (PCBs)

Sample Name: LDW-RM18-H-WF-Comp2  
 Lab Code: K2307475-014  
 File ID: J:\GC09\DATA\110103.B\1101F036.D  
 Instrument ID: GC09.i

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8082

Extraction Lot: KWG0316964  
 Calibration ID: CAL3054

Sample Amount: 20.03 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB-35MS  
 Column2: DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.0	U	10	2.0	
11104-28-2	Aroclor 1221	3.1	U	20	3.1	
11141-16-5	Aroclor 1232	2.0	U	10	2.0	
53469-21-9	Aroclor 1242	3.5	U	10	3.5	
12672-29-6	Aroclor 1248	0.76	U	10	0.76	
11097-69-1	Aroclor 1254	9.5	JP	10	1.5	
11096-82-5	Aroclor 1260	4.7	U	10	4.7	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	92	22-172	11/02/03	Acceptable

Comments:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/20/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/23/2003  
 Date Analyzed: 11/02/2003

Polychlorinated Biphenyls (PCBs)

Sample Name: LDW-RM18-H-WF-Comp3  
 Lab Code: K2307475-015  
 File ID: J:\GC09\DATA\110103.B\1101F037.D  
 Instrument ID: GC09.i

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8082

Extraction Lot: KWG0316964  
 Calibration ID: CAL3054

Sample Amount: 20.00 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB-35MS  
 Column2: DB-XLB

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
12674-11-2	Aroclor 1016	2.0	U	10	2.0	
11104-28-2	Aroclor 1221	3.1	U	20	3.1	
11141-16-5	Aroclor 1232	2.0	U	10	2.0	
53469-21-9	Aroclor 1242	3.5	U	10	3.5	
12672-29-6	Aroclor 1248	0.76	U	10	0.76	
11097-69-1	Aroclor 1254	9.3	JP	10	1.5	
11096-82-5	Aroclor 1260	4.7	U	10	4.7	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	89	22-172	11/02/03	Acceptable

Comments:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/12/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/04/2003

Organochlorine Pesticides

Sample Name: LDW-LWa-W-WF-Comp1  
 Lab Code: K2307487-004  
 File ID: J:\GC23\DATA\110303B\1103F018.D  
 Instrument ID: GC23  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Lot: KWG0317026  
 Calibration ID: CAL3060

Sample Amount: 4.87 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB XLB  
 Column2: DB-35MS

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
319-84-6	alpha-BHC	0.85	Ui	4.2	0.85	
319-85-7	beta-BHC	0.87	U	4.2	0.87	
58-89-9	gamma-BHC (Lindane)	1.5	Ui	4.2	1.5	
319-86-8	delta-BHC	1.4	U	4.2	1.4	
76-44-8	Heptachlor	1.9	U	4.2	1.9	
309-00-2	Aldrin	0.83	U	4.2	0.83	
1024-57-3	Heptachlor Epoxide	2.3	J	4.2	0.62	
5103-74-2	gamma-Chlordane	3.5	J	4.2	0.58	
959-98-8	Endosulfan I	0.54	U	4.2	0.54	
5103-71-9	alpha-Chlordane	1.5	U	4.2	1.5	
60-57-1	Dieldrin	0.46	U	4.2	0.46	
72-55-9	4,4'-DDE	5.7		4.2	0.50	
72-20-8	Endrin	0.61	Ui	4.2	0.61	
33213-65-9	Endosulfan II	1.5	U	4.2	1.5	
72-54-8	4,4'-DDD	0.77	JP	4.2	0.54	
7421-93-4	Endrin Aldehyde	0.70	U	4.2	0.70	
1031-07-8	Endosulfan Sulfate	1.2	U	4.2	1.2	
50-29-3	4,4'-DDT	12		4.2	1.6	
53494-70-5	Endrin Ketone	1.2	U	4.2	1.2	
72-43-5	Methoxychlor	1.2	U	4.2	1.2	
8001-35-2	Toxaphene	140	Ui	210	140	
26880-48-8	Oxychlordane	0.32	U	4.2	0.32	
3424-82-6	2,4'-DDE	4.2	Ui	4.2	4.2	
5103-73-1	cis-Nonachlor	0.50	U	4.2	0.50	
53-19-0	2,4'-DDD	5.1	P	4.2	0.74	
39765-80-5	trans-Nonachlor	0.73	J	4.2	0.21	
789-02-6	2,4'-DDT	14	P	4.2	0.91	
2385-85-5	Mirex	1.9	Ui	4.2	1.9	

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/12/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/04/2003

**Organochlorine Pesticides**

**Sample Name:** LDW-LWa-W-WF-Comp1  
**Lab Code:** K2307487-004  
**File ID:** J:\GC23\DATA\110303B\1103F018.D  
**Instrument ID:** GC23  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A  
  
**Sample Amount:** 4.87 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Lot:** KWG0317026  
**Calibration ID:** CAL3060

**Column1:** DB XLB  
**Column2:** DB-35MS

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	66	10-171	11/04/03	Acceptable
Decachlorobiphenyl	65	38-167	11/04/03	Acceptable

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/12/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/04/2003

**Organochlorine Pesticides**

**Sample Name:** LDW-LWa-W-WF-Comp2  
**Lab Code:** K2307487-005  
**File ID:** J:\GC23\DATA\110303B\1103F019.D  
**Instrument ID:** GC23

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A

**Extraction Lot:** KWG0317026  
**Calibration ID:** CAL3060

**Sample Amount:** 11.14 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB XLB  
**Column2:** DB-35MS

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
319-84-6	alpha-BHC	0.29	U	1.8	0.29	
319-85-7	beta-BHC	0.38	U	1.8	0.38	
58-89-9	gamma-BHC (Lindane)	1.7	Ui	1.8	1.7	
319-86-8	delta-BHC	0.62	U	1.8	0.62	
76-44-8	Heptachlor	1.8	JP	1.8	0.81	
309-00-2	Aldrin	0.36	U	1.8	0.36	
1024-57-3	Heptachlor Epoxide	2.2		1.8	0.27	
5103-74-2	gamma-Chlordane	4.4		1.8	0.26	
959-98-8	Endosulfan I	0.38	Ui	1.8	0.38	
5103-71-9	alpha-Chlordane	0.77	J	1.8	0.65	
60-57-1	Dieldrin	1.8	Ui	1.8	1.8	
72-55-9	4,4'-DDE	6.6		1.8	0.22	*
72-20-8	Endrin	1.3	Ui	1.8	1.3	
33213-65-9	Endosulfan II	0.63	U	1.8	0.63	
72-54-8	4,4'-DDD	1.6	J	1.8	0.24	
7421-93-4	Endrin Aldehyde	1.8	Ui	1.8	1.8	
1031-07-8	Endosulfan Sulfate	0.73	J	1.8	0.49	
50-29-3	4,4'-DDT	20		1.8	0.69	
53494-70-5	Endrin Ketone	1.8	Ui	1.8	1.8	
72-43-5	Methoxychlor	0.49	U	1.8	0.49	
8001-35-2	Toxaphene	130	Ui	130	130	
26880-48-8	Oxychlordane	0.23	JP	1.8	0.14	
3424-82-6	2,4'-DDE	4.3	P	1.8	0.18	
5103-73-1	cis-Nonachlor	1.8	Ui	1.8	1.8	
53-19-0	2,4'-DDD	1.8	Ui	1.8	1.8	
39765-80-5	trans-Nonachlor	1.1	J	1.8	0.092	
789-02-6	2,4'-DDT	21	P	1.8	0.40	
2385-85-5	Mirex	3.1	Ui	3.1	3.1	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/12/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/04/2003

Organochlorine Pesticides

**Sample Name:** LDW-LWa-W-WF-Comp2  
**Lab Code:** K2307487-005  
**File ID:** J:\GC23\DATA\110303B\1103F019.D  
**Instrument ID:** GC23

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A

**Extraction Lot:** KWG0317026  
**Calibration ID:** CAL3060

**Sample Amount:** 11.14 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB XLB  
**Column2:** DB-35MS

\* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	62	10-171	11/04/03	Acceptable
Decachlorobiphenyl	61	38-167	11/04/03	Acceptable

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/12/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/04/2003

Organochlorine Pesticides

Sample Name: LDW-LWa-W-WF-Comp3  
 Lab Code: K2307487-006  
 File ID: J:\GC23\DATA\110303B\1103F020.D  
 Instrument ID: GC23  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A  
 Sample Amount: 5.15 g  
 % Solids: NA  
 Dilution Factor: 1

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Lot: KWG0317026  
 Calibration ID: CAL3060

Column1: DB XLB  
 Column2: DB-35MS

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
319-84-6	alpha-BHC	0.63	U	3.9	0.63	
319-85-7	beta-BHC	0.94	J	3.9	0.82	
58-89-9	gamma-BHC (Lindane)	1.5	Ui	3.9	1.5	
319-86-8	delta-BHC	1.4	U	3.9	1.4	
76-44-8	Heptachlor	1.8	U	3.9	1.8	
309-00-2	Aldrin	0.78	U	3.9	0.78	
1024-57-3	Heptachlor Epoxide	4.3		3.9	0.59	
5103-74-2	gamma-Chlordane	5.0		3.9	0.55	
959-98-8	Endosulfan I	1.6	Ui	3.9	1.6	
5103-71-9	alpha-Chlordane	1.4	U	3.9	1.4	
60-57-1	Dieldrin	3.9	Ui	3.9	3.9	
72-55-9	4,4'-DDE	11		3.9	0.47	
72-20-8	Endrin	1.0	J	3.9	0.39	*
33213-65-9	Endosulfan II	1.4	U	3.9	1.4	
72-54-8	4,4'-DDD	2.0	J	3.9	0.51	
7421-93-4	Endrin Aldehyde	3.9	Ui	3.9	3.9	
1031-07-8	Endosulfan Sulfate	1.1	U	3.9	1.1	
50-29-3	4,4'-DDT	26		3.9	1.5	
53494-70-5	Endrin Ketone	3.9	Ui	3.9	3.9	
72-43-5	Methoxychlor	1.1	U	3.9	1.1	
8001-35-2	Toxaphene	160	Ui	200	160	
26880-48-8	Oxychlordane	0.52	JP	3.9	0.30	
3424-82-6	2,4'-DDE	19	P	3.9	0.38	
5103-73-1	cis-Nonachlor	0.47	U	3.9	0.47	
53-19-0	2,4'-DDD	3.9	Ui	3.9	3.9	
39765-80-5	trans-Nonachlor	1.4	J	3.9	0.20	
789-02-6	2,4'-DDT	30	P	3.9	0.86	
2385-85-5	Mirex	3.2	Ui	3.9	3.2	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/12/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/04/2003

Organochlorine Pesticides

**Sample Name:** LDW-LWa-W-WF-Comp3  
**Lab Code:** K2307487-006  
**File ID:** J:\GC23\DATA\110303B\1103F020.D  
**Instrument ID:** GC23  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A  
  
**Sample Amount:** 5.15 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Lot:** KWG0317026  
**Calibration ID:** CAL3060

**Column1:** DB XLB  
**Column2:** DB-35MS

\* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	73	10-171	11/04/03	Acceptable
Decachlorobiphenyl	69	38-167	11/04/03	Acceptable

Comments: \_\_\_\_\_



COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/04/2003

Duplicate Sample Summary  
 Organochlorine Pesticides

Sample Name: LDW-LWa-W-WF-Comp3  
 Lab Code: K2307487-006  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Units: ug/Kg  
 Basis: Wet  
 Level: Low  
 Extraction Lot: KWG0317026

LDW-LWa-W-WF-Comp3DUP

KWG0317026-10

Duplicate Sample

Analyte Name	MRL	MDL	Sample Result	Result	Average	Relative Percent Difference	RPD Limit
alpha-BHC	2.4	0.38	ND	ND	ND	-	40
beta-BHC	2.4	2.4	0.94	ND	NC	NC	40
gamma-BHC (Lindane)	2.4	0.66	ND	ND	ND	-	40
delta-BHC	2.4	0.80	ND	ND	ND	-	40
Heptachlor	2.4	1.1	ND	ND	ND	-	40
Aldrin	2.4	0.47	ND	ND	ND	-	40
Heptachlor Epoxide	2.4	0.36	4.3	2.9	3.6	40 #	40
gamma-Chlordane	2.4	0.33	5.0	3.1	4.1	46 #	40
Endosulfan I	2.4	0.31	ND	1.1	NC	NC	40
alpha-Chlordane	2.4	0.85	ND	ND	ND	-	40
Dieldrin	2.4	2.4	ND	ND	ND	-	40
4,4'-DDE	2.4	0.29	11	8.1	9.5	29	40
Endrin	2.4	0.24	1.0	0.69	0.86	39 #	40
Endosulfan II	2.4	0.83	ND	ND	ND	-	40
4,4'-DDD	2.4	0.31	2.0	1.2	1.6	52 #	40
Endrin Aldehyde	2.4	2.4	ND	ND	ND	-	40
Endosulfan Sulfate	2.4	0.64	ND	ND	ND	-	40
4,4'-DDT	2.4	0.90	26	19	22	31	40
Endrin Ketone	2.4	2.4	ND	ND	ND	-	40
Methoxychlor	2.4	0.64	ND	ND	ND	-	40
Toxaphene	130	130	ND	ND	ND	-	40
Oxychlordane	2.4	0.19	0.52	ND	NC	NC	40
2,4'-DDE	2.4	0.23	19	3.9	11	132 #	40
cis-Nonachlor	2.4	0.29	ND	ND	ND	-	40
2,4'-DDD	2.4	2.4	ND	ND	ND	-	40
trans-Nonachlor	2.4	0.12	1.4	0.82	1.1	53 #	40
2,4'-DDT	2.4	0.52	30	22	26	32	40
Mirex	4.3	4.3	ND	ND	ND	-	40

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/13/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/05/2003

Organochlorine Pesticides

Sample Name: LDW-MWa-W-WF-Comp4  
 Lab Code: K2307487-007  
 File ID: J:\GC23\DATA\110503\1105F012.D  
 Instrument ID: GC23

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Extraction Lot: KWG0317026  
 Calibration ID: CAL3060

Sample Amount: 6.95 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB XLB  
 Column2: DB-35MS

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
319-84-6	alpha-BHC	0.47 U	2.9	0.47	
319-85-7	beta-BHC	0.61 U	2.9	0.61	*
58-89-9	gamma-BHC (Lindane)	0.81 U	2.9	0.81	
319-86-8	delta-BHC	1.1 Ui	2.9	1.1	
76-44-8	Heptachlor	2.5 JP	2.9	1.3	
309-00-2	Aldrin	0.58 U	2.9	0.58	*
1024-57-3	Heptachlor Epoxide	7.4 Ui	7.4	7.4	
5103-74-2	gamma-Chlordane	40	2.9	0.41	*
959-98-8	Endosulfan I	0.38 U	2.9	0.38	*
5103-71-9	alpha-Chlordane	1.1 U	2.9	1.1	*
60-57-1	Dieldrin	2.9 Ui	2.9	2.9	*
72-55-9	4,4'-DDE	7.3 Ui	7.3	7.3	*
72-20-8	Endrin	6.5 P	2.9	0.29	*
33213-65-9	Endosulfan II	2.9 Ui	2.9	2.9	*
72-54-8	4,4'-DDD	3.9	2.9	0.38	*
7421-93-4	Endrin Aldehyde	9.7	2.9	0.49	*
1031-07-8	Endosulfan Sulfate	0.78 U	2.9	0.78	*
50-29-3	4,4'-DDT	82 Ui	82	82	*
53494-70-5	Endrin Ketone	2.9 Ui	2.9	2.9	*
72-43-5	Methoxychlor	0.78 U	2.9	0.78	*
8001-35-2	Toxaphene	560 Ui	560	560	
26880-48-8	Oxychlordane	0.48 Ui	2.9	0.48	
3424-82-6	2,4'-DDE	2.9 Ui	2.9	2.9	*
5103-73-1	cis-Nonachlor	1.2 Ui	2.9	1.2	*
53-19-0	2,4'-DDD	14 Ui	14	14	
39765-80-5	trans-Nonachlor	0.70 JP	2.9	0.15	
789-02-6	2,4'-DDT	83	2.9	0.64	*
2385-85-5	Mirex	0.78 U	2.9	0.78	*

Comments:

## Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/13/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/05/2003

## Organochlorine Pesticides

Sample Name: LDW-MWa-W-WF-Comp4  
 Lab Code: K2307487-007  
 File ID: J:\GC23\DATA\110503\1105F012.D  
 Instrument ID: GC23

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Extraction Lot: KWG0317026  
 Calibration ID: CAL3060

Sample Amount: 6.95 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB XLB  
 Column2: DB-35MS

\* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	61	10-171	11/05/03	Acceptable
Decachlorobiphenyl	71	38-167	11/05/03	Acceptable

Comments: \_\_\_\_\_

## Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/13/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/05/2003

## Organochlorine Pesticides

Sample Name: LDW-MWb-W-WF-Comp5  
 Lab Code: K2307487-008  
 File ID: J:\GC23\DATA\110503\1105F015.D  
 Instrument ID: GC23

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Extraction Lot: KWG0317026  
 Calibration ID: CAL3060

Sample Amount: 5.87 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB XLB  
 Column2: DB-35MS

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
319-84-6	alpha-BHC	0.55 U	3.5	0.55	
319-85-7	beta-BHC	0.72 U	3.5	0.72	*
58-89-9	gamma-BHC (Lindane)	0.96 U	3.5	0.96	
319-86-8	delta-BHC	1.2 U	3.5	1.2	
76-44-8	Heptachlor	1.6 U	3.5	1.6	
309-00-2	Aldrin	0.69 U	3.5	0.69	*
1024-57-3	Heptachlor Epoxide	3.9 Ui	3.9	3.9	
5103-74-2	gamma-Chlordane	16	3.5	0.48	*
959-98-8	Endosulfan I	3.5 Ui	3.5	3.5	*
5103-71-9	alpha-Chlordane	4.5 P	3.5	1.3	*
60-57-1	Dieldrin	3.5 Ui	3.5	3.5	*
72-55-9	4,4'-DDE	11	3.5	0.41	*
72-20-8	Endrin	2.1 JP	3.5	0.34	*
33213-65-9	Endosulfan II	1.2 U	3.5	1.2	*
72-54-8	4,4'-DDD	2.8 J	3.5	0.45	*
7421-93-4	Endrin Aldehyde	7.4 P	3.5	0.58	*
1031-07-8	Endosulfan Sulfate	0.92 U	3.5	0.92	*
50-29-3	4,4'-DDT	39 Ui	39	39	*
53494-70-5	Endrin Ketone	3.5 Ui	3.5	3.5	*
72-43-5	Methoxychlor	0.92 U	3.5	0.92	*
8001-35-2	Toxaphene	340 Ui	340	340	
26880-48-8	Oxychlordane	1.5 J	3.5	0.27	
3424-82-6	2,4'-DDE	3.5 Ui	3.5	3.5	*
5103-73-1	cis-Nonachlor	0.61 Ui	3.5	0.61	*
53-19-0	2,4'-DDD	5.3 Ui	5.3	5.3	
39765-80-5	trans-Nonachlor	3.0 J	3.5	0.18	
789-02-6	2,4'-DDT	42	3.5	0.75	*
2385-85-5	Mirex	0.92 U	3.5	0.92	*

Comments:

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/13/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/05/2003

Organochlorine Pesticides

Sample Name: LDW-MWb-W-WF-Comp5  
 Lab Code: K2307487-008  
 File ID: J:\GC23\DATA\110503\1105F015.D  
 Instrument ID: GC23

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Extraction Lot: KWG0317026  
 Calibration ID: CAL3060

Sample Amount: 5.87 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB XLB  
 Column2: DB-35MS

\* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	57	10-171	11/05/03	Acceptable
Decachlorobiphenyl	60	38-167	11/05/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/12/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/05/2003

Organochlorine Pesticides

Sample Name: LDW-MWc-W-WF-Comp6  
 Lab Code: K2307487-009  
 File ID: J:\GC23\DATA\110503\1105F016.D  
 Instrument ID: GC23

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Extraction Lot: KWG0317026  
 Calibration ID: CAL3060

Sample Amount: 6.55 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB XLB  
 Column2: DB-35MS

CAS No.	Analyte Name	Result Q	MRL	MDL	Note
319-84-6	alpha-BHC	0.61 Ui	3.1	0.61	
319-85-7	beta-BHC	0.84 J	3.1	0.65	*
58-89-9	gamma-BHC (Lindane)	0.86 U	3.1	0.86	
319-86-8	delta-BHC	1.1 U	3.1	1.1	
76-44-8	Heptachlor	1.4 U	3.1	1.4	
309-00-2	Aldrin	0.62 U	3.1	0.62	*
1024-57-3	Heptachlor Epoxide	3.0 J	3.1	0.46	
5103-74-2	gamma-Chlordane	6.9 P	3.1	0.43	*
959-98-8	Endosulfan I	0.40 U	3.1	0.40	*
5103-71-9	alpha-Chlordane	2.2 J	3.1	1.1	*
60-57-1	Dieldrin	5.7	3.1	0.34	*
72-55-9	4,4'-DDE	14 P	3.1	0.37	*
72-20-8	Endrin	0.64 J	3.1	0.31	*
33213-65-9	Endosulfan II	1.1 U	3.1	1.1	*
72-54-8	4,4'-DDD	5.4	3.1	0.40	*
7421-93-4	Endrin Aldehyde	3.1 Ui	3.1	3.1	*
1031-07-8	Endosulfan Sulfate	1.1 Ui	3.1	1.1	*
50-29-3	4,4'-DDT	16 Ui	16	16	*
53494-70-5	Endrin Ketone	3.1 Ui	3.1	3.1	*
72-43-5	Methoxychlor	0.83 U	3.1	0.83	*
8001-35-2	Toxaphene	270 Ui	270	270	
26880-48-8	Oxychlordane	1.3 JP	3.1	0.24	
3424-82-6	2,4'-DDE	12 P	3.1	0.30	*
5103-73-1	cis-Nonachlor	0.37 U	3.1	0.37	*
53-19-0	2,4'-DDD	3.1 Ui	3.1	3.1	
39765-80-5	trans-Nonachlor	3.2	3.1	0.16	
789-02-6	2,4'-DDT	22 P	3.1	0.68	*
2385-85-5	Mirex	0.83 U	3.1	0.83	*

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/12/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/05/2003

**Organochlorine Pesticides**

**Sample Name:** LDW-MWc-W-WF-Comp6  
**Lab Code:** K2307487-009  
**File ID:** J:\GC23\DATA\110503\1105F016.D  
**Instrument ID:** GC23

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A

**Extraction Lot:** KWG0317026  
**Calibration ID:** CAL3060

**Sample Amount:** 6.55 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** DB XLB  
**Column2:** DB-35MS

\* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	63	10-171	11/05/03	Acceptable
Decachlorobiphenyl	65	38-167	11/05/03	Acceptable

**Comments:** \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/14/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/03/2003

Organochlorine Pesticides

Sample Name: LDW-GR-W-WF-Comp1  
 Lab Code: K2307487-001  
 File ID: J:\GC23\DATA\110303B\1103F013.D  
 Instrument ID: GC23  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A  
 Sample Amount: 2.82 g  
 % Solids: NA  
 Dilution Factor: 1

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Lot: KWG0317026  
 Calibration ID: CAL3060

Column1: DB XLB  
 Column2: DB-35MS

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
319-84-6	alpha-BHC	2.3	Ui	7.1	2.3	
319-85-7	beta-BHC	1.5	U	7.1	1.5	
58-89-9	gamma-BHC (Lindane)	2.0	U	7.1	2.0	
319-86-8	delta-BHC	2.5	U	7.1	2.5	
76-44-8	Heptachlor	3.2	U	7.1	3.2	
309-00-2	Aldrin	1.5	U	7.1	1.5	
1024-57-3	Heptachlor Epoxide	8.2		7.1	1.1	
5103-74-2	gamma-Chlordane	11		7.1	1.0	
959-98-8	Endosulfan I	0.93	U	7.1	0.93	
5103-71-9	alpha-Chlordane	2.6	U	7.1	2.6	
60-57-1	Dieldrin	7.1	Ui	7.1	7.1	
72-55-9	4,4'-DDE	15		7.1	0.86	
72-20-8	Endrin	6.3	Ui	7.1	6.3	
33213-65-9	Endosulfan II	2.5	U	7.1	2.5	
72-54-8	4,4'-DDD	2.1	J	7.1	0.93	
7421-93-4	Endrin Aldehyde	1.3	U	7.1	1.3	
1031-07-8	Endosulfan Sulfate	2.0	U	7.1	2.0	
50-29-3	4,4'-DDT	31		7.1	2.7	
53494-70-5	Endrin Ketone	2.1	U	7.1	2.1	
72-43-5	Methoxychlor	2.0	U	7.1	2.0	
8001-35-2	Toxaphene	170	Ui	360	170	
26880-48-8	Oxychlordane	0.55	U	7.1	0.55	
3424-82-6	2,4'-DDE	14	Ui	14	14	
5103-73-1	cis-Nonachlor	0.86	U	7.1	0.86	
53-19-0	2,4'-DDD	7.1	Ui	7.1	7.1	
39765-80-5	trans-Nonachlor	1.9	J	7.1	0.37	
789-02-6	2,4'-DDT	34	P	7.1	1.6	
2385-85-5	Mirex	8.2	Ui	8.2	8.2	

Comments:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/14/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/03/2003

Organochlorine Pesticides

**Sample Name:** LDW-GR-W-WF-Comp1  
**Lab Code:** K2307487-001  
**File ID:** J:\GC23\DATA\110303B\1103F013.D  
**Instrument ID:** GC23  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A  
**Sample Amount:** 2.82 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Lot:** KWG0317026  
**Calibration ID:** CAL3060

**Column1:** DB XLB  
**Column2:** DB-35MS

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	67	10-171	11/03/03	Acceptable
Decachlorobiphenyl	66	38-167	11/03/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/14/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/04/2003

Organochlorine Pesticides

Sample Name: LDW-GR-W-WF-Comp2  
 Lab Code: K2307487-002  
 File ID: J:\GC23\DATA\110303B\1103F016.D  
 Instrument ID: GC23  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A  
 Sample Amount: 8.20 g  
 % Solids: NA  
 Dilution Factor: 1

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Lot: KWG0317026  
 Calibration ID: CAL3060

Column1: DB XLB  
 Column2: DB-35MS

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
319-84-6	alpha-BHC	1.3	Ui	2.5	1.3	
319-85-7	beta-BHC	0.56	J	2.5	0.52	
58-89-9	gamma-BHC (Lindane)	3.0	P	2.5	0.69	
319-86-8	delta-BHC	0.83	U	2.5	0.83	
76-44-8	Heptachlor	1.1	U	2.5	1.1	
309-00-2	Aldrin	0.64	Ui	2.5	0.64	
1024-57-3	Heptachlor Epoxide	0.77	J	2.5	0.37	
5103-74-2	gamma-Chlordane	0.36	Ui	2.5	0.36	
959-98-8	Endosulfan I	0.90	Ui	2.5	0.90	
5103-71-9	alpha-Chlordane	0.88	U	2.5	0.88	
60-57-1	Dieldrin	0.44	Ui	2.5	0.44	
72-55-9	4,4'-DDE	5.5	P	2.5	0.30	
72-20-8	Endrin	5.2	P	2.5	0.25	
33213-65-9	Endosulfan II	0.86	U	2.5	0.86	
72-54-8	4,4'-DDD	1.4	J	2.5	0.32	
7421-93-4	Endrin Aldehyde	0.42	U	2.5	0.42	
1031-07-8	Endosulfan Sulfate	0.66	U	2.5	0.66	
50-29-3	4,4'-DDT	3.2		2.5	0.93	
53494-70-5	Endrin Ketone	0.71	U	2.5	0.71	
72-43-5	Methoxychlor	0.66	U	2.5	0.66	
8001-35-2	Toxaphene	130	Ui	130	130	
26880-48-8	Oxychlordane	0.19	U	2.5	0.19	
3424-82-6	2,4'-DDE	2.5	Ui	2.5	2.5	
5103-73-1	cis-Nonachlor	0.30	U	2.5	0.30	
53-19-0	2,4'-DDD	2.5	Ui	2.5	2.5	
39765-80-5	trans-Nonachlor	1.7	JP	2.5	0.13	
789-02-6	2,4'-DDT	2.5	Ui	2.5	2.5	
2385-85-5	Mirex	0.66	U	2.5	0.66	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/14/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/04/2003

Organochlorine Pesticides

**Sample Name:** LDW-GR-W-WF-Comp2  
**Lab Code:** K2307487-002  
**File ID:** J:\GC23\DATA\110303B\1103F016.D  
**Instrument ID:** GC23  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A  
  
**Sample Amount:** 8.20 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Lot:** KWG0317026  
**Calibration ID:** CAL3060

**Column1:** DB XLB  
**Column2:** DB-35MS

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	63	10-171	11/04/03	Acceptable
Decachlorobiphenyl	68	38-167	11/04/03	Acceptable

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/14/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/24/2003  
 Date Analyzed: 11/04/2003

Organochlorine Pesticides

Sample Name: LDW-GR-W-WF-Comp3  
 Lab Code: K2307487-003  
 File ID: J:\GC23\DATA\110303B\1103F017.D  
 Instrument ID: GC23

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Extraction Lot: KWG0317026  
 Calibration ID: CAL3060

Sample Amount: 12.09 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: DB XLB  
 Column2: DB-35MS

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
319-84-6	alpha-BHC	0.27	U	1.7	0.27	
319-85-7	beta-BHC	1.1	Ui	1.7	1.1	
58-89-9	gamma-BHC (Lindane)	2.5	Ui	2.5	2.5	
319-86-8	delta-BHC	0.57	U	1.7	0.57	
76-44-8	Heptachlor	0.76	J	1.7	0.75	
309-00-2	Aldrin	0.99	J	1.7	0.34	
1024-57-3	Heptachlor Epoxide	0.94	JP	1.7	0.25	
5103-74-2	gamma-Chlordane	0.90	Ui	1.7	0.90	
959-98-8	Endosulfan I	1.7	Ui	1.7	1.7	
5103-71-9	alpha-Chlordane	0.60	U	1.7	0.60	
60-57-1	Dieldrin	0.52	JP	1.7	0.19	*
72-55-9	4,4'-DDE	3.9		1.7	0.20	
72-20-8	Endrin	1.7	Ui	1.7	1.7	
33213-65-9	Endosulfan II	0.58	U	1.7	0.58	
72-54-8	4,4'-DDD	0.53	J	1.7	0.22	
7421-93-4	Endrin Aldehyde	0.95	Ui	1.7	0.95	
1031-07-8	Endosulfan Sulfate	1.7	Ui	1.7	1.7	
50-29-3	4,4'-DDT	1.9		1.7	0.63	*
53494-70-5	Endrin Ketone	1.7	Ui	1.7	1.7	
72-43-5	Methoxychlor	0.45	U	1.7	0.45	
8001-35-2	Toxaphene	83	Ui	83	83	
26880-48-8	Oxychlordane	0.13	U	1.7	0.13	
3424-82-6	2,4'-DDE	3.4	P	1.7	0.16	
5103-73-1	cis-Nonachlor	0.20	U	1.7	0.20	
53-19-0	2,4'-DDD	1.7	Ui	1.7	1.7	
39765-80-5	trans-Nonachlor	1.7	JP	1.7	0.085	
789-02-6	2,4'-DDT	6.0	P	1.7	0.37	
2385-85-5	Mirex	2.4	Ui	2.4	2.4	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/14/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/04/2003

Organochlorine Pesticides

**Sample Name:** LDW-GR-W-WF-Comp3  
**Lab Code:** K2307487-003  
**File ID:** J:\GC23\DATA\110303B\1103F017.D  
**Instrument ID:** GC23  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A  
  
**Sample Amount:** 12.09 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Lot:** KWG0317026  
**Calibration ID:** CAL3060

**Column1:** DB XLB  
**Column2:** DB-35MS

\* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	70	10-171	11/04/03	Acceptable
Decachlorobiphenyl	65	38-167	11/04/03	Acceptable

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003

**Organochlorine Pesticides**

**Sample Name:** LDW-LWa-W-WF-Comp1  
**Lab Code:** K2307475-007  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND Ui	1.0	0.82	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND U	1.0	0.28	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND U	1.0	0.34	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	0.96 JP	1.0	0.45	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND U	1.0	0.20	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	1.6 P	1.0	0.15	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	ND U	1.0	0.14	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	ND Ui	1.0	0.54	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND U	1.0	0.36	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	2.3	1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
Endrin	ND Ui	1.0	0.73	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND U	1.0	0.35	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	ND U	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	ND U	1.0	0.17	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	ND Ui	1.0	0.50	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	1.2	1.0	0.38	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND U	1.0	0.29	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND Ui	50	30	1	10/23/03	11/01/03	KWG0316962	
Oxychlordane	ND Ui	1.0	0.31	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDE	0.75 J	1.0	0.096	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND U	1.0	0.12	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDD	0.72 JP	1.0	0.18	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND Ui	1.0	1.0	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDT	1.8 P	1.0	0.22	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND U	1.0	0.27	1	10/23/03	11/02/03	KWG0316962	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/23/2003  
Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-LWa-W-WF-Comp1  
Lab Code: K2307475-007

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	72	10-171	11/01/03	Acceptable
Decachlorobiphenyl	78	38-167	11/01/03	Acceptable

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003

## Organochlorine Pesticides

Sample Name: LDW-LWa-W-WF-Comp2  
 Lab Code: K2307475-008  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND U	2.0	0.32	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	ND Ui	2.0	1.1	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND Ui	2.0	1.2	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND U	2.0	0.68	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	ND U	2.0	0.90	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND U	2.0	0.40	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	ND Ui	2.0	0.35	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND U	2.0	0.72	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
Endrin	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND U	2.0	0.70	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	ND U	2.0	0.26	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	ND Ui	2.0	0.59	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	ND Ui	2.0	1.4	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	0.80 J	2.0	0.58	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND U	2.0	0.54	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND Ui	100	39	1	10/23/03	11/01/03	KWG0316962	
Oxychlorane	ND Ui	2.0	0.29	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDE	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND Ui	2.0	0.31	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDD	1.4 JP	2.0	0.36	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND Ui	2.0	0.28	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDT	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND U	2.0	0.54	1	10/23/03	11/01/03	KWG0316962	

Comments:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/23/2003  
Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-LWa-W-WF-Comp2  
Lab Code: K2307475-008

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	75	10-171	11/01/03	Acceptable
Decachlorobiphenyl	80	38-167	11/01/03	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003

**Organochlorine Pesticides**

Sample Name: LDW-LWa-W-WF-Comp3  
 Lab Code: K2307475-009  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.5	0.23	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	0.98	J	1.5	0.30	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND	Ui	1.5	0.71	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND	Ui	1.5	1.5	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	ND	U	1.5	0.65	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND	U	1.5	0.29	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	0.72	JP	1.5	0.22	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	1.1	JP	1.5	0.20	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	0.50	JP	1.5	0.19	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND	U	1.5	0.52	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	ND	U	1.5	0.16	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	ND	Ui	1.5	1.5	1	10/23/03	11/01/03	KWG0316962	
Endrin	ND	U	1.5	0.15	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND	U	1.5	0.50	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	0.29	J	1.5	0.19	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	ND	U	1.5	0.25	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	ND	U	1.5	0.39	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	ND	Ui	1.6	1.6	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND	U	1.5	0.42	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND	U	1.5	0.39	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND	Ui	80	80	1	10/23/03	11/01/03	KWG0316962	
Oxychlordane	ND	Ui	1.5	0.12	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDE	ND	Ui	1.5	1.5	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND	U	1.5	0.18	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDD	ND	U	1.5	0.26	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND	Ui	1.5	1.5	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDT	9.2	P	1.5	0.32	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND	U	1.5	0.39	1	10/23/03	11/01/03	KWG0316962	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/23/2003  
Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-LWa-W-WF-Comp3  
Lab Code: K2307475-009

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	75	10-171	11/01/03	Acceptable
Decachlorobiphenyl	75	38-167	11/01/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report.

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Extracted: 10/23/2003  
 Date Analyzed: 11/01/2003

Duplicate Sample Summary  
 Organochlorine Pesticides

Sample Name: LDW-LWa-W-WF-Comp3  
 Lab Code: K2307475-009  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Units: ug/Kg  
 Basis: Wet  
 Level: Low  
 Extraction Lot: KWG0316962

Analyte Name	MRL	MDL	Sample Result	LDW-LWa-W-WF-Comp3DUP KWG0316962-5 Duplicate Sample		Relative Percent Difference	RPD Limit
				Result	Average		
alpha-BHC	1.5	0.23	ND	1.3	NC	NC	40
beta-BHC	1.5	1.2	0.98	ND	NC	NC	40
gamma-BHC (Lindane)	1.5	0.69	ND	ND	ND	-	40
delta-BHC	1.5	1.5	ND	ND	ND	-	40
Heptachlor	1.5	1.5	ND	ND	ND	-	40
Aldrin	1.5	0.29	ND	ND	ND	-	40
Heptachlor Epoxide	1.5	0.83	0.72	ND	NC	NC	40
gamma-Chlordane	1.5	1.5	1.1	ND	NC	NC	40
Endosulfan I	1.5	0.19	0.50	0.76	0.63	41 #	40
alpha-Chlordane	1.5	1.5	ND	ND	ND	-	40
Dieldrin	1.5	0.16	ND	ND	ND	-	40
4,4'-DDE	1.5	1.5	ND	ND	ND	-	40
Endrin	1.5	0.15	ND	ND	ND	-	40
Endosulfan II	1.5	0.50	ND	ND	ND	-	40
4,4'-DDD	1.5	0.19	0.29	0.24	0.27	19 #	40
Endrin Aldehyde	1.5	0.69	ND	ND	ND	-	40
Endosulfan Sulfate	1.5	1.5	ND	ND	ND	-	40
4,4'-DDT	1.8	1.8	ND	ND	ND	-	40
Endrin Ketone	1.5	1.2	ND	ND	ND	-	40
Methoxychlor	1.5	0.39	ND	0.49	NC	NC	40
Toxaphene	89	89	ND	ND	ND	-	40
Oxychlordane	1.5	1.5	ND	ND	ND	-	40
2,4'-DDE	1.5	1.5	ND	ND	ND	-	40
cis-Nonachlor	1.5	0.31	ND	ND	ND	-	40
2,4'-DDD	1.5	0.26	ND	0.99	NC	NC	40
trans-Nonachlor	1.5	1.5	ND	ND	ND	-	40
2,4'-DDT	1.5	0.32	9.2	13	11	32	40
Mirex	1.5	0.39	ND	ND	ND	-	40

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003

## Organochlorine Pesticides

Sample Name: LDW-MWb-W-WF-Comp1  
 Lab Code: K2307475-001  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	Ui	1.0	0.74	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	4.4		1.0	0.21	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND	U	1.0	0.34	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	ND	U	1.0	0.45	1	10/23/03	11/01/03	KWG0316962	
Aldrin	0.61	JP	1.0	0.20	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	ND	U	1.0	0.15	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	0.21	JP	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND	U	1.0	0.36	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	ND	U	1.0	0.11	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	2.2		1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
Endrin	ND	U	1.0	0.099	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND	U	1.0	0.35	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	ND	U	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	ND	U	1.0	0.17	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	0.56	J	1.0	0.38	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND	Ui	1.0	0.39	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND	Ui	50	16	1	10/23/03	11/01/03	KWG0316962	
Oxychlordane	ND	Ui	1.0	0.13	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDE	ND	Ui	1.0	0.26	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND	Ui	1.0	1.0	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDD	1.9	P	1.0	0.18	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND	Ui	1.0	0.19	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDT	ND	U	1.0	0.22	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND	U	1.0	0.27	1	10/23/03	11/02/03	KWG0316962	

Comments:

## Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/23/2003  
Date Received: 09/26/2003

## Organochlorine Pesticides

Sample Name: LDW-MWb-W-WF-Comp1  
Lab Code: K2307475-001

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	77	10-171	11/01/03	Acceptable
Decachlorobiphenyl	70	38-167	11/01/03	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003

## Organochlorine Pesticides

Sample Name: LDW-MWb-W-WF-Comp2  
 Lab Code: K2307475-002  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.0	0.16	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	0.39	JP	1.0	0.21	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND	U	1.0	0.28	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND	U	1.0	0.34	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	ND	U	1.0	0.45	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND	U	1.0	0.20	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	0.93	J	1.0	0.15	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	0.96	JP	1.0	0.14	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND	U	1.0	0.36	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	1.8	P	1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
Endrin	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND	U	1.0	0.35	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	ND	U	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	ND	Ui	1.0	0.67	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	1.5		1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	ND	U	1.0	0.38	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND	Ui	1.0	0.33	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND	Ui	65	65	1	10/23/03	11/01/03	KWG0316962	
Oxychlorane	ND	Ui	1.0	0.14	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDE	0.72	J	1.0	0.096	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND	Ui	2.3	2.3	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDD	ND	U	1.0	0.18	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND	Ui	1.0	0.27	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDT	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND	Ui	1.0	0.63	1	10/23/03	11/02/03	KWG0316962	

Comments:

## Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/23/2003  
Date Received: 09/26/2003

## Organochlorine Pesticides

Sample Name: LDW-MWb-W-WF-Comp2  
Lab Code: K2307475-002

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	81	10-171	11/01/03	Acceptable
Decachlorobiphenyl	72	38-167	11/01/03	Acceptable

Comments:

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003

**Organochlorine Pesticides**

Sample Name: LDW-MWb-W-WF-Comp3  
 Lab Code: K2307475-003  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND U	1.0	0.16	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	1.2 P	1.0	0.21	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	1.0 P	1.0	0.28	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND U	1.0	0.34	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	ND U	1.0	0.45	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND U	1.0	0.20	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	1.7	1.0	0.15	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND U	1.0	0.36	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	2.5 P	1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
Endrin	ND Ui	1.0	0.67	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	ND Ui	1.0	0.44	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	0.97 J	1.0	0.17	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	1.1 P	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	0.92 JP	1.0	0.38	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND Ui	1.0	0.35	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND Ui	50	50	1	10/23/03	11/01/03	KWG0316962	
Oxychlorane	ND Ui	1.0	0.77	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDE	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND Ui	2.3	2.3	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDD	0.63 J	1.0	0.18	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND Ui	1.0	0.20	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDT	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND U	1.0	0.27	1	10/23/03	11/02/03	KWG0316962	

Comments: \_\_\_\_\_

## Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/23/2003  
Date Received: 09/26/2003

## Organochlorine Pesticides

Sample Name: LDW-MWb-W-WF-Comp3  
Lab Code: K2307475-003

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	84	10-171	11/01/03	Acceptable
Decachlorobiphenyl	71	38-167	11/01/03	Acceptable

Comments:

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/18/2003  
 Date Received: 09/26/2003

## Organochlorine Pesticides

Sample Name: LDW-RM18-W-WF-Comp1  
 Lab Code: K2307475-016  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.0	0.16	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	0.53	JP	1.0	0.21	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND	U	1.0	0.28	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND	U	1.0	0.34	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	1.9		1.0	0.45	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND	Ui	1.0	0.26	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	ND	Ui	1.0	0.59	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	0.24	JP	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND	U	1.0	0.36	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	ND	U	1.0	0.11	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	3.5		1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
Endrin	ND	Ui	1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND	U	1.0	0.35	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	ND	U	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	0.62	J	1.0	0.17	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	ND	Ui	1.0	0.76	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND	Ui	1.0	0.72	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND	Ui	50	37	1	10/23/03	11/01/03	KWG0316962	
Oxychlordane	ND	Ui	1.0	0.14	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDE	ND	Ui	1.0	0.90	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND	U	1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDD	ND	U	1.0	0.18	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	0.62	JP	1.0	0.051	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDT	ND	U	1.0	0.22	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/18/2003  
Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-RM18-W-WF-Comp1  
Lab Code: K2307475-016

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	78	10-171	11/01/03	Acceptable
Decachlorobiphenyl	76	38-167	11/01/03	Acceptable

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/20/2003  
**Date Received:** 09/26/2003

**Organochlorine Pesticides**

**Sample Name:** LDW-RM18-W-WF-Comp2  
**Lab Code:** K2307475-017  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND U	1.0	0.16	1	10/23/03	11/02/03	KWG0316962	
beta-BHC	ND U	1.0	0.21	1	10/23/03	11/02/03	KWG0316962	
gamma-BHC (Lindane)	ND U	1.0	0.28	1	10/23/03	11/02/03	KWG0316962	
delta-BHC	ND U	1.0	0.34	1	10/23/03	11/02/03	KWG0316962	
Heptachlor	ND U	1.0	0.45	1	10/23/03	11/02/03	KWG0316962	
Aldrin	ND Ui	1.0	0.38	1	10/23/03	11/02/03	KWG0316962	
Heptachlor Epoxide	ND Ui	1.0	0.45	1	10/23/03	11/02/03	KWG0316962	
gamma-Chlordane	0.32 J	1.0	0.14	1	10/23/03	11/02/03	KWG0316962	
Endosulfan I	0.26 JP	1.0	0.13	1	10/23/03	11/02/03	KWG0316962	
alpha-Chlordane	ND U	1.0	0.36	1	10/23/03	11/02/03	KWG0316962	
Dieldrin	0.97 J	1.0	0.11	1	10/23/03	11/02/03	KWG0316962	
4,4'-DDE	2.9	1.0	0.12	1	10/23/03	11/02/03	KWG0316962	
Endrin	ND U	1.0	0.099	1	10/23/03	11/02/03	KWG0316962	
Endosulfan II	ND U	1.0	0.35	1	10/23/03	11/02/03	KWG0316962	
4,4'-DDD	ND U	1.0	0.13	1	10/23/03	11/02/03	KWG0316962	
Endrin Aldehyde	0.44 JP	1.0	0.17	1	10/23/03	11/02/03	KWG0316962	
Endosulfan Sulfate	ND Ui	1.0	1.0	1	10/23/03	11/02/03	KWG0316962	
4,4'-DDT	1.0	1.0	0.38	1	10/23/03	11/02/03	KWG0316962	
Endrin Ketone	ND U	1.0	0.29	1	10/23/03	11/02/03	KWG0316962	
Methoxychlor	ND U	1.0	0.27	1	10/23/03	11/02/03	KWG0316962	
Toxaphene	ND Ui	50	18	1	10/23/03	11/02/03	KWG0316962	
Oxychlordane	ND Ui	1.0	0.50	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDE	1.7 P	1.0	0.096	1	10/23/03	11/02/03	KWG0316962	
cis-Nonachlor	ND U	1.0	0.12	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDD	ND Ui	1.0	1.0	1	10/23/03	11/02/03	KWG0316962	
trans-Nonachlor	ND Ui	1.0	1.0	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDT	ND Ui	1.0	1.0	1	10/23/03	11/02/03	KWG0316962	
Mirex	ND U	1.0	0.27	1	10/23/03	11/02/03	KWG0316962	

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/20/2003  
Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-RM18-W-WF-Comp2  
Lab Code: K2307475-017

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	83	10-171	11/02/03	Acceptable
Decachlorobiphenyl	82	38-167	11/02/03	Acceptable

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/25/2003  
**Date Received:** 09/26/2003

**Organochlorine Pesticides**

**Sample Name:** LDW-RM18-W-WF-Comp3  
**Lab Code:** K2307475-018  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND U	1.0	0.16	1	10/23/03	11/02/03	KWG0316962	
beta-BHC	0.50 J	1.0	0.21	1	10/23/03	11/02/03	KWG0316962	
gamma-BHC (Lindane)	0.34 JP	1.0	0.28	1	10/23/03	11/02/03	KWG0316962	
delta-BHC	ND U	1.0	0.34	1	10/23/03	11/02/03	KWG0316962	
Heptachlor	1.5 P	1.0	0.45	1	10/23/03	11/02/03	KWG0316962	
Aldrin	ND Ui	1.0	0.37	1	10/23/03	11/02/03	KWG0316962	
Heptachlor Epoxide	0.31 JP	1.0	0.15	1	10/23/03	11/02/03	KWG0316962	
gamma-Chlordane	ND U	1.0	0.14	1	10/23/03	11/02/03	KWG0316962	
Endosulfan I	0.42 J	1.0	0.13	1	10/23/03	11/02/03	KWG0316962	
alpha-Chlordane	ND U	1.0	0.36	1	10/23/03	11/02/03	KWG0316962	
Dieldrin	0.89 JP	1.0	0.11	1	10/23/03	11/02/03	KWG0316962	
4,4'-DDE	2.3	1.0	0.12	1	10/23/03	11/02/03	KWG0316962	
Endrin	0.73 JP	1.0	0.099	1	10/23/03	11/02/03	KWG0316962	
Endosulfan-II	ND U	1.0	0.35	1	10/23/03	11/02/03	KWG0316962	
4,4'-DDD	ND U	1.0	0.13	1	10/23/03	11/02/03	KWG0316962	
Endrin Aldehyde	1.1 P	1.0	0.17	1	10/23/03	11/02/03	KWG0316962	
Endosulfan Sulfate	ND Ui	1.0	1.0	1	10/23/03	11/02/03	KWG0316962	
4,4'-DDT	0.59 J	1.0	0.38	1	10/23/03	11/02/03	KWG0316962	
Endrin Ketone	ND U	1.0	0.29	1	10/23/03	11/02/03	KWG0316962	
Methoxychlor	ND Ui	1.0	0.33	1	10/23/03	11/02/03	KWG0316962	
Toxaphene	ND Ui	50	13	1	10/23/03	11/02/03	KWG0316962	
Oxychlordane	ND Ui	1.0	0.12	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDE	1.8 P	1.0	0.096	1	10/23/03	11/02/03	KWG0316962	
cis-Nonachlor	ND Ui	1.6	1.6	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDD	ND U	1.0	0.18	1	10/23/03	11/02/03	KWG0316962	
trans-Nonachlor	ND Ui	1.0	0.11	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDT	ND Ui	1.0	1.0	1	10/23/03	11/02/03	KWG0316962	
Mirex	ND U	1.0	0.27	1	10/23/03	11/02/03	KWG0316962	

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/25/2003  
Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-RM18-W-WF-Comp3  
Lab Code: K2307475-018

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	84	10-171	11/02/03	Acceptable
Decachlorobiphenyl	83	38-167	11/02/03	Acceptable

Comments:



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** Salmon Collection (LDW)/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307486  
**Date Collected:** 05/21/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/03/2003

**Organochlorine Pesticides**

**Sample Name:** LDW-SC-H-WF-Comp1  
**Lab Code:** K2307486-001  
**File ID:** J:\GC23\DATA\110303B\1103F012.D  
**Instrument ID:** GC23  
**Extraction Method:** BPA 3540C  
**Analysis Method:** 8081A  
  
**Sample Amount:** 8.02 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Lot:** KWG0317026  
**Calibration ID:** CAL3060

**Column1:** DB XLB  
**Column2:** DB-35MS

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
319-84-6	alpha-BHC	0.40	U	2.5	0.40	
319-85-7	beta-BHC	12		2.5	0.53	
58-89-9	gamma-BHC (Lindane)	2.6		2.5	0.70	
319-86-8	delta-BHC	0.85	U	2.5	0.85	
76-44-8	Heptachlor	2.5	Ui	2.5	2.5	
309-00-2	Aldrin	1.9	Ui	2.5	1.9	
1024-57-3	Heptachlor Epoxide	0.38	U	2.5	0.38	
5103-74-2	gamma-Chlordane	0.56	Ui	2.5	0.56	
959-98-8	Endosulfan I	0.33	U	2.5	0.33	
5103-71-9	alpha-Chlordane	1.2	J	2.5	0.90	
60-57-1	Dieldrin	1.5	JP	2.5	0.28	
72-55-9	4,4'-DDE	7.5		2.5	0.30	
72-20-8	Endrin	0.25	U	2.5	0.25	
33213-65-9	Endosulfan II	0.88	U	2.5	0.88	
72-54-8	4,4'-DDD	1.4	J	2.5	0.33	
7421-93-4	Endrin Aldehyde	0.50	Ui	2.5	0.50	
1031-07-8	Endosulfan Sulfate	0.68	U	2.5	0.68	
50-29-3	4,4'-DDT	0.95	U	2.5	0.95	
53494-70-5	Endrin Ketone	0.76	Ui	2.5	0.76	
72-43-5	Methoxychlor	6.3		2.5	0.68	
8001-35-2	Toxaphene	46	Ui	130	46	
26880-48-8	Oxychlordane	0.37	Ui	2.5	0.37	
3424-82-6	2,4'-DDE	1.1	Ui	2.5	1.1	
5103-73-1	cis-Nonachlor	0.30	U	2.5	0.30	
53-19-0	2,4'-DDD	7.2	P	2.5	0.45	
39765-80-5	trans-Nonachlor	0.73	JP	2.5	0.13	
789-02-6	2,4'-DDT	2.5	Ui	2.5	2.5	
2385-85-5	Mirex	0.68	U	2.5	0.68	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Windward Environmental  
**Project:** Salmon Collection (LDW)/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307486  
**Date Collected:** 05/21/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/24/2003  
**Date Analyzed:** 11/03/2003

Organochlorine Pesticides

**Sample Name:** LDW-SC-H-WF-Comp1  
**Lab Code:** K2307486-001  
**File ID:** J:\GC23\DATA\110303B\1103F012.D  
**Instrument ID:** GC23  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A  
  
**Sample Amount:** 8.02 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Lot:** KWG0317026  
**Calibration ID:** CAL3060

**Column1:** DB XLB  
**Column2:** DB-35MS

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	67	10-171	11/03/03	Acceptable
Decachlorobiphenyl	66	38-167	11/03/03	Acceptable

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003

**Organochlorine Pesticides**

**Sample Name:** LDW-LWa-H-WF-Compl  
**Lab Code:** K2307475-004  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND U	2.0	0.32	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	ND U	2.0	0.42	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND U	2.0	0.56	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND U	2.0	0.68	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	ND U	2.0	0.90	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND U	2.0	0.40	1	10/23/03	11/01/03	KWG0316962	
<b>Heptachlor Epoxide</b>	<b>1.1 J</b>	2.0	0.30	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	ND U	2.0	0.28	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	ND Ui	2.0	0.39	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND U	2.0	0.72	1	10/23/03	11/01/03	KWG0316962	
<b>Dieldrin</b>	<b>0.76 J</b>	2.0	0.22	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
Endrin	ND U	2.0	0.20	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND U	2.0	0.70	1	10/23/03	11/01/03	KWG0316962	
<b>4,4'-DDD</b>	<b>0.77 J</b>	2.0	0.26	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	ND U	2.0	0.34	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	ND Ui	2.0	0.60	1	10/23/03	11/01/03	KWG0316962	
<b>4,4'-DDT</b>	<b>1.7 J</b>	2.0	0.76	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND U	2.0	0.58	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND U	2.0	0.54	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND Ui	100	41	1	10/23/03	11/01/03	KWG0316962	
Oxychlorthane	ND Ui	2.0	0.84	1	10/23/03	11/02/03	KWG0316962	
<b>2,4'-DDE</b>	<b>2.2</b>	2.0	0.20	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND Ui	2.0	1.7	1	10/23/03	11/02/03	KWG0316962	
<b>2,4'-DDD</b>	<b>1.4 J</b>	2.0	0.36	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND Ui	2.0	0.44	1	10/23/03	11/02/03	KWG0316962	
<b>2,4'-DDT</b>	<b>2.1 P</b>	2.0	0.44	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND U	2.0	0.54	1	10/23/03	11/02/03	KWG0316962	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/23/2003  
Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-LWa-H-WF-Comp1  
Lab Code: K2307475-004

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	80	10-171	11/01/03	Acceptable
Decachlorobiphenyl	78	38-167	11/01/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-LWa-H-WF-Comp2  
 Lab Code: K2307475-005  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND U	2.0	0.32	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	ND U	2.0	0.42	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND Ui	2.0	0.76	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND U	2.0	0.68	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	ND U	2.0	0.90	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND U	2.0	0.40	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	2.6 P	2.0	0.30	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	ND Ui	2.0	1.1	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND U	2.0	0.72	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	2.0	2.0	0.22	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	4.3 P	2.0	0.24	1	10/23/03	11/01/03	KWG0316962	
Endrin	ND Ui	2.0	1.9	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND U	2.0	0.70	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	ND U	2.0	0.26	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	ND U	2.0	0.34	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	2.3	2.0	0.54	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	3.1	2.0	0.76	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND U	2.0	0.58	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND U	2.0	0.54	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND Ui	100	70	1	10/23/03	11/01/03	KWG0316962	
Oxychlordane	ND U	2.0	0.16	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDE	2.2 P	2.0	0.20	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND U	2.0	0.24	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDD	ND U	2.0	0.36	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND Ui	2.0	1.1	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDT	4.3 P	2.0	0.44	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND U	2.0	0.54	1	10/23/03	11/02/03	KWG0316962	

Comments:

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-LWa-H-WF-Comp2  
 Lab Code: K2307475-005

Units: ug/Kg  
 Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	76	10-171	11/01/03	Acceptable
Decachlorobiphenyl	72	38-167	11/01/03	Acceptable

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-LWa-H-WF-Comp3  
 Lab Code: K2307475-006  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	ND U	2.0	0.42	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND Ui	2.0	1.6	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	ND U	2.0	0.89	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND U	2.0	0.40	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	ND Ui	2.0	1.5	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	1.5 JP	2.0	0.26	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND U	2.0	0.72	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	1.2 J	2.0	0.22	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	ND Ui	3.0	3.0	1	10/23/03	11/01/03	KWG0316962	
Endrin	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND U	2.0	0.70	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	0.36 JP	2.0	0.26	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	1.2 JP	2.0	0.34	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	2.9	2.0	0.76	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND U	2.0	0.58	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND U	2.0	0.54	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND Ui	99	99	1	10/23/03	11/01/03	KWG0316962	
Oxychlordane	ND U	2.0	0.16	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDE	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND Ui	2.0	1.6	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDD	0.49 J	2.0	0.36	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND Ui	2.0	0.25	1	10/23/03	11/02/03	KWG0316962	
2,4'-DDT	3.9 P	2.0	0.44	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND U	2.0	0.54	1	10/23/03	11/02/03	KWG0316962	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/23/2003  
Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-LWa-H-WF-Comp3  
Lab Code: K2307475-006

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	85	10-171	11/01/03	Acceptable
Decachlorobiphenyl	77	38-167	11/01/03	Acceptable

Comments:



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003

**Organochlorine Pesticides**

**Sample Name:** LDW-MW-H-WF-Comp1  
**Lab Code:** K2307475-010  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.0	0.16	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	0.42	J	1.0	0.21	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND	U	1.0	0.28	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND	U	1.0	0.34	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	0.98	JP	1.0	0.45	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND	U	1.0	0.20	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	1.9	P	1.0	0.15	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	ND	Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	0.50	JP	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	3.8		1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
Endrin	0.41	J	1.0	0.099	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	0.94	J	1.0	0.35	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	0.39	J	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	ND	Ui	1.0	0.31	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	ND	Ui	6.3	6.3	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND	Ui	82	82	1	10/23/03	11/01/03	KWG0316962	
Oxychlordane	0.24	JP	1.0	0.077	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDE	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDD	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND	Ui	1.0	0.43	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDT	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/23/2003  
Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-MW-H-WF-Comp1  
Lab Code: K2307475-010

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	80	10-171	11/01/03	Acceptable
Decachlorobiphenyl	81	38-167	11/01/03	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003

**Organochlorine Pesticides**

**Sample Name:** LDW-MW-H-WF-Comp2  
**Lab Code:** K2307475-011  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.0	0.16	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	ND	Ui	1.0	0.66	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND	Ui	1.0	0.53	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND	U	1.0	0.34	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	ND	U	1.0	0.45	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND	U	1.0	0.20	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	ND	Ui	1.0	0.62	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	ND	U	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND	U	1.0	0.36	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	ND	Ui	1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	5.0		1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
Endrin	0.40	JP	1.0	0.099	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND	U	1.0	0.35	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	0.44	J	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	0.86	J	1.0	0.17	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	ND	Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND	U	1.0	0.29	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND	Ui	50	19	1	10/23/03	11/01/03	KWG0316962	
Oxychlorthane	0.25	JP	1.0	0.077	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDE	0.79	J	1.0	0.096	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND	U	1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDD	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND	Ui	1.0	0.14	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDT	4.7	P	1.0	0.22	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/23/2003  
Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-MW-H-WF-Comp2  
Lab Code: K2307475-011

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	80	10-171	11/01/03	Acceptable
Decachlorobiphenyl	79	38-167	11/01/03	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003

**Organochlorine Pesticides**

**Sample Name:** LDW-MW-H-WF-Comp3  
**Lab Code:** K2307475-012  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND U	1.0	0.16	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	0.54 J	1.0	0.28	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND Ui	2.0	2.0	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	ND U	1.0	0.45	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	0.85 JP	1.0	0.15	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	3.1	1.0	0.14	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	ND Ui	1.0	0.99	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	1.2 P	1.0	0.36	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	ND Ui	1.2	1.2	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	9.6 P	1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
Endrin	0.39 JP	1.0	0.099	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND U	1.0	0.35	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	0.51 J	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	ND Ui	6.8	6.8	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND U	1.0	0.29	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND Ui	200	200	1	10/23/03	11/01/03	KWG0316962	
Oxychlordane	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDE	ND Ui	3.6	3.6	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDD	ND Ui	1.5	1.5	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDT	10 P	1.0	0.22	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/23/2003  
Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-MW-H-WF-Comp3  
Lab Code: K2307475-012

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	83	10-171	11/01/03	Acceptable
Decachlorobiphenyl	80	38-167	11/01/03	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/18/2003  
**Date Received:** 09/26/2003

**Organochlorine Pesticides**

**Sample Name:** LDW-RM18-H-WF-Comp1  
**Lab Code:** K2307475-013  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.0	0.16	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	ND	U	1.0	0.21	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND	U	1.0	0.28	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND	U	1.0	0.34	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	ND	U	1.0	0.45	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND	U	1.0	0.20	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	ND	U	1.0	0.15	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	ND	Ui	1.0	0.49	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND	U	1.0	0.36	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	ND	U	1.0	0.11	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	3.7		1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
Endrin	ND	U	1.0	0.099	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND	U	1.0	0.35	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	0.57	JP	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	ND	U	1.0	0.17	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	0.73	JP	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	0.70	J	1.0	0.38	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND	U	1.0	0.29	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND	Ui	50	24	1	10/23/03	11/01/03	KWG0316962	
Oxychlordane	ND	U	1.0	0.077	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDE	0.76	J	1.0	0.096	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND	U	1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDD	ND	U	1.0	0.18	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND	Ui	1.0	0.23	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDT	ND	Ui	1.0	0.65	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	

Comments:

## Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/18/2003  
Date Received: 09/26/2003

## Organochlorine Pesticides

Sample Name: LDW-RM18-H-WF-Comp1  
Lab Code: K2307475-013

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	51	10-171	11/01/03	Acceptable
Decachlorobiphenyl	51	38-167	11/01/03	Acceptable

Comments: \_\_\_\_\_



## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/19/2003  
 Date Received: 09/26/2003

## Organochlorine Pesticides

Sample Name: LDW-RM18-H-WF-Comp2  
 Lab Code: K2307475-014  
 Extraction Method: EPA 3540C  
 Analysis Method: 8081A

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND	U	1.0	0.16	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	ND	U	1.0	0.21	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND	U	1.0	0.28	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND	U	1.0	0.34	1	10/23/03	11/01/03	KWG0316962	
Heptachlor	ND	U	1.0	0.45	1	10/23/03	11/01/03	KWG0316962	
Aldrin	ND	U	1.0	0.20	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	0.59	J	1.0	0.15	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	0.36	JP	1.0	0.14	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	0.95	JP	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND	U	1.0	0.36	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	4.8		1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
Endrin	0.17	J	1.0	0.099	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND	U	1.0	0.35	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	0.32	J	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	ND	U	1.0	0.17	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	2.0	P	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	ND	Ui	1.1	1.1	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	0.58	J	1.0	0.29	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND	Ui	50	32	1	10/23/03	11/01/03	KWG0316962	
Oxychlordane	0.086	J	1.0	0.077	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDE	0.64	J	1.0	0.096	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDD	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND	Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDT	2.5	P	1.0	0.22	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND	U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/19/2003  
Date Received: 09/26/2003

Organochlorine Pesticides

Sample Name: LDW-RM18-H-WF-Comp2  
Lab Code: K2307475-014

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	81	10-171	11/01/03	Acceptable
Decachlorobiphenyl	78	38-167	11/01/03	Acceptable

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/20/2003  
**Date Received:** 09/26/2003

**Organochlorine Pesticides**

**Sample Name:** LDW-RM18-H-WF-Comp3  
**Lab Code:** K2307475-015  
**Extraction Method:** EPA 3540C  
**Analysis Method:** 8081A

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
alpha-BHC	ND U	1.0	0.16	1	10/23/03	11/01/03	KWG0316962	
beta-BHC	ND U	1.0	0.21	1	10/23/03	11/01/03	KWG0316962	
gamma-BHC (Lindane)	ND U	1.0	0.28	1	10/23/03	11/01/03	KWG0316962	
delta-BHC	ND U	1.0	0.34	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Aldrin	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Heptachlor Epoxide	1.3 P	1.0	0.15	1	10/23/03	11/01/03	KWG0316962	
gamma-Chlordane	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
Endosulfan I	ND Ui	1.0	0.17	1	10/23/03	11/01/03	KWG0316962	
alpha-Chlordane	ND U	1.0	0.36	1	10/23/03	11/01/03	KWG0316962	
Dieldrin	1.1	1.0	0.11	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDE	3.4	1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
Endrin	ND Ui	1.0	0.18	1	10/23/03	11/01/03	KWG0316962	
Endosulfan II	ND U	1.0	0.35	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDD	0.34 JP	1.0	0.13	1	10/23/03	11/01/03	KWG0316962	
Endrin Aldehyde	ND Ui	1.0	0.18	1	10/23/03	11/01/03	KWG0316962	
Endosulfan Sulfate	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
4,4'-DDT	ND Ui	1.1	1.1	1	10/23/03	11/01/03	KWG0316962	
Endrin Ketone	ND Ui	1.1	1.1	1	10/23/03	11/01/03	KWG0316962	
Methoxychlor	ND U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	
Toxaphene	ND Ui	53	53	1	10/23/03	11/01/03	KWG0316962	
Oxychlordane	ND Ui	1.0	0.16	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDE	0.64 JP	1.0	0.096	1	10/23/03	11/01/03	KWG0316962	
cis-Nonachlor	ND U	1.0	0.12	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDD	ND U	1.0	0.18	1	10/23/03	11/01/03	KWG0316962	
trans-Nonachlor	ND Ui	1.0	1.0	1	10/23/03	11/01/03	KWG0316962	
2,4'-DDT	2.2 P	1.0	0.22	1	10/23/03	11/01/03	KWG0316962	
Mirex	ND U	1.0	0.27	1	10/23/03	11/01/03	KWG0316962	

Comments: \_\_\_\_\_

## Analytical Results

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 06/20/2003  
Date Received: 09/26/2003

## Organochlorine Pesticides

Sample Name: LDW-RM18-H-WF-Comp3  
Lab Code: K2307475-015

Units: ug/Kg  
Basis: Wet

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	83	10-171	11/01/03	Acceptable
Decachlorobiphenyl	77	38-167	11/01/03	Acceptable

Comments: \_\_\_\_\_



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/12/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/29/2003  
**Date Analyzed:** 11/05/2003

**Butyltins**

**Sample Name:** LDW-LWa-W-WF-Comp1  
**Lab Code:** K2307487-004  
**File ID:** J:\GC11\DATA\110403R\1104F057.D  
**Instrument ID:** GC11

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** METHOD  
**Analysis Method:** Krone

**Extraction Lot:** KWG0317406  
**Calibration ID:** CAL3064

**Sample Amount:** 5.01 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** RTX-5  
**Column2:** RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	13		4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	40	10-132	11/05/03	Acceptable

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/12/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/29/2003  
**Date Analyzed:** 11/05/2003

**Butyltins**

**Sample Name:** LDW-LWa-W-WF-Comp2  
**Lab Code:** K2307487-005  
**File ID:** J:\GC11\DATA\110403R\1104F058.D  
**Instrument ID:** GC11

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** METHOD  
**Analysis Method:** Krone

**Extraction Lot:** KWG0317406  
**Calibration ID:** CAL3064

**Sample Amount:** 5.45 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** RTX-5  
**Column2:** RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	8.8		3.7	1.4	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	35	10-132	11/05/03	Acceptable

**Comments:** \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/12/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-LWa-W-WF-Comp3  
 Lab Code: K2307487-006  
 File ID: J:\GC11\DATA\110403R\1104F059.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317406  
 Calibration ID: CAL3064

Sample Amount: 5.00 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	14		4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	42	10-132	11/05/03	Acceptable

Comments:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/13/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-MWa-W-WF-Comp4  
 Lab Code: K2307487-007  
 File ID: J:\GC11\DATA\110403R\1104F060.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317406  
 Calibration ID: CAL3064

Sample Amount: 5.51 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	7.2		3.7	1.4	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	36	10-132	11/05/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/13/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/29/2003  
**Date Analyzed:** 11/05/2003

Butyltins

**Sample Name:** LDW-MWb-W-WF-Comp5  
**Lab Code:** K2307487-008  
**File ID:** J:\GC11\DATA\110403R\1104F061.D  
**Instrument ID:** GC11

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** METHOD  
**Analysis Method:** Krone

**Extraction Lot:** KWG0317406  
**Calibration ID:** CAL3064

**Sample Amount:** 5.37 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** RTX-5  
**Column2:** RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	10		3.8	1.4	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	40	10-132	11/05/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/12/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-MWc-W-WF-Comp6  
 Lab Code: K2307487-009  
 File ID: J:\GC11\DATA\110403R\1104F064.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317406  
 Calibration ID: CAL3064

Sample Amount: 5.04 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	7.1		4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	36	10-132	11/05/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/14/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-GR-W-WF-Comp1  
 Lab Code: K2307487-001  
 File ID: J:\GC11\DATA\110403R\1104FX58.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317406  
 Calibration ID: CAL3064

Sample Amount: 10.24 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	44	10-132	11/05/03	Acceptable

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Windward Environmental  
**Project:** LDW Juvenile Salmon Collection/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307487  
**Date Collected:** 05/14/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/29/2003  
**Date Analyzed:** 11/05/2003

**Butyltins**

**Sample Name:** LDW-GR-W-WF-Comp2  
**Lab Code:** K2307487-002  
**File ID:** J:\GC11\DATA\110403R\1104F052.D  
**Instrument ID:** GC11

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** METHOD  
**Analysis Method:** Krone

**Extraction Lot:** KWG0317406  
**Calibration ID:** CAL3064

**Sample Amount:** 7.30 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** RTX-5  
**Column2:** RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.1	U	2.8	1.1	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	37	10-132	11/05/03	Acceptable

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 05/14/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-GR-W-WF-Comp3  
 Lab Code: K2307487-003  
 File ID: J:\GC11\DATA\110403R\1104F053.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317406  
 Calibration ID: CAL3064

Sample Amount: 5.05 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	37	10-132	11/05/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/04/2003

Butyltins

Sample Name: LDW-LWa-W-WF-Comp1  
 Lab Code: K2307475-007  
 File ID: J:\GC11\DATA\110403R\1104F028.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.10 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	41	10-132	11/04/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/04/2003

Butyltins

Sample Name: LDW-LWa-W-WF-Comp2  
 Lab Code: K2307475-008  
 File ID: J:\GC11\DATA\110403R\1104F029.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.02 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	42	10-132	11/04/03	Acceptable

Comments: \_\_\_\_\_



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/04/2003

Butyltins

Sample Name: LDW-LWa-W-WF-Comp3  
 Lab Code: K2307475-009  
 File ID: J:\GC11\DATA\110403R\1104F030.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.00 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	43	10-132	11/04/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-MWb-W-WF-Comp1  
 Lab Code: K2307475-001  
 File ID: J:\GC11\DATA\110403R\1104F036.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.20 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
588-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	37	10-132	11/05/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-MWb-W-WF-Comp2  
 Lab Code: K2307475-002  
 File ID: J:\GC11\DATA\110403R\1104F037.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.02 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	39	10-132	11/05/03	Acceptable

Comments: \_\_\_\_\_

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Duplicate Sample Summary  
 Butyltins

Sample Name: LDW-MWb-W-WF-Comp2  
 Lab Code: K2307475-002  
 Extraction Method: METHOD  
 Analysis Method: Krone

Units: ug/Kg  
 Basis: Wet  
 Level: Low  
 Extraction Lot: KWG0317013

Analyte Name	MRL	MDL	Sample Result	LDW-MWb-W-WF-Comp2DUP		Relative Percent Difference	RPD Limit
				KWG0317013-1 Duplicate Sample Result	Average		
Tri-n-butyltin	4.0	1.5	ND	ND	ND	-	50

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-MWb-W-WF-Comp3  
 Lab Code: K2307475-003  
 File ID: J:\GC11\DATA\110403R\1104F039.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.21 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	34	10-132	11/05/03	Acceptable

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/18/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 11/03/2003  
**Date Analyzed:** 11/05/2003

**Butyltins**

**Sample Name:** LDW-RM18-W-WF-Comp1  
**Lab Code:** K2307475-016  
**File ID:** J:\GC11\DATA\110403R\1104F077.D  
**Instrument ID:** GC11

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** METHOD  
**Analysis Method:** Krone

**Extraction Lot:** KWG0317680  
**Calibration ID:** CAL3064

**Sample Amount:** 1.02 g  
**% Solids:** NA  
**Dilution Factor:** 1

**Column1:** RTX-5  
**Column2:** RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	40	10-132	11/05/03	Acceptable

**Comments:** \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Woodward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/20/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/29/2003  
**Date Analyzed:** 11/05/2003

**Butyltins**

**Sample Name:** LDW-RM18-W-WF-Comp2  
**Lab Code:** K2307475-017  
**File ID:** J:\GC11\DATA\110403R\1104F049.D  
**Instrument ID:** GC11

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** METHOD  
**Analysis Method:** Krone

**Extraction Lot:** KWG0317013  
**Calibration ID:** CAL3064

**Sample Amount:** 10.24 g  
**% Solids:** NA  
**Dilution Factor:** 4

**Column1:** RTX-5  
**Column2:** RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	33	10-132	11/05/03	Acceptable

**Comments:** \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Woodward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/25/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-RM18-W-WF-Comp3  
 Lab Code: K2307475-018  
 File ID: J:\GC11\DATA\110403R\1104F050.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.07 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	34	10-132	11/05/03	Acceptable

Comments: \_\_\_\_\_



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: Salmon Collection (LDW)/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307486  
 Date Collected: 05/21/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-SC-H-WF-Comp1  
 Lab Code: K2307486-001  
 File ID: J:\GC11\DATA\110403R\1104FX57.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317406  
 Calibration ID: CAL3064

Sample Amount: 10.02 g  
 % Solids: NA  
 Dilution Factor: 1

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	39	10-132	11/05/03	Acceptable

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Woodward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/29/2003  
**Date Analyzed:** 11/04/2003

**Butyltins**

**Sample Name:** LDW-LWa-H-WF-Comp1  
**Lab Code:** K2307475-004  
**File ID:** J:\GC11\DATA\110403R\1104F025.D  
**Instrument ID:** GC11

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** METHOD  
**Analysis Method:** Krone

**Extraction Lot:** KWG0317013  
**Calibration ID:** CAL3064

**Sample Amount:** 10.02 g  
**% Solids:** NA  
**Dilution Factor:** 4

**Column1:** RTX-5  
**Column2:** RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	50	10-132	11/04/03	Acceptable

**Comments:** \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Woodward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/04/2003

Butyltins

Sample Name: LDW-LWa-H-WF-Comp2  
 Lab Code: K2307475-005  
 File ID: J:\GC11\DATA\110403R\1104F026.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.01 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	3.4	JD	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	46	10-132	11/04/03	Acceptable

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Windward Environmental  
**Project:** POS/LDWG  
**Sample Matrix:** Tissue

**Service Request:** K2307475  
**Date Collected:** 06/23/2003  
**Date Received:** 09/26/2003  
**Date Extracted:** 10/29/2003  
**Date Analyzed:** 11/04/2003

**Butyltins**

**Sample Name:** LDW-LWa-H-WF-Comp3  
**Lab Code:** K2307475-006  
**File ID:** J:\GC11\DATA\110403R\1104F027.D  
**Instrument ID:** GC11

**Units:** ug/Kg  
**Basis:** Wet  
**Level:** Low

**Extraction Method:** METHOD  
**Analysis Method:** Krone

**Extraction Lot:** KWG0317013  
**Calibration ID:** CAL3064

**Sample Amount:** 10.02 g  
**% Solids:** NA  
**Dilution Factor:** 4

**Column1:** RTX-5  
**Column2:** RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	42	10-132	11/04/03	Acceptable

**Comments:** \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/04/2003

Butyltins

Sample Name: LDW-MW-H-WF-Comp1  
 Lab Code: K2307475-010  
 File ID: J:\GC11\DATA\110403R\1104F031.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.14 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.9	JD	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	45	10-132	11/04/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-MW-H-WF-Comp2  
 Lab Code: K2307475-011  
 File ID: J:\GC11\DATA\110403R\1104F035.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.06 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	39	10-132	11/05/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/23/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-MW-H-WF-Comp3  
 Lab Code: K2307475-012  
 File ID: J:\GC11\DATA\110403R\1104F042.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.12 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.8	JD	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	38	10-132	11/05/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/18/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-RM18-H-WF-Comp1  
 Lab Code: K2307475-013  
 File ID: J:\GC11\DATA\110403R\1104F046.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.00 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	38	10-132	11/05/03	Acceptable

Comments: \_\_\_\_\_



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/19/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-RM18-H-WF-Comp2  
 Lab Code: K2307475-014  
 File ID: JAGC11\DATA\110403R\1104F047.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.07 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	37	10-132	11/05/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 06/20/2003  
 Date Received: 09/26/2003  
 Date Extracted: 10/29/2003  
 Date Analyzed: 11/05/2003

Butyltins

Sample Name: LDW-RM18-H-WF-Comp3  
 Lab Code: K2307475-015  
 File ID: J:\GC1\DATA\110403R\1104F048.D  
 Instrument ID: GC11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: METHOD  
 Analysis Method: Krone

Extraction Lot: KWG0317013  
 Calibration ID: CAL3064

Sample Amount: 10.17 g  
 % Solids: NA  
 Dilution Factor: 4

Column1: RTX-5  
 Column2: RTX-OPP

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
688-73-3	Tri-n-butyltin	1.5	U	4.0	1.5	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	35	10-132	11/05/03	Acceptable

Comments:

Total Solids

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Windward Environmental  
Project: LDW Juvenile Salmon Collection/03-08-06-16  
Sample Matrix: Tissue

Service Request: K2307487  
Date Collected: 5/12-14/03  
Date Received: 9/26/03

Solids, Total

Prep Method: NONE  
Analysis Method: Freeze Dry  
Test Notes:

Units: PERCENT  
Basis: Wet

Sample Name	Lab Code	Date Analyzed	Result	Result Notes
LDW-GR-W-WF-Comp1	K2307487-001	10/16/03	23.8	
LDW-GR-W-WF-Comp2	K2307487-002	10/16/03	20.0	
LDW-GR-W-WF-Comp3	K2307487-003	10/16/03	19.6	
LDW-LWa-W-WF-Comp1	K2307487-004	10/16/03	20.3	
LDW-LWa-W-WF-Comp2	K2307487-005	10/16/03	19.9	
LDW-LWa-W-WF-Comp3	K2307487-006	10/16/03	21.3	
LDW-MWa-W-WF-Comp4	K2307487-007	10/16/03	20.3	
LDW-MWb-W-WF-Comp5	K2307487-008	10/16/03	20.2	
LDW-MWc-W-WF-Comp6	K2307487-009	10/16/03	19.9	

Approved By: \_\_\_\_\_

Date: 10/24/03

1A/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Windward Environmental  
**Project:** Salmon Collection (LDW)/03-08-06-16  
**Sample Matrix:** Tissue

**Service Request:** K2307486  
**Date Collected:** 5/21/03  
**Date Received:** 9/26/03

Solids, Total

**Prep Method:** NONE  
**Analysis Method:** Freeze Dry  
**Test Notes:**

**Units:** PERCENT  
**Basis:** Wet

Sample Name	Lab Code	Date Analyzed	Result	Result Notes
LDW-SC-H-WF-Comp1	K2307486-001	10/16/03	21.8	

Approved By: \_\_\_\_\_



Date: \_\_\_\_\_

10/24/03

1A/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 6/18-25/03  
 Date Received: 9/26/03

Solids, Total

Prep Method: NONE  
 Analysis Method: Freeze Dry  
 Test Notes:

Units: PERCENT  
 Basis: Wet

Sample Name	Lab Code	Date Analyzed	Result	Result Notes
LDW-MWb-W-WF-Comp1	K2307475-001	10/16/03	22.2	
LDW-MWb-W-WF-Comp2	K2307475-002	10/16/03	20.7	
LDW-MWb-W-WF-Comp3	K2307475-003	10/16/03	21.9	
LDW-LWa-H-WF-Comp1	K2307475-004	10/16/03	20.4	
LDW-LWa-H-WF-Comp2	K2307475-005	10/16/03	19.8	
LDW-LWa-H-WF-Comp3	K2307475-006	10/16/03	20.7	
LDW-LWa-W-WF-Comp1	K2307475-007	10/16/03	21.4	
LDW-LWa-W-WF-Comp2	K2307475-008	10/16/03	21.2	
LDW-LWa-W-WF-Comp3	K2307475-009	10/16/03	20.6	
LDW-MW-H-WF-Comp1	K2307475-010	10/16/03	20.7	
LDW-MW-H-WF-Comp2	K2307475-011	10/16/03	20.7	
LDW-MW-H-WF-Comp3	K2307475-012	10/16/03	20.8	
LDW-RM18-H-WF-Comp1	K2307475-013	10/16/03	20.9	
LDW-RM18-H-WF-Comp2	K2307475-014	10/16/03	20.3	
LDW-RM18-H-WF-Comp3	K2307475-015	10/16/03	20.3	
LDW-RM18-W-WF-Comp1	K2307475-016	10/16/03	20.9	
LDW-RM18-W-WF-Comp2	K2307475-017	10/16/03	20.7	
LDW-RM18-W-WF-Comp3	K2307475-018	10/16/03	20.8	

Approved By: \_\_\_\_\_

*gc*

Date: 10/24/03

1A/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 6/23/03  
Date Received: 9/26/03  
Date Extracted: NA  
Date Analyzed: 10/16/03

Duplicate Summary  
Total Metals

Sample Name: LDW-LWa-W-WF-Comp1  
Lab Code: K2307475-007D  
Test Notes:

Units: PERCENT  
Basis: Wet

Analyte	Prep Method	Analysis Method	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total	NA	Freeze Dry	21.4	21.3	21.4	<1	

Approved By: \_\_\_\_\_

Date: 10/24/03

DUP/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 6/23/03  
Date Received: 9/26/03  
Date Extracted: NA  
Date Analyzed: 10/16/03

Duplicate Summary  
Total Metals

Sample Name: LDW-LWa-H-WF-Comp1  
Lab Code: K2307475-004D  
Test Notes:

Units: PERCENT  
Basis: Wet

Analyte	Prep Method	Analysis Method	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Solids, Total	NA	Freeze Dry	20.4	20.6	20.5	<1	

Approved By: \_\_\_\_\_



Date: 10/24/03

DUP/052595



**Total Lipids**

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Windward Environmental  
 Project: LDW Juvenile Salmon Collection/03-08-06-16  
 Sample Matrix: Tissue

Service Request: K2307487  
 Date Collected: 5/14/2003  
 Date Received: 9/26/2003

Lipids, Total

Prep Method: EPA 3540  
 Analysis Method: PSEP  
 Test Notes:

Units: PERCENT  
 Basis: AS RECEIVED

Sample Name	Lab Code	MRL	Date Extracted	Date Analyzed	Result	Result Notes
LDW-GR-W-WF-Comp1	K2307487-001	0.177	10/24/2003	10/31/2003	1.3	
LDW-GR-W-WF-Comp2	K2307487-002	0.061	10/24/2003	10/31/2003	1.3	
LDW-GR-W-WF-Comp3	K2307487-003	0.041	10/24/2003	10/31/2003	0.85	
LDW-LWa-W-WF-Comp1	K2307487-004	0.103	10/24/2003	10/31/2003	0.55	
LDW-LWa-W-WF-Comp2	K2307487-005	0.045	10/24/2003	10/31/2003	1.0	
LDW-LWa-W-WF-Comp3	K2307487-006	0.097	10/24/2003	10/31/2003	1.1	
LDW-MWa-W-WF-Comp4	K2307487-007	0.072	10/24/2003	10/31/2003	0.83	
LDW-MWb-W-WF-Comp5	K2307487-008	0.085	10/24/2003	10/31/2003	0.98	
LDW-MWc-W-WF-Comp6	K2307487-009	0.076	10/24/2003	10/31/2003	1.3	

Approved By: \_\_\_\_\_

Date: 11/3/03

1A/092099p

074875VG.ab1 - Sample 10/31/2003

Page No.:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Windward Environmental  
Project: LDW Juvenile Salmon Collection/03-08-06-16  
Sample Matrix: Tissue

Service Request: K2307487  
Date Collected: 5/14/2003  
Date Received: 9/26/2003  
Date Extracted: 10/24/2003  
Date Analyzed: 10/31/2003

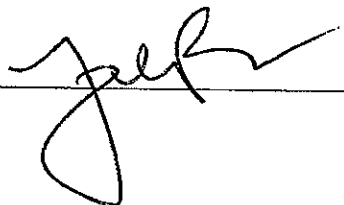
Triplicate Summary  
Lipids, Total

Sample Name: LDW-MWa-W-WF-Comp4  
Lab Code: K2307487-007  
Test Notes:

Units: PERCENT  
Basis: AS RECEIVED

Lab Code	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Triplicate Sample Result	Average	Percent Relative Standard Deviation	Result Notes
K2307487-007	EPA 3540	PSEP	0.072	0.83	0.66	0.62	0.70	16	

Approved By: \_\_\_\_\_



Date: 11/3/03

DUP/091599p

07487SVG.ab1 - TRP 10/31/2003

Page No.:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Windward Environmental  
Project: POS/LDWG  
Sample Matrix: Tissue

Service Request: K2307475  
Date Collected: 6/23/2003  
Date Received: 9/26/2003  
Date Extracted: 10/23/2003  
Date Analyzed: 10/31/2003

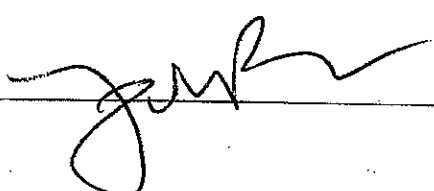
Triplicate Summary  
Lipids, Total

Sample Name: LDW-LWa-W-WF-Comp2  
Lab Code: K2307475-008  
Test Notes:

Units: PERCENT  
Basis: AS RECEIVED

Lab Code	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Triplicate Sample Result	Average	Percent Relative Standard Deviation	Result Notes
K2307475-008	EPA 3540	PSEP	0.050	1.7	1.6	2.0	1.8	12	

Approved By: \_\_\_\_\_



Date: \_\_\_\_\_

11/31/03

DUP/091599p

07475SVG.ab1 - TRP 10/31/2003

Page No.:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Windward Environmental  
Project: Salmon Collection (LDW)/03-08-06-16  
Sample Matrix: Tissue

Service Request: K2307486  
Date Collected: 5/21/2003  
Date Received: 9/26/2003

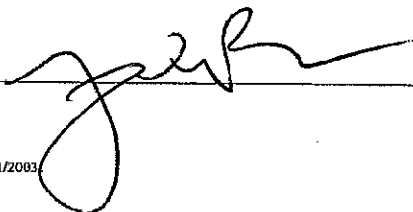
Lipids, Total

Prep Method: EPA 3540  
Analysis Method: PSEP  
Test Notes:

Units: PERCENT  
Basis: AS RECEIVED

Sample Name	Lab Code	MRL	Date Extracted	Date Analyzed	Result	Result Notes
LDW-SC-H-WF-Comp1	K2307486-001	0.062	10/24/2003	10/31/2003	3.6	

Approved By: \_\_\_\_\_



Date: \_\_\_\_\_

11/3/03

1A/092099p

07486SYG.ab1 - Sample 10/31/2003

Page No.:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Windward Environmental  
Project: Salmon Collection (LDW)/03-08-06-16  
Sample Matrix: Tissue

Service Request: K2307486  
Date Collected: 5/21/2003  
Date Received: 9/26/2003  
Date Extracted: 10/24/2003  
Date Analyzed: 10/31/2003

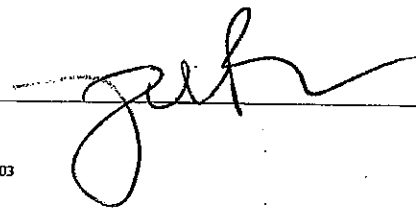
Triplicate Summary  
Lipids, Total

Sample Name: LDW-SC-H-WF-Comp1  
Lab Code: K2307486-001  
Test Notes:

Units: PERCENT  
Basis: AS RECEIVED

Lab Code	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Triplicate Sample Result	Average	Percent Relative Standard Deviation	Result Notes
K2307486-001	EPA 3540	PSEP	0.062	3.6	3.7	3.1	3.5	9	

Approved By: \_\_\_\_\_



Date: \_\_\_\_\_

11/3/03

DUP/091599p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2307475  
 Date Collected: 6/23/2003  
 Date Received: 9/26/2003

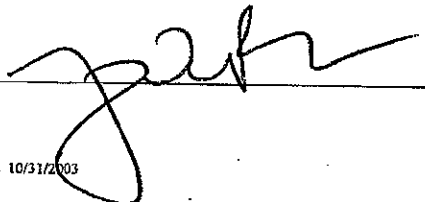
Lipids, Total

Prep Method: EPA 3540  
 Analysis Method: PSEP  
 Test Notes:

Units: PERCENT  
 Basis: AS RECEIVED

Sample Name	Lab Code	MRL	Date Extracted	Date Analyzed	Result	Result Notes
LDW-MWb-W-WF-Comp1	K2307475-001	0.025	10/23/2003	10/31/2003	2.8	
LDW-MWb-W-WF-Comp2	K2307475-002	0.025	10/23/2003	10/31/2003	1.4	
LDW-MWb-W-WF-Comp3	K2307475-003	0.025	10/23/2003	10/31/2003	2.7	
LDW-LWa-H-WF-Comp1	K2307475-004	0.050	10/23/2003	10/31/2003	1.4	
LDW-LWa-H-WF-Comp2	K2307475-005	0.050	10/23/2003	10/31/2003	1.2	
LDW-LWa-H-WF-Comp3	K2307475-006	0.049	10/23/2003	10/31/2003	1.7	
LDW-LWa-W-WF-Comp1	K2307475-007	0.025	10/23/2003	10/31/2003	1.5	
LDW-LWa-W-WF-Comp2	K2307475-008	0.050	10/23/2003	10/31/2003	1.7	
LDW-LWa-W-WF-Comp3	K2307475-009	0.036	10/23/2003	10/31/2003	1.7	
LDW-MW-H-WF-Comp1	K2307475-010	0.025	10/23/2003	10/31/2003	1.2	
LDW-MW-H-WF-Comp2	K2307475-011	0.025	10/23/2003	10/31/2003	1.4	
LDW-MW-H-WF-Comp3	K2307475-012	0.025	10/23/2003	10/31/2003	1.5	
LDW-RM18-H-WF-Comp1	K2307475-013	0.025	10/23/2003	10/31/2003	1.1	
LDW-RM18-H-WF-Comp2	K2307475-014	0.025	10/23/2003	10/31/2003	1.0	
LDW-RM18-H-WF-Comp3	K2307475-015	0.025	10/23/2003	10/31/2003	1.3	
LDW-RM18-W-WF-Comp1	K2307475-016	0.025	10/23/2003	10/31/2003	1.6	
LDW-RM18-W-WF-Comp2	K2307475-017	0.025	10/23/2003	10/31/2003	1.8	
LDW-RM18-W-WF-Comp3	K2307475-018	0.025	10/23/2003	10/31/2003	2.1	

Approved By: \_\_\_\_\_



Date: \_\_\_\_\_

11/3/03

1A/092099p

07475SVG.ab1 - Sample 10/31/2003

Page No.:





METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Windward Environmental

Service Request: K2308006

Project No.: NA

Date Collected: 09/24/03

Project Name: POS/LDWG

Date Received: 09/26/03

Matrix: TISSUE

Units: MG/KG

Basis: Wet

Sample Name: LDW-LW-H-SC-Comp1

Lab Code: K2308006-001

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	6020	0.10	0.01	5	10/20/03	10/23/03	0.80		
Cadmium	6020	0.004	0.002	5	10/20/03	10/23/03	0.092		
Chromium	6010B	0.1	0.1	1	10/20/03	10/28/03	0.4		
Copper	6020	0.02	0.01	5	10/20/03	10/23/03	8.20		
Lead	6020	0.004	0.001	5	10/20/03	10/23/03	0.580		
Silver	6020	0.004	0.001	5	10/20/03	10/23/03	0.037		
Zinc	6010B	0.2	0.1	1	10/20/03	10/28/03	24.0		

% Solids: NA

Comments:

METALS  
- 6 -  
DUPLICATES

Client: Windward Environmental  
Project No.:  
Project Name: POS/LDWG  
Matrix: TISSUE

Service Request: K2308006  
Units: mg/kg  
Basis: Wet  
% Solids: NA

Sample Name: LDW-LW-H-SC-Comp1D

Lab Code: K2308006-001D

Analyte	Control Limit (%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	30	0.80		0.82		3		6020
Cadmium	30	0.092		0.098		6		6020
Chromium		0.4		0.3		24		6010B
Copper	30	8.20		9.15		11		6020
Lead	30	0.580		0.518		11		6020
Silver	30	0.037		0.043		15		6020
Zinc	20	24.0		22.9		5		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2308006  
 Date Collected: 06/24/2003  
 Date Received: 09/26/2003  
 Date Extracted: 11/04/2003  
 Date Analyzed: 11/08/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: LDW-LW-H-SC-Comp1  
 Lab Code: K2308006-001  
 File ID: J:\MS11\DATA\110803\1108F006.D  
 Instrument ID: MS11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3541  
 Analysis Method: 8270C SIM

Extraction Lot: KWG0317706  
 Calibration ID: CAL3082

Sample Amount: 5.00 g  
 % Solids: NA  
 Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
91-20-3	Naphthalene	21		4.0	1.1	
91-57-6	2-Methylnaphthalene	26		4.0	1.2	
90-12-0	1-Methylnaphthalene	19		4.0	0.62	
CASID30061	C2-Naphthalenes	71		4.0	4.0	
CASID30071	C3-Naphthalenes	140		4.0	4.0	
CASID30077	C4-Naphthalenes	<del>190</del> 146		4.0	4.0	
92-52-4	Biphenyl	12		4.0	0.16	
208-96-8	Acenaphthylene	2.7	J	4.0	0.24	
132-64-9	Dibenzofuran	40		4.0	0.38	
83-32-9	Acenaphthene	38		4.0	0.17	
86-73-7	Fluorene	55		4.0	0.74	
CASID30040	C1-Fluorenes	59		4.0	4.0	
CASID30060	C2-Fluorenes	120		4.0	4.0	
CASID30070	C3-Fluorenes	180		4.0	4.0	
132-65-0	Dibenzothiophene	26		4.0	0.24	
CASID30038	C1-Dibenzothiophenes	<del>100</del> 110		4.0	4.0	
CASID30059	C2-Dibenzothiophenes	78		4.0	4.0	
CASID30069	C3-Dibenzothiophenes	84		4.0	4.0	
85-01-8	Phenanthrene	380		4.0	0.38	
120-12-7	Anthracene	21		4.0	0.24	
CASID30042	C1-Phenanthrenes/Anthracenes	160		4.0	4.0	
CASID30062	C2-Phenanthrenes/Anthracenes	140		4.0	4.0	
CASID30072	C3-Phenanthrenes/Anthracenes	110		4.0	4.0	
CASID30078	C4-Phenanthrenes/Anthracenes	<del>78</del> 58		4.0	4.0	
206-44-0	Fluoranthene	350		4.0	0.74	
129-00-0	Pyrene	240		4.0	0.78	
CASID30039	C1-Fluoranthenes/Pyrenes	91		4.0	4.0	

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Windward Environmental  
 Project: POS/LDWG  
 Sample Matrix: Tissue

Service Request: K2308006  
 Date Collected: 06/24/2003  
 Date Received: 09/26/2003  
 Date Extracted: 11/04/2003  
 Date Analyzed: 11/08/2003

Polynuclear Aromatic Hydrocarbons

Sample Name: LDW-LW-H-SC-Comp1  
 Lab Code: K2308006-001  
 File ID: J:\MS11\DATA\110803\1108F006.D  
 Instrument ID: MS11

Units: ug/Kg  
 Basis: Wet  
 Level: Low

Extraction Method: EPA 3541  
 Analysis Method: 8270C SIM

Extraction Lot: KWG0317706  
 Calibration ID: CAL3082

Sample Amount: 5.00 g  
 % Solids: NA  
 Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
56-55-3	Benz(a)anthracene	32		4.0	0.34	
218-01-9	Chrysene	62		4.0	0.34	
CASID30037	C1-Chrysenes	28		4.0	4.0	
CASID30058	C2-Chrysenes	18		4.0	4.0	
CASID30068	C3-Chrysenes	4.0	U	4.0	4.0	
CASID30074	C4-Chrysenes	4.0	U	4.0	4.0	
205-99-2	Benzo(b)fluoranthene	22		4.0	0.30	
207-08-9	Benzo(k)fluoranthene	28		4.0	0.34	
192-97-2	Benzo(e)pyrene	19		4.0	0.32	
50-32-8	Benzo(a)pyrene	10		4.0	0.20	
198-55-0	Perylene	2.7	J	4.0	0.26	
193-39-5	Indeno(1,2,3-cd)pyrene	8.4		4.0	0.36	
53-70-3	Dibenz(a,h)anthracene	0.90	J	4.0	0.30	
191-24-2	Benzo(g,h,i)perylene	6.5		4.0	0.40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	84	54-102	11/08/03	Acceptable
Fluoranthene-d10	94	57-107	11/08/03	Acceptable
Terphenyl-d14	102	53-116	11/08/03	Acceptable

Comments: