FIELD SAMPLING REPORT
Priest Point Park Sediment Sampling Project

Prepared by
Thurston County Public Health and Social Services

For

Washington Department of Ecology
November 2010

Field Sampling Report

Table of Contents

Appendix A – Sample Locations (Sampling Sites - North and Sampling Sites - South)
Appendix B – Field Logbook (copy)
Appendix C - Chain of Custody
Appendix D – Field Sampling Health and Safety Plan
Appendix E – Field Data
Appendix F – Laboratory Analytical Report

1.0 INTRODUCTION

The work described in this Field Sampling Report was performed by Thurston County Public Health and Social Services (TC) on behalf of the Washington State Department of Ecology (Ecology). The sampling effort was designed to provide adequate sampling data to allow the Washington State Department of Health (DOH) to determine the potential health hazards from dioxin contamination to people interacting with sediments within Priest Point Park.

This document will outline the sediment sampling and any deviations from the original Field Sampling Plan (Thurston County, September 2010).

2.0 PROJECT DESCRIPTION

2.1 Overview

Sediment characterization studies of the Olympia Harbor Navigation Channel and Port of Olympia berthing area has found elevated concentrations of dioxins. The data has raised concerns regarding the overall extent of contamination in Budd Inlet and the potential for risk to human health and the environment. To help evaluate the potential hazards for people coming into contact with sediments, TC collected and analyzed 32 sediment samples from the publicly accessible beach at Priest Point Park (currently the only public beach in the southern portion of Budd Inlet).

2.2 Sample Locations

The study zone included the northern and southern intertidal area at Priest Point Park at a minus 2 (-2) tide. TC used a Geographic Information System (GIS, based on ESRI Arcview® 8.1) program to overlay a sampling grid for the entire study zone. The grid consisted of five meter by five meter squares projected over the intertidal beach area with a continuous alphanumeric numbering sequence (Appendix A). A total of 15 sample locations were randomly pre-selected from the northern area and 25 sample locations from the southern area (Appendix A). Of these locations, 10 locations from the northern area were sampled and 20 locations from the southern area. One sample location from the northern area (U73) and one location from the southern area (RRR181) had a duplicate sample collected for total of 32 samples. The extra 5 locations from each area were sampled only if one of the pre-selected locations met the exclusion criteria.

2.3 Sampling

The sampling grid was downloaded onto a Trimble® GPS unit which was used to navigate to each selected sample grid point. If the sample location was acceptable for sampling (no evidence of burning, not vegetated, and not underwater), one discrete sample was collected into a single jar from the upper ten centimeters of sediment. When a location was assigned a duplicate sample, two sample jars were filled with the same sediment to create a duplicate set of samples.

2.4 Sample Location Moved Due to Exclusion Criteria

Since the sampling grid was created on a computer and uploaded onto a GPS device, there were selected grids that could not be sampled. One sample location on the southern area was selected (LLLL156) that was found to be vegetated and had to be replaced with location KKKK159.

3.0 SEDIMENT SAMPLING

3.1 Sample Numbering

The sample number scheme consisted of taking the grid coordinates (ex. U73) and adding either "01" for a discrete sample (U73-01) or "02" for the second sample (U73-02) when a discrete sample point had a duplicate sample collected. The sample numbers and the corresponding sample grid points were noted in the field logbook (Appendix B) and the sample numbers were used on the sample jars and chain-of-custody form (Appendix C).

3.2 Sampling Protocol

All sampling activities were conducted according to the Field Sampling Health and Safety Plan (Appendix D).

1. Sampling was performed using a team of two Thurston County employees (Koster and Soderberg).
2. Site locations were noted in field book as was the site conditions.
3. Sample collection
    a. All points within a grid were collected using one stainless steel spoon and a set of nitrile gloves.
    b. Each sample was placed into one 9 ounce pre-cleaned glass jar provided by Pace Laboratory.
    c. Instead of collecting sediment into bowls at each discrete sample location, bowls were only used for collecting duplicate samples. At

discrete sample locations, the sediment was placed directly into the glass jars with a pre-cleaned stainless steel spoon.

d. Duplicate samples were collected by placing sediment into a stainless steel bowl and mixing until it was uniform in color and texture. Two 9 ounce jars were filled and labeled with unique sample numbers.
e. Instead of decontaminating sampling spoons between sample points, three dozen stainless steel spoons were purchased so each sample point could be collected with its own spoon. All spoons and bowls were cleaned using Alconox® detergent and rinsed twice with potable water prior to sample collection.
f. Each sample jar had a label with the date and time, sampler's initials, and sample number.
g. A custody seal was placed across each sample jar lid and down the side of the jar. Pace laboratory noted that all samples were received with their custody seals intact.
h. All sample collection information was recorded into a field logbook (Appendix B) and onto chain of custody forms (Appendix C).
i. After samples were collected, they were placed in a cooler with ice to maintain samples at or below 4^{o}C. Pace Laboratory noted that all the samples were received at acceptable temperatures and were placed in a refrigerator and maintained below 6^{o}C until analyzed.

3.3 Field Logbook

The following information was recorded in the field logbook for the sampling event:

- Sampling team members
- Date and time of sampling event
- Sample numbers (which incorporates the location)
- Sample location description
- Sediment description according to the Unified Soil Classification System

Due to very inclement weather at the time of sampling, gps coordinates were not written into the logbook. The GPS coordinates were collected at the time of sample collection from each sampling point using a Trimble® GPS unit. The coordinates were later downloaded to a computer and incorporated into Appendix E, but not written into the logbook.

3.4 Decontamination and Waste Handling

Stainless steel bowls and spoons were scrubbed using potable water and Alconox® detergent followed by a double rinse with potable water. Thirty-six spoons and two bowls were purchased so that no cleaning needed to take place between sample locations. The dirty spoons and bowls were cleaned and discarded.

3.5 Sample Shipping & Chain of Custody

After the samples were collected they were brought back to Thurston County Public Health and Social Services. Each sample jar was wiped clean and signed custody seals were applied prior to placing into a shipping cooler. Each sample cooler was packed with ziplock® bags of ice and included a copy of the completed chain-of-custody form. After taping the coolers shut, a custody seal was placed over each side of the cooler lids and was shipped to Pace Laboratory via Federal Express®. Pace Laboratory noted that the samples arrived at the appropriate temperature with all the custody seals intact.

3.6 Quality Control Samples for Field Collection

Two duplicate sediment samples were collected to assess field sampling precision. One duplicate sample was collected in the Priest Point Park northern area (U73-01 and U73-02), and another in the Priest Point Park southern area (RRR181-01 and RRR181-02). Since the goal was to obtain different types of sediment, the northern area was collected from an area that was close to land with a steep slope and the southern area was far out from shore in a flat area. The sediments from the northern area were described as; silty sands containing about 80% silt fines and 20% coarse sand. The sediments from the southern area were described as; >95% fine silt with fine sand.

Two equipment rinse samples were collected to ensure that the sampling equipment did not transfer contamination to the sediment. Rinse sample "RI-01" consisted of all stainless steel sampling spoons and mixing bowl. Rinse sample "RI-02" consisted of nitrile gloves, sample jar, and stainless steel mixing bowl. The sample was collected by pouring ASTM Type II water (provided by Pace Laboratory) into a bowl containing the corresponding equipment and then pouring the water directly from the bowl into the sample bottles. These rinse samples were labeled, chilled, shipped, and analyzed for dioxins / furans with the rest of the sediment samples.

4.0 LABORATORY ANALYSES

4.1 Analytical Methods Used For Sediment Samples

All dioxin and furan analyses were performed using Method 1613B (tetra- through octa-chlorinated dioxins and furans by isotope dilution HRGC/HRMS).
A written report was prepared by Pace Laboratory documenting all the activities associated with the sample analyses (Appendix F).

4.2 Quality Assurance and Quality Control for Lab Analyses

The laboratory quality control and quality assurance sample analyses are included in the data report.

5.0 Data Management

This field sampling report represents the data deliverable to Ecology and includes; a summary of sampling, all deviations from the sampling plan, a table showing sample numbers and GPS positioning, a table of all sampling data, and a set of maps showing the area-wide sample grid as well as individual grid sample points.

All sample data, maps, and technical data from field logs (GPS coordinates, sample numbers, etc.), data report, and laboratory analyses will be retained by TC and copies will be provided to Ecology and DOH.

Appendix A

Sample Locations

(Sampling Sites - North and Sampling Sites - South)


Priest Point Park
Field Sampling Locations -
Northern Area
Legend
Final Field Sampling Locations
0 25 50 100 150
Feet
Thurston GeoData Center
Area of Interest
INLET
INLET
BUDD
W38
N44
X55
N57
V91
U73
CC102
FF110
II118
XX127


Priest Point Park
Field Sampling Locations -
Southern Area
Legend
Final Field Sampling Locations
0 35 70 140 210
Feet
Thurston GeoData Center
Area of Interest
INLET
INLET
BUDD
ELD
HENDE
LLLL121
OOOO123
CCCC131
IIII142
ZZZ144
OOO148
ZZZ157
RRR159
KKKK159
CCCC165
UUU169
AAAA175
RRR181
QQQQ184
YYY190
XXXX198
VVVV200
RRR200
QQQQ204
FFFF209

Appendix B

Field Logbook (copy)

"Outdoor writing products for outdoor writing people."

RECYCLABLE

"Rite in the Rain" - A unique All-Weather Writing paper created to shed water and enhance the written image. It is widely used throughout the world for recording critical field data in all kinds of weather.

Available in a variety of standard and custom printed case-bound field books, loose leaf, spiral and stapled notebooks, multi-copy sets and copier paper.

For best results, use a pencil or an all-weather pen.

a product of

J. L. DARLING CORPORATION
Tacoma, WA 98424-1017 USA
(253) 922-5000 • FAX (253) 922-5300
www.RiteintheRain.com

NSN: 7530-01-433-5654

6 32281 31111 9

2010

"Rite in the Rain"®
ALL-WEATHER WRITING PAPER

LEVEL

All-Weather Notebook
No. 311

THURSTON COUNTY · HAZARDOUS WASTE
412 LILLY ROAD NE
OLYMPIA WA 98506
360 · 867 · 2664

4 5/8" x 7" - 48 Numbered Pages

SODERBERG / KOSTER PRIEST POINT PARK SAMPLING

EQUIPMENT LIST

- MAP
- GPS
- JARS / BOTTLES / LABELS
- ✓ DI WATER
- ✓ ICE
- PHONE
- GLOVES
- 5-GALLON BUCKETS
- SPOONS
- ✓ CHAIN of CUSTODY
- ✓ ZIP-LOCK BAGS (30+)

WEATHER = 60°F O WIND RAINY

NORTHERN AREA

1 W38-01 @ 1101 pm

GPS

- LOCATION DESCRIPTION = STEEP SLOPE NEAR TREE LINE
- SEDIMENT DESCRIPTION = 4/4/3 olive brown

SP - poorly sorted sands w/ fines < 50%, gravel ≤ 10% to 30 mm coarse sand & gravel rounded to sub angular - very loose

2 N-44-01 @ 205

GPS

- LOCATION = VERY WET, NEAR WATER, SWAMPY
- SEDIMENT = 2/N2/0 black

SM - silt sand, all fines w/ < 5% broken shells, well sorted

3 X55-01 @ 1111

GPS

- LOCATION - STEEP BANK - ROCKY, NEAR TREE LINE
- SEDIMENT - 3/3/2 very dark grayish brown

SP - poorly sorted sand w/ fines < 30%, gravel < 30% to 25 mm sand & gravel rounded to sub rounded, sand medium to coarse - very loose

NORTHERN PPP

4 N57-01 @ 1159

GPS {

LOCATION DESCRIPTION - near water, [illegible]

SEDIMENT DESCRIPTION - 2/N2/0 black

SM - silt, very well sorted, all fines, wet

5 [U73-01 @ 1115
[U73-02 @ 1117

GPS {

LOCATION - beginning of silty sands, [illegible]

SEDIMENT - 3/N3/0 very dark gray

SM - silty sands w/ <80% fines (well sorted), subrounded to rounded ~~sand~~ coarse (PS) sand

6 V91-01 @ 1156

GPS {

LOCATION - near water, [illegible]

SEDIMENT - 3/N3/0 Very dark gray

SM - silt sand, all fines, well sorted, wet

NORTHERN PPP

7 CC102-01 @ 1121

GPS {

LOCATION - Steep bank - very rocky

SEDIMENT - 3/3/2 very dark grayish brown

SP - poorly sorted medium to coarse sands w/ gravel to 20mm <30% and fines <20%

subrounded to angular, very loose

8 FF110-01 @ 1131

GPS {

LOCATION - Edge of rocky beach; silty sand

SEDIMENT 3/N3/0 Very dark gray

SM - silty sands, poorly sorted sands - fine to coarse, >60% fines ~10% Gravel to 10mm

9 (PS) ~~II108~~ II118-01 @ 1137

GPS {

LOCATION - [illegible] silts

SEDIMENT - 3/3/2 VERY DARK grayish BROWN

(PS) ~~ML = CLAYEY silts w/ slight plasticity~~ ~~silts w/ (PS)~~, SM - silt sand mixture, poorly sorted, loose, >50% fines

10 XX127-01 @ 1144

GPS {

LOCATION - Very rocky, above mouth of cove

SEDIMENT - 3/N3/0 Very dark gray

SP - Poorly sorted sand w/ ~40% fines, 20% Gravel to 10mm, 5% shells, loose

SOUTHERN AREA - PPP

1 LLLL 121-01 @ 1151

GPS {

LOCATION DESCRIPTION - pebbly area; fines

SEDIMENT DESCRIPTION - 2/N2/0 black

SP - poorly sorted sands and silt w/ gravel to 10mm, poorly sorted sand fine to coarse, > 40% fines, 50% sands

2 0000123-01 @ 1205

GPS {

location - pebbles w/ fine sand

SEDIMENT - 2/N2/0 black

OL - organic silty clay w/ <20% fine to coarse sand, <20% fine gravel to 15mm - rounded to sub angular.

3 CCCC 131-01 @ 1211

GPS {

location - near creek, very wet, fine

SEDIMENT - 3/N3/0 Very dark gray

SM - silty sands, fines >90%, well sorted, fine sands, very wet

SOUTHERN AREA

4 IIII 142-01 @ 1216

GPS {

location - Very fine sands, - wet

SEDIMENT - 3/N3/0 Very dark gray

SM - silty sands, well sorted, fines >80%, fine sands, wet

5 ZZZZ144-01 @ 1219

GPS {

location - very wet fine sands

SEDIMENT - 3/N3/0 very dark gray

SM - silts w/ broken shells, >90% fines, well sorted, 5% shells

6 000148-01 @ 1223

GPS {

location - wet fine sands w/ shells

SEDIMENT - 2/N2/0 Black

SM - very wet silt sand, all fines - well sorted

SOUTHERN AREA

7
RRR 159-01 @ 1327
GPS {
LOCATION DESCRIPTION - wet fine sandy
SEDIMENT DESCRIPTION - 3/3/2 very dark grayish brown
SM - silt, nearly all fines, very well sorted, wet, wet, wet

8 ZZZ 157-01 @ 1231
GPS {
location - wet fine sand w/ shelly
SEDIMENT - 2/N2/0 black
SM - silty sand, all fines w/ <5% broken shells, well sorted

9 LLLL 156-01 @ 1244
GPS {
location - middly wet fine sand near veg
SEDIMENT - 2/N2/0 black
SM - silts, fines >90%, well sorted w/ small shell fragments
LOCATION changed due to vegetation
KKKK 159-01

SOUTHERN AREA

10 CCCC 165-01 @ 1255
GPS {
location - mid beach, fine w/ shells
SEDIMENT - 3/N3/0 very dark gray
SM - silty sands, very loose, mostly fines w/ broken shells

11 UUU 169-01 @ 1259
GPS {
location - outer beach, fine sand
SEDIMENT - 2/N2/0 black
SM - silt, all fines, well sorted

12 AAAA 175-01 @ 104
GPS {
location - near mouth, very wet, fine sandy
SEDIMENT - 4/4/2 dark grayish brown
SM - silt sands, >90% fines well sorted, small shell fragments

SOUTHERN AREA - ???

13

RRR 181-01 @ 108
RRR 181-02 @ 111

GPS {

LOCATION DESCRIPTION - near water line, fine sands
SEDIMENT DESCRIPTION - 2/N2/0 black
SM - silt, >95% fines, very well sorted

14 QQQQ 184-01 @ 141

GPS {

LOCATION - near vegetation, shelly
SEDIMENT - 2/N2/0 black
SM - ~~sand~~ silt sand, <20% fine to coarse sand, >80% fines: silt

15 YYY 190-01 @ 113

GPS {

LOCATION - outer bench, grassy shelly
SEDIMENT - 3/N3/0 very dark gray
SM - silt sands, all fines, well sorted

SOUTHERN ???

16

RRR 200-01 @ 114

GPS {

LOCATION - near water, fine sand w/ shelly
SEDIMENT - 3/N3/0 very dark gray
SM - well sorted silty sand w/ mostly silt fines >80%

17 FFF 209-01 @ 125

GPS {

LOCATION outer bench near grassy
SEDIMENT 3/N3/0 very dark gray
SM - silt sands, ~~all~~ all silt fines w/ <5% shell fragments

18 QQQQ 204-01 @ 133

GPS {

LOCATION - mid bench, mostly sandy
SEDIMENT - 3/N3/0 very dark gray
SM - silt, well sorted >90% fines w/ shell fragments & fine sands

10/10/10 Sodergren/Koster

Southern Area

19

VVVV200-01 @131

GPS {

Location description - mud beach, lots of shells

Sediment description - 2/N2/0 black

SM - silt sands, >95% fine silt w/shell fragments

20 XXXX 198-01 @135

GPS {

location - upper beach, lots of shells

Sediment 2/N2/0 black

SM - silt sands, poorly sorted sand - fine to coarse ~~sand~~ <40%, <10% fine gravel rounded to 10mm, >50% fine silt, shell frag.

10/8/10 Sodergren/Koster

PPP Sampling

Equipment Blanks

① DI water and all sampling spoons
RI-01 @ 1040
collected on 10/8/10

② DI water and gloves + jar
RI-02 @ 1055
collected on 10/8/10

Appendix C

Chain of Custody

Pace Analytical®
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

1133, 1134

RUSH

CHAIN OF CUSTODY

COC No.

(Please Print Clearly)	
Company Name:	THURSTON COUNTY
Branch/Location:	- HAZARDOUS WASTE
Project Contact:	PATRICK SODERBERG
Phone:	360-867-2586
Project Number:	
Project Name:	Budd Inlet
Project State:	WASHINGTON
Sampled By (Print):	PATRICK SODERBERG
Sampled By (Sign):	
PO #:	Regulatory Program:

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water, B = Biota, DW = Drinking Water, C = Charcoal, GW = Ground Water, O = Oil, SW = Surface Water, S = Soil, WW = Waste Water, SI = Sludge, WP = Wipe

FILTERED? (YES/NO) PRESERVATION (CODE)*

Analyses Requested: EPA 1613

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	RI-Ø1	10/8	1040	W	N	A		10140376001	
	RI-Ø2	10/8	1055	W				002	
	W38-Ø1	10/9	1101	S				003	
	N44-Ø1	10/10	205	S				004	
	X55-Ø1	10/9	1111	S				005	
	N57-Ø1	10/10	159	S				006	
	U73-Ø1	10/9	1115	S				007	
	U73-Ø2	10/9	1117	S				008	
	V91-Ø1	10/10	1156	S				009	
	CC1Ø2-Ø1	10/9 (13)	1121	S				010	
	FF11Ø-Ø1	10/9 (13)	1131	S				011	
	II118-Ø1	10/9 (13)	1137	S				012	
	XX127-Ø1	10/9	1144	S				013	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/12/10 1200	PACE	10/13/10 1000
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.
10140376

Receipt Temp = 3.2 °C
6.0

Sample Receipt pH OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

JOUR - 1

Pace Analytical®
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

CHAIN OF CUSTODY

COC No.

(Please Print Clearly)	
Company Name:	THURSTON COUNTY
Branch/Location:	HAZARDOUS WASTE
Project Contact:	PATRICK SODENBERG
Phone:	360-867-2586
Project Number:	
Project Name:	BUDD INLET
Project State:	WA
Sampled By (Print):	PATRICK SODENBERG
Sampled By (Sign):	
PO #:	Regulatory Program:

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water
B = Biota, DW = Drinking Water
C = Charcoal, GW = Ground Water
O = Oil, SW = Surface Water
S = Soil, WW = Waste Water
SI = Sludge, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) PRESERVATION (CODE)* Y/N	Pick Letter	Analyses Requested: EPA 1613	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	LLLL 121-Ø1	10/9	1151	S	N	A	X		10140376014	
	0000 123-Ø1	10/10	1205	S			X		015	
	CCCC 131-Ø1	10/10	1211	S			X		016	
	IIII 142-Ø1	10/10	1216	S			X		017	
	ZZZZ 144-Ø1	10/10	1219	S			X		018	
	000148-Ø1	10/10	1223	S			X		019	
	RRR159-Ø1	10/10	1227	S			X		020	
	ZZZ 157-Ø1	10/10	1231	S			X		021	
(PS)	~~LLLL 156-Ø1~~	10/10		S			X			
	CCCC 165-Ø1	10/10	1255	S			X		022	
	KKKK 159-Ø1	10/10	1244	S			X		023	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/12/10 1220	PACE	10/13/10 1000
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.: 10140376

Receipt Temp = 3.2 / 6.0 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

SOUTH - 2

Pace Analytical®
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

CHAIN OF CUSTODY

COC No.

(Please Print Clearly)	
Company Name:	THURSTON COUNTY
Branch/Location:	HAZARDOUS WASTE
Project Contact:	PATRICK SOERENSEN
Phone:	360-867-2586
Project Number:	
Project Name:	BUDD INLET
Project State:	WA
Sampled By (Print):	PATRICK SOERENSEN
Sampled By (Sign):	
PO #:	Regulatory Program:

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water, B = Biota, DW = Drinking Water, C = Charcoal, GW = Ground Water, O = Oil, SW = Surface Water, S = Soil, WW = Waste Water, SI = Sludge, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) PRESERVATION (CODE)* Y/N	Pick Letter	Analyses Requested: EPA 1613	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	UUU169-Ø1	10/10	1259	S	N	A	X		10140376	024
	AAAA175-Ø1	10/10	104	S			X			025
	RRR181-Ø1	10/10	108	S			X			026
	RRR181-Ø2	10/10	111	S			X			027
	QQQQ184-Ø1	10/10	141	S			X			028
	YYY190-Ø1	10/10	113	S			X			029
	RRRZØØ-Ø1	10/10	119	S			X			030
	FFFZØ9-Ø1	10/10	125	S			X			031
	QQQQZØ4-Ø1	10/10	133	S			X			032
	VVVVZØØ-Ø1	10/10	131	S			X			033
	XXXX198-Ø1	10/10	135	S			X			034

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/12/10 1200		10/13/10 1000
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.
10140376

Receipt Temp = 3.2 °C (6.0)

Sample Receipt pH
OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

C019a(27Jun2006)

Version 6.0 06/14/06

Sample Condition Upon Receipt

Pace Analytical

1995 2474 3762

Client Name: Thurston County **Project #** 10140376

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 9675 1946 4034

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals Intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ✓ No 10/13/10 SA

Thermometer Used 80344042 or 179425 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 3.2 / 6.0 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and initials of person examining contents: 10/13/10 SA

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☑Yes	☐No	☐N/A	7. 5 DAY TAT @ 10/13/10
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☐Yes	☑No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☐N/A	11.
Sample Labels match COC:	☐Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SHWT				
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☐N/A	Samp #
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes	☑No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Paul S. Date/Time: 10/13/10

Comments/ Resolution:

Contain labeled "LLLL156-01" is sample "KKKK159-01"

Project Manager Review: _____ **Date:** 10/13/10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

Pace Analytical Services, Inc.
1700 Elm Street SE, Suite 200, Minneapolis, MN 55414

Appendix D

Field Sampling Health and Safety Plan

Priest Point Park Study in Thurston County
Health and Safety Plan

1. **General**

Site name:	Priest Point Park Intertidal Beach Sampling
Safety officer:	Patrick Soderberg (Thurston County Health Dept)
Proposed date of field activities:	October 2010

2. **Sampling Objective**

a: Collect samples of soil from 0- 10 cm.
b: Collect GPS readings at each sample location for incorporation into site map.

3. **Key Personnel/Duties Identified:**

Patrick Soderberg -	Project manager /safety officer / data collector
Gerald Tousley -	Sampler
Brad Zulewski -	Alternate sampler
Mark Koster -	Alternate sampler
Nicky Upson	Alternate sampler

4. **Site/Waste Characteristics**

Site description:	Sampling activities are part of a dioxin contamination study along the beach of Priest Point Park.
Waste types:	Dioxin contaminated sediments.
Chemical concentration:	Unknown, but expected to be less than 1 ppb.

5. **Hazard Summary**

Chemical	Dioxins – potential routes of entry are dermal / ingestion.
Physical	Physical hazardous associated with heavy lifting and being outdoors, heat or cold stress, slips / trips / falls, uncontrolled animals and people.

6. **Site Safety Work plan**

Site entry procedures:	Area is open for use by the public.

7. Personnel Protection

Sampling: Sample team will use modified Level D protection. PPE will consist of nitrile gloves and waterproof boots.

Air Monitoring:

Contaminants of concern: Dioxins.

Monitoring equipment: Not required (no volatile compounds).

Decontamination:

Procedures: After sample collection and equipment decontamination, personnel will remove nitrile sampling gloves and boots and visible dirt on any body part will be washed off with soap and water. Nitrile gloves will be thrown away and boots will be rinsed off.

8. Hospital

Name and Location: For all non-emergencies accidents that result in personnel needing medical attention will be brought to Group Health Medical Center at 700 Lilly Road NE, Olympia (see attached map).

9. Emergency Contact Information:

Local/Site Resources	**Name**	**Phone**	**Notified**	
			Yes	**No**
Fire District or Department	Various fire districts	911		X
Police	Thurston County Sheriff Lacey Police Department Yelm Police Department	911		X
Ambulance		911		X
Hospital	Group Health	360-923-7000		X
Poison Control Center	800-732-6985			X
Site Phone #1	Patrick Soderberg	360-561-4385	X	
Site Phone #2	Gerald Tousley	360-481-0257	X	
Site Phone #3	Brad Zulewski	360-789-2192	X	

Site Safety Plan Consent Agreement

I have received the Site Safety Plan for the Priest Point Park Intertidal Beach Sampling project, dated September 17, 2010. I understand its purpose and consent to adhere to its procedures and guidelines.

Employee Name (Print)	Employee Signature	Date

Appendix E

Field Data

(on request)

Appendix F

Laboratory Analytical Report

Pace Analytical™

www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Patrick Soderberg
Thurston County Health Dept
412 Lilly Road NE
Olympia WA 98506

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

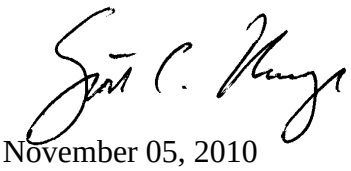
Pace Project #: 10140376
Sample Receipt Date: 10/13/2010
Client Project #: Budd Inlet
Client Sub PO #: N/A
State Cert #: C755

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:



November 05, 2010

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
November 5, 2010

ACCREDITED IN ACCORDANCE WITH nelac

Report of Laboratory Analysis

The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on thirty-four samples submitted by a representative of Thurston County. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 1613B. Reporting limits were based on signal-to-noise measurements.

The isotopically-labeled PCDD/PCDF internal standards in the sample extracts were recovered at 25-129%. With the exception of one elevated value, which was flagged "R" on the results table, the labeled standard recoveries obtained for this project were within the Method 1613B target ranges. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained.

A laboratory method blank was prepared and analyzed with each sample batch as part of our routine quality control procedures. The results show the blanks to contain trace levels of selected congeners. These were below the calibration range of the method. Sample levels similar to the corresponding blank levels were flagged "B" on the results tables and may be, at least partially, attributed to the background. It should be noted that levels less than ten times the background are not generally considered to be statistically different from the background.

Laboratory spike samples were also prepared with the sample batches using clean sand or water that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 94-139%, with relative percent differences of 0.0-19.9%. These results were all within the target ranges for this method. Matrix spikes were prepared with the 11/01/2010 sample batch using sample material from a separate project; results from these analyses will be provided upon request. Matrix spikes were not prepared with the other extraction batches.

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
Alabama	40770	Montana	92
Alaska	MN00064	Nebraska	
Arizona	AZ0014	Nevada	MN000642010A
Arkansas	88-0680	New Jersey (NE	MN002
California	01155CA	New Mexico	MN00064
Colorado	MN00064	New York (NEL	11647
Connecticut	PH-0256	North Carolina	27700
EPA Region 5	WD-15J	North Dakota	R-036
EPA Region 8	8TMS-Q	Ohio	4150
Florida (NELAP	E87605	Ohio VAP	CL101
Georgia (DNR)	959	Oklahoma	D9922
Guam	09-019r	Oregon (ELAP)	MN200001-005
Hawaii	SLD	Oregon (OREL	MN200001-005
Idaho	MN00064	Pennsylvania	68-00563
Illinois	200012	Saipan	MP0003
Indiana	C-MN-01	South Carolina	74003001
Indiana	C-MN-01	Tennesee	2818
Iowa	368	Tennessee	02818
Kansas	E-10167	Texas	T104704192-08
Kentucky	90062	Utah (NELAP)	PAM
Louisiana	LA0900016	Virginia	00251
Maine	2007029	Washington	C755
Maryland	322	West Virginia	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-Q
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

Appendix A

Sample Management

Report No....10140376_1613

Page 5 of 64

Pace Analytical®
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

1133, 1134

Page 1 of 3
Cooler 1 of 2

RUSH

CHAIN OF CUSTODY

COC No.

(Please Print Clearly)	
Company Name:	THURSTON COUNTY
Branch/Location:	- HAZARDOUS WASTE
Project Contact:	PATRICK SODERBERG
Phone:	360-867-2586
Project Number:	
Project Name:	Budd Inlet
Project State:	WASHINGTON
Sampled By (Print):	PATRICK SODERBERG
Sampled By (Sign):	
PO #:	Regulatory Program:

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

FILTERED? (YES/NO) PRESERVATION (CODE)*

Analyses Requested: EPA 1613

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	RI-Ø1	10/8	1040	W	N	A		10140376001	
	RI-Ø2	10/8	1055	W				002	
	W38-Ø1	10/9	1101	S				003	
	N44-Ø1	10/10	205	S				004	
	X55-Ø1	10/9	1111	S				005	
	N57-Ø1	10/10	159	S				006	
	U73-Ø1	10/9	1115	S				007	
	U73-Ø2	10/9	1117	S				008	
	V91-Ø1	10/10	1156	S				009	
	CC1Ø2-Ø1	10/9 (13)	1121	S				010	
	FF11Ø-Ø1 10/9	10/10 (13)	1131	S				011	
	II118-Ø1	10/9 (13)	1137	S				012	
	XX127-Ø1	10/9	1144	S				013	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/12/10 1200	PAce	10/13/10 1000
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.
10140376

Receipt Temp = 3.2 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

JOUIN - 1

(Please Print Clearly)	
Company Name:	THURSTON COUNTY
Branch/Location:	HAZARDOUS WASTE
Project Contact:	PATRICK SODENBERG
Phone:	360-867-2586
Project Number:	
Project Name:	BUDD INLET
Project State:	WA
Sampled By (Print):	PATRICK SODENBERG
Sampled By (Sign):	
PO #:	Regulatory Program:

Pace Analytical®
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

CHAIN OF CUSTODY

COC No.

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water
B = Biota, DW = Drinking Water
C = Charcoal, GW = Ground Water
O = Oil, SW = Surface Water
S = Soil, WW = Waste Water
SI = Sludge, WP = Wipe

FILTERED? (YES/NO) PRESERVATION (CODE)*

Analyses Requested: EPA 1613

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	LLLL 121-Ø1	10/9	1151	S		N A		10140376 014	
	0000 123-Ø1	10/10	1205	S		X		015	
	CCCC 131-Ø1	10/10	1211	S		X		016	
	IIII 142-Ø1	10/10	1216	S		X		017	
	ZZZZ 144-Ø1	10/10	1219	S		X		018	
	000148-Ø1	10/10	1223	S		X		019	
	RRR159-Ø1	10/10	1227	S		X		020	
	ZZZ 157-Ø1	10/10	1231	S		X		021	
(PS)	~~LLLL 156-Ø1~~	~~10/10~~		~~S~~		~~X~~			
	CCCC 165-Ø1	10/10	1255	S		X		022	
	KKKK 159-Ø1	10/10	1244	S		X		023	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/12/10 1220	PACE	10/13/10 1000
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.: 10140376

Receipt Temp = 3.2 c 6.0 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

SOUTH - 2

Report No....10140376_1613

Page 7 of 64

Pace Analytical®
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

CHAIN OF CUSTODY

COC No.

(Please Print Clearly)	
Company Name:	THURSTON COUNTY
Branch/Location:	HAZARDOUS WASTE
Project Contact:	PATRICK SOERENSEN
Phone:	360-867-2586
Project Number:	
Project Name:	BUDD INLET
Project State:	WA
Sampled By (Print):	PATRICK SOERENSEN
Sampled By (Sign):	
PO #:	Regulatory Program:

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
- ☐ EPA Level III
- ☐ EPA Level IV

MS/MSD
- ☐ On your sample (billable)
- ☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water, B = Biota, DW = Drinking Water, C = Charcoal, GW = Ground Water, O = Oil, SW = Surface Water, S = Soil, WW = Waste Water, SI = Sludge, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) PRESERVATION (CODE)* Y/N	Pick Letter	Analyses Requested: EPA 1613	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	UUU169-Ø1	10/10	1259	S	N	A	X		10140376 024	
	AAAA175-Ø1	10/10	104	S			X		025	
	RRR181-Ø1	10/10	108	S			X		026	
	RRR181-Ø2	10/10	111	S			X		027	
	QQQQ184-Ø1	10/10	141	S			X		028	
	YYY190-Ø1	10/10	113	S			X		029	
	RRRZØØ-Ø1	10/10	119	S			X		030	
	FFFZØ9-Ø1	10/10	125	S			X		031	
	QQQQZØ4-Ø1	10/10	133	S			X		032	
	VVVVZØØ-Ø1	10/10	131	S			X		033	
	XXXX198-Ø1	10/10	135	S			X		034	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/12/10 1200		10/13/10 1000
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.
10140376

Receipt Temp = 3.2 °C (6.0)

Sample Receipt pH
OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

Sample Condition Upon Receipt

Pace Analytical

1995 2474 3762

Client Name: Thurston County **Project #** 10140376

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 9675 1946 4034

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals Intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ✓ No

10/13/10 SA

Thermometer Used 80344042 of 179425 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 3.2 / 6.0 **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 10/13/10 SA

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☑Yes	☐No	☐N/A	7. 5 DAY TAT @ 10/13/10
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☐Yes	☑No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☐N/A	11.
Sample Labels match COC:	☐Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SHWT				
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes	☐No	☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☐N/A	Samp #
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes	☑No		Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Paul S. Date/Time: 10/13/10

Comments/ Resolution:

Contain labeled "LLLL156-01" is sample "KKKK159-01"

Project Manager Review: [signature] **Date:** 10/13/10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interference present

J = Estimated value

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = See Discussion

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	RI-01		
Lab Sample ID	10140376001		
Filename	F101027A_03		
Injected By	SMT		
Total Amount Extracted	939 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	10/08/2010 10:40
ICAL ID	F101012	Received	10/13/2010 10:00
CCal Filename(s)	F101026B_17	Extracted	10/22/2010 14:35
Method Blank ID	BLANK-26771	Analyzed	10/27/2010 04:40

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.10		2,3,7,8-TCDF-13C	2.00	68
Total TCDF	ND	-----	1.10		2,3,7,8-TCDD-13C	2.00	88
					1,2,3,7,8-PeCDF-13C	2.00	81
2,3,7,8-TCDD	ND	-----	0.89		2,3,4,7,8-PeCDF-13C	2.00	88
Total TCDD	ND	-----	0.89		1,2,3,7,8-PeCDD-13C	2.00	117
					1,2,3,4,7,8-HxCDF-13C	2.00	76
1,2,3,7,8-PeCDF	ND	-----	1.00		1,2,3,6,7,8-HxCDF-13C	2.00	77
2,3,4,7,8-PeCDF	ND	-----	0.83		2,3,4,6,7,8-HxCDF-13C	2.00	77
Total PeCDF	ND	-----	0.93		1,2,3,7,8,9-HxCDF-13C	2.00	83
					1,2,3,4,7,8-HxCDD-13C	2.00	91
1,2,3,7,8-PeCDD	ND	-----	1.00		1,2,3,6,7,8-HxCDD-13C	2.00	91
Total PeCDD	ND	-----	1.00		1,2,3,4,6,7,8-HpCDF-13C	2.00	86
					1,2,3,4,7,8,9-HpCDF-13C	2.00	93
1,2,3,4,7,8-HxCDF	ND	-----	0.94		1,2,3,4,6,7,8-HpCDD-13C	2.00	114
1,2,3,6,7,8-HxCDF	ND	-----	0.80		OCDD-13C	4.00	98
2,3,4,6,7,8-HxCDF	ND	-----	0.66				
1,2,3,7,8,9-HxCDF	ND	-----	0.85		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.81		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.86		2,3,7,8-TCDD-37Cl4	0.20	83
1,2,3,6,7,8-HxCDD	ND	-----	1.00				
1,2,3,7,8,9-HxCDD	ND	-----	1.20				
Total HxCDD	ND	-----	1.00				
1,2,3,4,6,7,8-HpCDF	1.0	-----	0.86	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.10		Equivalence: 1.5 pg/L		
Total HpCDF	1.0	-----	0.99	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	1.1	0.69	I			
Total HpCDD	1.9	-----	0.69	BJ			
OCDF	3.0	-----	1.30	BJ			
OCDD	-----	3.2	1.40	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	RI-01 (Duplicate)		
Lab Sample ID	10140376001-DUP		
Filename	F101027A_04		
Injected By	SMT		
Total Amount Extracted	951 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	10/08/2010 10:40
ICAL ID	F101012	Received	10/13/2010 10:00
CCal Filename(s)	F101026B_17	Extracted	10/22/2010 14:35
Method Blank ID	BLANK-26771	Analyzed	10/27/2010 05:26

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.40		2,3,7,8-TCDF-13C	2.00	58
Total TCDF	ND	-----	1.40		2,3,7,8-TCDD-13C	2.00	76
					1,2,3,7,8-PeCDF-13C	2.00	72
2,3,7,8-TCDD	ND	-----	1.50		2,3,4,7,8-PeCDF-13C	2.00	79
Total TCDD	ND	-----	1.50		1,2,3,7,8-PeCDD-13C	2.00	107
					1,2,3,4,7,8-HxCDF-13C	2.00	72
1,2,3,7,8-PeCDF	ND	-----	1.30		1,2,3,6,7,8-HxCDF-13C	2.00	72
2,3,4,7,8-PeCDF	ND	-----	1.00		2,3,4,6,7,8-HxCDF-13C	2.00	72
Total PeCDF	ND	-----	1.20		1,2,3,7,8,9-HxCDF-13C	2.00	77
					1,2,3,4,7,8-HxCDD-13C	2.00	91
1,2,3,7,8-PeCDD	ND	-----	1.30		1,2,3,6,7,8-HxCDD-13C	2.00	83
Total PeCDD	ND	-----	1.30		1,2,3,4,6,7,8-HpCDF-13C	2.00	83
					1,2,3,4,7,8,9-HpCDF-13C	2.00	88
1,2,3,4,7,8-HxCDF	1.4	-----	0.95	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	108
1,2,3,6,7,8-HxCDF	ND	-----	1.00		OCDD-13C	4.00	93
2,3,4,6,7,8-HxCDF	ND	-----	1.10				
1,2,3,7,8,9-HxCDF	ND	-----	1.10		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	1.4	-----	1.00	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	1.20		2,3,7,8-TCDD-37Cl4	0.20	74
1,2,3,6,7,8-HxCDD	ND	-----	1.60				
1,2,3,7,8,9-HxCDD	ND	-----	1.20				
Total HxCDD	ND	-----	1.30				
1,2,3,4,6,7,8-HpCDF	ND	-----	1.00		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.20		Equivalence: 2.2 pg/L		
Total HpCDF	ND	-----	1.10		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	1.10				
Total HpCDD	1.8	-----	1.10	BJ			
OCDF	-----	1.9	1.50	I			
OCDD	3.8	-----	2.00	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Duplicate Analysis Results

Client: Thurston County Health Dept

Client's Sample ID	RI-01	Client's Duplicate ID	RI-01 (Duplicate)
Lab Sample ID	10140376001	Lab Duplicate ID	10140376001-DUP
Sample Filename	F101027A_03	Duplicate Filename	F101027A_04

Compound	Sample Conc. pg/L	Duplicate Conc. pg/L	RPD %
2,3,7,8-TCDF	ND	ND	NA
Total TCDF	ND	ND	NA
2,3,7,8-TCDD	ND	ND	NA
Total TCDD	ND	ND	NA
1,2,3,7,8-PeCDF	ND	ND	NA
2,3,4,7,8-PeCDF	ND	ND	NA
Total PeCDF	ND	ND	NA
1,2,3,7,8-PeCDD	ND	ND	NA
Total PeCDD	ND	ND	NA
1,2,3,4,7,8-HxCDF	ND	1.4	NA
1,2,3,6,7,8-HxCDF	ND	ND	NA
2,3,4,6,7,8-HxCDF	ND	ND	NA
1,2,3,7,8,9-HxCDF	ND	ND	NA
Total HxCDF	ND	1.4	NA
1,2,3,4,7,8-HxCDD	ND	ND	NA
1,2,3,6,7,8-HxCDD	ND	ND	NA
1,2,3,7,8,9-HxCDD	ND	ND	NA
Total HxCDD	ND	ND	NA
1,2,3,4,6,7,8-HpCDF	1.0	ND	NA
1,2,3,4,7,8,9-HpCDF	ND	ND	NA
Total HpCDF	1.0	ND	NA
1,2,3,4,6,7,8-HpCDD	ND	ND	NA
Total HpCDD	1.9	1.8	3.1
OCDF	3.0	ND	NA
OCDD	ND	3.8	NA

Conc = Concentration RPD = Relative Percent Difference NA = Not Applicable ND = Not Detected

RPD calculations are based on unrounded intermediate data. Consequently, it may not be possible to precisely reconstruct the resultant values from the rounded concentration results, due to rounding errors.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	RI-02		
Lab Sample ID	10140376002		
Filename	F101027A_05		
Injected By	SMT		
Total Amount Extracted	941 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	10/08/2010 10:55
ICAL ID	F101012	Received	10/13/2010 10:00
CCal Filename(s)	F101026B_17	Extracted	10/22/2010 14:35
Method Blank ID	BLANK-26771	Analyzed	10/27/2010 06:12

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.20		2,3,7,8-TCDF-13C	2.00	50
Total TCDF	ND	-----	1.20		2,3,7,8-TCDD-13C	2.00	66
					1,2,3,7,8-PeCDF-13C	2.00	60
2,3,7,8-TCDD	ND	-----	1.50		2,3,4,7,8-PeCDF-13C	2.00	66
Total TCDD	ND	-----	1.50		1,2,3,7,8-PeCDD-13C	2.00	89
					1,2,3,4,7,8-HxCDF-13C	2.00	61
1,2,3,7,8-PeCDF	ND	-----	1.20		1,2,3,6,7,8-HxCDF-13C	2.00	62
2,3,4,7,8-PeCDF	ND	-----	1.10		2,3,4,6,7,8-HxCDF-13C	2.00	60
Total PeCDF	ND	-----	1.20		1,2,3,7,8,9-HxCDF-13C	2.00	66
					1,2,3,4,7,8-HxCDD-13C	2.00	73
1,2,3,7,8-PeCDD	ND	-----	1.40		1,2,3,6,7,8-HxCDD-13C	2.00	74
Total PeCDD	ND	-----	1.40		1,2,3,4,6,7,8-HpCDF-13C	2.00	71
					1,2,3,4,7,8,9-HpCDF-13C	2.00	73
1,2,3,4,7,8-HxCDF	ND	-----	1.00		1,2,3,4,6,7,8-HpCDD-13C	2.00	91
1,2,3,6,7,8-HxCDF	ND	-----	0.87		OCDD-13C	4.00	79
2,3,4,6,7,8-HxCDF	ND	-----	0.88				
1,2,3,7,8,9-HxCDF	ND	-----	1.10		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.96		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	1.20		2,3,7,8-TCDD-37Cl4	0.20	64
1,2,3,6,7,8-HxCDD	ND	-----	1.60				
1,2,3,7,8,9-HxCDD	ND	-----	1.50				
Total HxCDD	ND	-----	1.50				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.97		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.50		Equivalence: 2.2 pg/L		
Total HpCDF	ND	-----	1.20		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	1.3	-----	1.30	J			
Total HpCDD	1.3	-----	1.30	BJ			
OCDF	-----	2.0	1.90	I			
OCDD	3.9	-----	1.40	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	W38-01		
Lab Sample ID	10140376003		
Filename	U101029A_12		
Injected By	BAL		
Total Amount Extracted	12.1 g	Matrix	Solid
% Moisture	14.5	Dilution	NA
Dry Weight Extracted	10.3 g	Collected	10/09/2010 11:01
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_03	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/29/2010 23:23

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.061		2,3,7,8-TCDF-13C	2.00	65
Total TCDF	0.062	-----	0.061	J	2,3,7,8-TCDD-13C	2.00	74
					1,2,3,7,8-PeCDF-13C	2.00	64
2,3,7,8-TCDD	ND	-----	0.077		2,3,4,7,8-PeCDF-13C	2.00	64
Total TCDD	ND	-----	0.077		1,2,3,7,8-PeCDD-13C	2.00	73
					1,2,3,4,7,8-HxCDF-13C	2.00	67
1,2,3,7,8-PeCDF	ND	-----	0.100		1,2,3,6,7,8-HxCDF-13C	2.00	68
2,3,4,7,8-PeCDF	ND	-----	0.085		2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF	ND	-----	0.093		1,2,3,7,8,9-HxCDF-13C	2.00	71
					1,2,3,4,7,8-HxCDD-13C	2.00	75
1,2,3,7,8-PeCDD	ND	-----	0.130		1,2,3,6,7,8-HxCDD-13C	2.00	80
Total PeCDD	ND	-----	0.130		1,2,3,4,6,7,8-HpCDF-13C	2.00	75
					1,2,3,4,7,8,9-HpCDF-13C	2.00	74
1,2,3,4,7,8-HxCDF	ND	-----	0.056		1,2,3,4,6,7,8-HpCDD-13C	2.00	81
1,2,3,6,7,8-HxCDF	ND	-----	0.053		OCDD-13C	4.00	69
2,3,4,6,7,8-HxCDF	ND	-----	0.045				
1,2,3,7,8,9-HxCDF	ND	-----	0.041		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	0.120	-----	0.049	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.079		2,3,7,8-TCDD-37Cl4	0.20	67
1,2,3,6,7,8-HxCDD	ND	-----	0.087				
1,2,3,7,8,9-HxCDD	ND	-----	0.090				
Total HxCDD	ND	-----	0.085				
1,2,3,4,6,7,8-HpCDF	0.096	-----	0.045	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.044		Equivalence: 0.15 ng/Kg		
Total HpCDF	0.096	-----	0.044	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	0.350	-----	0.080	BJ			
Total HpCDD	0.850	-----	0.080	BJ			
OCDF	0.180	-----	0.055	BJ			
OCDD	2.100	-----	0.099	BJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
B = Less than 10x higher than method blank level

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	N44-01		
Lab Sample ID	10140376004		
Filename	U101030B_04		
Injected By	BAL		
Total Amount Extracted	14.6 g	Matrix	Solid
% Moisture	28.6	Dilution	NA
Dry Weight Extracted	10.4 g	Collected	10/10/2010 02:05
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101030B_01	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/30/2010 18:45

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.59	-----	0.11	J	2,3,7,8-TCDF-13C	2.00	96
Total TCDF	5.20	-----	0.11		2,3,7,8-TCDD-13C	2.00	86
					1,2,3,7,8-PeCDF-13C	2.00	98
2,3,7,8-TCDD	ND	-----	0.27		2,3,4,7,8-PeCDF-13C	2.00	97
Total TCDD	0.43	-----	0.27	J	1,2,3,7,8-PeCDD-13C	2.00	86
					1,2,3,4,7,8-HxCDF-13C	2.00	97
1,2,3,7,8-PeCDF	ND	-----	0.22		1,2,3,6,7,8-HxCDF-13C	2.00	108
2,3,4,7,8-PeCDF	0.47	-----	0.29	J	2,3,4,6,7,8-HxCDF-13C	2.00	98
Total PeCDF	3.40	-----	0.26	J	1,2,3,7,8,9-HxCDF-13C	2.00	84
					1,2,3,4,7,8-HxCDD-13C	2.00	77
1,2,3,7,8-PeCDD	ND	-----	0.36		1,2,3,6,7,8-HxCDD-13C	2.00	91
Total PeCDD	ND	-----	0.36		1,2,3,4,6,7,8-HpCDF-13C	2.00	54
					1,2,3,4,7,8,9-HpCDF-13C	2.00	47
1,2,3,4,7,8-HxCDF	0.57	-----	0.40	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	46
1,2,3,6,7,8-HxCDF	ND	-----	0.48		OCDD-13C	4.00	39
2,3,4,6,7,8-HxCDF	0.52	-----	0.39	J			
1,2,3,7,8,9-HxCDF	ND	-----	0.59		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	15.00	-----	0.47		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.62		2,3,7,8-TCDD-37Cl4	0.20	82
1,2,3,6,7,8-HxCDD	1.50	-----	0.66	J			
1,2,3,7,8,9-HxCDD	0.66	-----	0.53	J			
Total HxCDD	17.00	-----	0.61				
1,2,3,4,6,7,8-HpCDF	8.70	-----	0.26		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.38		Equivalence: 1.4 ng/Kg		
Total HpCDF	22.00	-----	0.32		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	33.00	-----	0.76				
Total HpCDD	76.00	-----	0.76				
OCDF	18.00	-----	0.99				
OCDD	250.00	-----	1.40				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	N44-01 (Duplicate)		
Lab Sample ID	10140376004-DUP		
Filename	U101030B_05		
Injected By	BAL		
Total Amount Extracted	14.1 g	Matrix	Solid
% Moisture	28.6	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	10/10/2010 02:05
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101030B_01	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/30/2010 19:31

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.62	-----	0.10	J	2,3,7,8-TCDF-13C	2.00	93
Total TCDF	4.10	-----	0.10		2,3,7,8-TCDD-13C	2.00	85
					1,2,3,7,8-PeCDF-13C	2.00	96
2,3,7,8-TCDD	ND	-----	0.19		2,3,4,7,8-PeCDF-13C	2.00	94
Total TCDD	0.38	-----	0.19	J	1,2,3,7,8-PeCDD-13C	2.00	85
					1,2,3,4,7,8-HxCDF-13C	2.00	99
1,2,3,7,8-PeCDF	0.23	-----	0.17	J	1,2,3,6,7,8-HxCDF-13C	2.00	104
2,3,4,7,8-PeCDF	0.32	-----	0.21	J	2,3,4,6,7,8-HxCDF-13C	2.00	94
Total PeCDF	3.50	-----	0.19	J	1,2,3,7,8,9-HxCDF-13C	2.00	82
					1,2,3,4,7,8-HxCDD-13C	2.00	82
1,2,3,7,8-PeCDD	ND	-----	0.34		1,2,3,6,7,8-HxCDD-13C	2.00	87
Total PeCDD	1.10	-----	0.34	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	53
					1,2,3,4,7,8,9-HpCDF-13C	2.00	46
1,2,3,4,7,8-HxCDF	-----	0.54	0.28	I	1,2,3,4,6,7,8-HpCDD-13C	2.00	47
1,2,3,6,7,8-HxCDF	ND	-----	0.36		OCDD-13C	4.00	39
2,3,4,6,7,8-HxCDF	ND	-----	0.32				
1,2,3,7,8,9-HxCDF	ND	-----	0.46		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	12.00	-----	0.35		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.42		2,3,7,8-TCDD-37Cl4	0.20	83
1,2,3,6,7,8-HxCDD	1.30	-----	0.54	J			
1,2,3,7,8,9-HxCDD	0.65	-----	0.38	J			
Total HxCDD	15.00	-----	0.45				
1,2,3,4,6,7,8-HpCDF	7.40	-----	0.65		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.46		Equivalence: 1.2 ng/Kg		
Total HpCDF	18.00	-----	0.56		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	29.00	-----	0.85				
Total HpCDD	68.00	-----	0.85				
OCDF	13.00	-----	0.80				
OCDD	220.00	-----	0.84				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Duplicate Analysis Results

Client: Thurston County Health Dept

Client's Sample ID	N44-01	Client's Duplicate ID	N44-01 (Duplicate)
Lab Sample ID	10140376004	Lab Duplicate ID	10140376004-DUP
Sample Filename	U101030B_04	Duplicate Filename	U101030B_05

Compound	Sample Conc. ng/Kg	Duplicate Conc. ng/Kg	RPD %
2,3,7,8-TCDF	0.59	0.62	5.8
Total TCDF	5.2	4.1	23.3
2,3,7,8-TCDD	ND	ND	NA
Total TCDD	0.43	0.38	12.2
1,2,3,7,8-PeCDF	ND	0.23	NA
2,3,4,7,8-PeCDF	0.47	0.32	38.0
Total PeCDF	3.4	3.5	2.8
1,2,3,7,8-PeCDD	ND	ND	NA
Total PeCDD	ND	1.1	NA
1,2,3,4,7,8-HxCDF	0.57	ND	NA
1,2,3,6,7,8-HxCDF	ND	ND	NA
2,3,4,6,7,8-HxCDF	0.52	ND	NA
1,2,3,7,8,9-HxCDF	ND	ND	NA
Total HxCDF	15	12	21.4
1,2,3,4,7,8-HxCDD	ND	ND	NA
1,2,3,6,7,8-HxCDD	1.5	1.3	14.8
1,2,3,7,8,9-HxCDD	0.66	0.65	1.0
Total HxCDD	17	15	10.7
1,2,3,4,6,7,8-HpCDF	8.7	7.4	16.4
1,2,3,4,7,8,9-HpCDF	ND	ND	NA
Total HpCDF	22	18	22.4
1,2,3,4,6,7,8-HpCDD	33	29	12.6
Total HpCDD	76	68	11.8
OCDF	18	13	29.9
OCDD	250	220	11.9

Conc = Concentration RPD = Relative Percent Difference NA = Not Applicable ND = Not Detected

RPD calculations are based on unrounded intermediate data. Consequently, it may not be possible to precisely reconstruct the resultant values from the rounded concentration results, due to rounding errors.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	X55-01		
Lab Sample ID	10140376005		
Filename	U101029A_13		
Injected By	BAL		
Total Amount Extracted	12.4 g	Matrix	Solid
% Moisture	17.9	Dilution	NA
Dry Weight Extracted	10.2 g	Collected	10/09/2010 11:11
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_03	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 00:08

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.048	-----	0.038	J	2,3,7,8-TCDF-13C	2.00	72
Total TCDF	0.048	-----	0.038	J	2,3,7,8-TCDD-13C	2.00	82
					1,2,3,7,8-PeCDF-13C	2.00	69
2,3,7,8-TCDD	ND	-----	0.047		2,3,4,7,8-PeCDF-13C	2.00	70
Total TCDD	ND	-----	0.047		1,2,3,7,8-PeCDD-13C	2.00	78
					1,2,3,4,7,8-HxCDF-13C	2.00	71
1,2,3,7,8-PeCDF	ND	-----	0.053		1,2,3,6,7,8-HxCDF-13C	2.00	74
2,3,4,7,8-PeCDF	ND	-----	0.062		2,3,4,6,7,8-HxCDF-13C	2.00	73
Total PeCDF	ND	-----	0.058		1,2,3,7,8,9-HxCDF-13C	2.00	74
					1,2,3,4,7,8-HxCDD-13C	2.00	78
1,2,3,7,8-PeCDD	ND	-----	0.130		1,2,3,6,7,8-HxCDD-13C	2.00	82
Total PeCDD	ND	-----	0.130		1,2,3,4,6,7,8-HpCDF-13C	2.00	75
					1,2,3,4,7,8,9-HpCDF-13C	2.00	75
1,2,3,4,7,8-HxCDF	ND	-----	0.042		1,2,3,4,6,7,8-HpCDD-13C	2.00	82
1,2,3,6,7,8-HxCDF	ND	-----	0.040		OCDD-13C	4.00	70
2,3,4,6,7,8-HxCDF	ND	-----	0.034				
1,2,3,7,8,9-HxCDF	ND	-----	0.032		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.037		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.056		2,3,7,8-TCDD-37Cl4	0.20	74
1,2,3,6,7,8-HxCDD	ND	-----	0.050				
1,2,3,7,8,9-HxCDD	ND	-----	0.048				
Total HxCDD	ND	-----	0.051				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.038		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.040		Equivalence: 0.12 ng/Kg		
Total HpCDF	ND	-----	0.039		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	0.069	0.048	I			
Total HpCDD	0.120	-----	0.048	BJ			
OCDF	0.099	-----	0.062	BJ			
OCDD	-----	0.470	0.063	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	X55-01 (Duplicate)		
Lab Sample ID	10140376005-DUP		
Filename	U101029A_14		
Injected By	BAL		
Total Amount Extracted	12.3 g	Matrix	Solid
% Moisture	17.9	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	10/09/2010 11:11
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_03	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 00:54

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.060		2,3,7,8-TCDF-13C	2.00	68
Total TCDF	ND	-----	0.060		2,3,7,8-TCDD-13C	2.00	76
					1,2,3,7,8-PeCDF-13C	2.00	66
2,3,7,8-TCDD	ND	-----	0.100		2,3,4,7,8-PeCDF-13C	2.00	67
Total TCDD	ND	-----	0.100		1,2,3,7,8-PeCDD-13C	2.00	74
					1,2,3,4,7,8-HxCDF-13C	2.00	69
1,2,3,7,8-PeCDF	ND	-----	0.120		1,2,3,6,7,8-HxCDF-13C	2.00	72
2,3,4,7,8-PeCDF	ND	-----	0.110		2,3,4,6,7,8-HxCDF-13C	2.00	72
Total PeCDF	ND	-----	0.120		1,2,3,7,8,9-HxCDF-13C	2.00	74
					1,2,3,4,7,8-HxCDD-13C	2.00	75
1,2,3,7,8-PeCDD	ND	-----	0.160		1,2,3,6,7,8-HxCDD-13C	2.00	82
Total PeCDD	ND	-----	0.160		1,2,3,4,6,7,8-HpCDF-13C	2.00	74
					1,2,3,4,7,8,9-HpCDF-13C	2.00	73
1,2,3,4,7,8-HxCDF	ND	-----	0.080		1,2,3,4,6,7,8-HpCDD-13C	2.00	79
1,2,3,6,7,8-HxCDF	ND	-----	0.063		OCDD-13C	4.00	69
2,3,4,6,7,8-HxCDF	ND	-----	0.058				
1,2,3,7,8,9-HxCDF	ND	-----	0.060		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.065		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.120		2,3,7,8-TCDD-37Cl4	0.20	64
1,2,3,6,7,8-HxCDD	ND	-----	0.130				
1,2,3,7,8,9-HxCDD	ND	-----	0.120				
Total HxCDD	ND	-----	0.120				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.050		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.073		Equivalence: 0.18 ng/Kg		
Total HpCDF	ND	-----	0.062		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	0.098				
Total HpCDD	0.15	-----	0.098	BJ			
OCDF	0.11	-----	0.077	BJ			
OCDD	-----	0.62	0.081	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Duplicate Analysis Results

Client: Thurston County Health Dept

Client's Sample ID	X55-01	Client's Duplicate ID	X55-01 (Duplicate)
Lab Sample ID	10140376005	Lab Duplicate ID	10140376005-DUP
Sample Filename	U101029A_13	Duplicate Filename	U101029A_14

Compound	Sample Conc. ng/Kg	Duplicate Conc. ng/Kg	RPD %
2,3,7,8-TCDF	0.048	ND	NA
Total TCDF	0.048	ND	NA
2,3,7,8-TCDD	ND	ND	NA
Total TCDD	ND	ND	NA
1,2,3,7,8-PeCDF	ND	ND	NA
2,3,4,7,8-PeCDF	ND	ND	NA
Total PeCDF	ND	ND	NA
1,2,3,7,8-PeCDD	ND	ND	NA
Total PeCDD	ND	ND	NA
1,2,3,4,7,8-HxCDF	ND	ND	NA
1,2,3,6,7,8-HxCDF	ND	ND	NA
2,3,4,6,7,8-HxCDF	ND	ND	NA
1,2,3,7,8,9-HxCDF	ND	ND	NA
Total HxCDF	ND	ND	NA
1,2,3,4,7,8-HxCDD	ND	ND	NA
1,2,3,6,7,8-HxCDD	ND	ND	NA
1,2,3,7,8,9-HxCDD	ND	ND	NA
Total HxCDD	ND	ND	NA
1,2,3,4,6,7,8-HpCDF	ND	ND	NA
1,2,3,4,7,8,9-HpCDF	ND	ND	NA
Total HpCDF	ND	ND	NA
1,2,3,4,6,7,8-HpCDD	ND	ND	NA
Total HpCDD	0.12	0.15	18.4
OCDF	0.099	0.11	12.9
OCDD	ND	ND	NA

Conc = Concentration RPD = Relative Percent Difference NA = Not Applicable ND = Not Detected

RPD calculations are based on unrounded intermediate data. Consequently, it may not be possible to precisely reconstruct the resultant values from the rounded concentration results, due to rounding errors.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	N57-01		
Lab Sample ID	10140376006		
Filename	U101030B_06		
Injected By	BAL		
Total Amount Extracted	14.6 g	Matrix	Solid
% Moisture	28.9	Dilution	NA
Dry Weight Extracted	10.4 g	Collected	10/10/2010 01:59
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101030B_01	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/30/2010 20:17

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.50	-----	0.099	J	2,3,7,8-TCDF-13C	2.00	95
Total TCDF	3.50	-----	0.099		2,3,7,8-TCDD-13C	2.00	87
					1,2,3,7,8-PeCDF-13C	2.00	98
2,3,7,8-TCDD	ND	-----	0.150		2,3,4,7,8-PeCDF-13C	2.00	98
Total TCDD	0.42	-----	0.150	J	1,2,3,7,8-PeCDD-13C	2.00	87
					1,2,3,4,7,8-HxCDF-13C	2.00	98
1,2,3,7,8-PeCDF	-----	0.20	0.160	I	1,2,3,6,7,8-HxCDF-13C	2.00	102
2,3,4,7,8-PeCDF	0.36	-----	0.140	J	2,3,4,6,7,8-HxCDF-13C	2.00	90
Total PeCDF	2.40	-----	0.150	J	1,2,3,7,8,9-HxCDF-13C	2.00	80
					1,2,3,4,7,8-HxCDD-13C	2.00	79
1,2,3,7,8-PeCDD	0.28	-----	0.240	J	1,2,3,6,7,8-HxCDD-13C	2.00	86
Total PeCDD	0.96	-----	0.240	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	52
					1,2,3,4,7,8,9-HpCDF-13C	2.00	47
1,2,3,4,7,8-HxCDF	0.53	-----	0.240	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	48
1,2,3,6,7,8-HxCDF	ND	-----	0.310		OCDD-13C	4.00	38
2,3,4,6,7,8-HxCDF	0.43	-----	0.250	J			
1,2,3,7,8,9-HxCDF	0.29	-----	0.280	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	12.00	-----	0.270		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.43	-----	0.360	J	2,3,7,8-TCDD-37Cl4	0.20	88
1,2,3,6,7,8-HxCDD	1.20	-----	0.340	J			
1,2,3,7,8,9-HxCDD	0.53	-----	0.360	J			
Total HxCDD	13.00	-----	0.350				
1,2,3,4,6,7,8-HpCDF	7.10	-----	0.380		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.380		Equivalence: 1.3 ng/Kg		
Total HpCDF	16.00	-----	0.380		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	26.00	-----	0.680				
Total HpCDD	59.00	-----	0.680				
OCDF	12.00	-----	0.790				
OCDD	200.00	-----	0.900				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	U73-01		
Lab Sample ID	10140376007		
Filename	U101029A_15		
Injected By	BAL		
Total Amount Extracted	13.4 g	Matrix	Solid
% Moisture	22.9	Dilution	NA
Dry Weight Extracted	10.4 g	Collected	10/09/2010 11:15
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_03	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 01:40

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.12	-----	0.058	J	2,3,7,8-TCDF-13C	2.00	58
Total TCDF	1.10	-----	0.058		2,3,7,8-TCDD-13C	2.00	65
					1,2,3,7,8-PeCDF-13C	2.00	59
2,3,7,8-TCDD	0.17	-----	0.073	BJ	2,3,4,7,8-PeCDF-13C	2.00	60
Total TCDD	0.31	-----	0.073	BJ	1,2,3,7,8-PeCDD-13C	2.00	64
					1,2,3,4,7,8-HxCDF-13C	2.00	58
1,2,3,7,8-PeCDF	-----	0.28	0.120	I	1,2,3,6,7,8-HxCDF-13C	2.00	61
2,3,4,7,8-PeCDF	0.29	-----	0.140	J	2,3,4,6,7,8-HxCDF-13C	2.00	60
Total PeCDF	1.70	-----	0.130	J	1,2,3,7,8,9-HxCDF-13C	2.00	60
					1,2,3,4,7,8-HxCDD-13C	2.00	61
1,2,3,7,8-PeCDD	0.24	-----	0.160	J	1,2,3,6,7,8-HxCDD-13C	2.00	63
Total PeCDD	1.20	-----	0.160	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	56
					1,2,3,4,7,8,9-HpCDF-13C	2.00	54
1,2,3,4,7,8-HxCDF	-----	0.27	0.074	I	1,2,3,4,6,7,8-HpCDD-13C	2.00	57
1,2,3,6,7,8-HxCDF	0.22	-----	0.059	J	OCDD-13C	4.00	49
2,3,4,6,7,8-HxCDF	-----	0.14	0.048	I			
1,2,3,7,8,9-HxCDF	-----	0.12	0.069	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	2.70	-----	0.063	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.21	-----	0.140	J	2,3,7,8-TCDD-37Cl4	0.20	66
1,2,3,6,7,8-HxCDD	0.41	-----	0.180	J			
1,2,3,7,8,9-HxCDD	0.35	-----	0.140	J			
Total HxCDD	4.80	-----	0.150	J			
1,2,3,4,6,7,8-HpCDF	1.60	-----	0.091	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	-----	0.16	0.100	I	Equivalence: 0.72 ng/Kg		
Total HpCDF	3.60	-----	0.095	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	6.00	-----	0.110				
Total HpCDD	14.00	-----	0.110				
OCDF	2.30	-----	0.088	J			
OCDD	36.00	-----	0.130				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	U73-02		
Lab Sample ID	10140376008		
Filename	U101029A_16		
Injected By	BAL		
Total Amount Extracted	13.4 g	Matrix	Solid
% Moisture	24.6	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	10/09/2010 11:17
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_03	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 02:26

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.087		2,3,7,8-TCDF-13C	2.00	60
Total TCDF	0.28	-----	0.087	J	2,3,7,8-TCDD-13C	2.00	63
					1,2,3,7,8-PeCDF-13C	2.00	58
2,3,7,8-TCDD	0.18	-----	0.130	BJ	2,3,4,7,8-PeCDF-13C	2.00	59
Total TCDD	0.18	-----	0.130	BJ	1,2,3,7,8-PeCDD-13C	2.00	62
					1,2,3,4,7,8-HxCDF-13C	2.00	59
1,2,3,7,8-PeCDF	ND	-----	0.180		1,2,3,6,7,8-HxCDF-13C	2.00	62
2,3,4,7,8-PeCDF	ND	-----	0.190		2,3,4,6,7,8-HxCDF-13C	2.00	60
Total PeCDF	1.90	-----	0.190	J	1,2,3,7,8,9-HxCDF-13C	2.00	62
					1,2,3,4,7,8-HxCDD-13C	2.00	58
1,2,3,7,8-PeCDD	ND	-----	0.190		1,2,3,6,7,8-HxCDD-13C	2.00	67
Total PeCDD	0.34	-----	0.190	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	57
					1,2,3,4,7,8,9-HpCDF-13C	2.00	55
1,2,3,4,7,8-HxCDF	ND	-----	0.100		1,2,3,4,6,7,8-HpCDD-13C	2.00	56
1,2,3,6,7,8-HxCDF	0.15	-----	0.087	J	OCDD-13C	4.00	49
2,3,4,6,7,8-HxCDF	0.11	-----	0.073	J			
1,2,3,7,8,9-HxCDF	ND	-----	0.110		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	2.90	-----	0.092	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.140		2,3,7,8-TCDD-37Cl4	0.20	69
1,2,3,6,7,8-HxCDD	0.38	-----	0.160	J			
1,2,3,7,8,9-HxCDD	0.26	-----	0.160	J			
Total HxCDD	3.60	-----	0.160	J			
1,2,3,4,6,7,8-HpCDF	1.40	-----	0.130	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.087		Equivalence: 0.50 ng/Kg		
Total HpCDF	3.10	-----	0.110	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	5.10	-----	0.150				
Total HpCDD	12.00	-----	0.150				
OCDF	2.00	-----	0.130	J			
OCDD	34.00	-----	0.360				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
B = Less than 10x higher than method blank level

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	V91-01		
Lab Sample ID	10140376009		
Filename	U101030B_07		
Injected By	BAL		
Total Amount Extracted	16.9 g	Matrix	Solid
% Moisture	39.3	Dilution	NA
Dry Weight Extracted	10.2 g	Collected	10/10/2010 01:56
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101030B_01	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/30/2010 21:03

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	1.30	-----	0.160		2,3,7,8-TCDF-13C	2.00	95
Total TCDF	12.00	-----	0.160		2,3,7,8-TCDD-13C	2.00	89
					1,2,3,7,8-PeCDF-13C	2.00	98
2,3,7,8-TCDD	-----	0.16	0.100	I	2,3,4,7,8-PeCDF-13C	2.00	98
Total TCDD	4.60	-----	0.100		1,2,3,7,8-PeCDD-13C	2.00	89
					1,2,3,4,7,8-HxCDF-13C	2.00	102
1,2,3,7,8-PeCDF	1.00	-----	0.150	J	1,2,3,6,7,8-HxCDF-13C	2.00	99
2,3,4,7,8-PeCDF	1.40	-----	0.180	J	2,3,4,6,7,8-HxCDF-13C	2.00	92
Total PeCDF	14.00	-----	0.170		1,2,3,7,8,9-HxCDF-13C	2.00	78
					1,2,3,4,7,8-HxCDD-13C	2.00	91
1,2,3,7,8-PeCDD	1.00	-----	0.360	J	1,2,3,6,7,8-HxCDD-13C	2.00	80
Total PeCDD	8.70	-----	0.360		1,2,3,4,6,7,8-HpCDF-13C	2.00	50
					1,2,3,4,7,8,9-HpCDF-13C	2.00	44
1,2,3,4,7,8-HxCDF	2.60	-----	0.560	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	48
1,2,3,6,7,8-HxCDF	0.89	-----	0.350	J	OCDD-13C	4.00	38
2,3,4,6,7,8-HxCDF	1.60	-----	0.470	J			
1,2,3,7,8,9-HxCDF	0.60	-----	0.330	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	46.00	-----	0.430		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.10	-----	0.350	J	2,3,7,8-TCDD-37Cl4	0.20	86
1,2,3,6,7,8-HxCDD	5.80	-----	0.370				
1,2,3,7,8,9-HxCDD	2.40	-----	0.380	J			
Total HxCDD	60.00	-----	0.370				
1,2,3,4,6,7,8-HpCDF	29.00	-----	0.290		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	1.80	-----	0.480	J	Equivalence: 4.8 ng/Kg		
Total HpCDF	72.00	-----	0.380		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	110.00	-----	0.830				
Total HpCDD	260.00	-----	0.830				
OCDF	43.00	-----	1.300				
OCDD	860.00	-----	0.880				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	CC102-01			
Lab Sample ID	10140376010			
Filename	U101029A_17			
Injected By	BAL			
Total Amount Extracted	14.9 g	Matrix	Solid	
% Moisture	31.7	Dilution	NA	
Dry Weight Extracted	10.2 g	Collected	10/09/2010	11:21
ICAL ID	U100929	Received	10/13/2010	10:00
CCal Filename(s)	U101029A_03	Extracted	10/28/2010	15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010	03:12

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	-----	0.18	0.071	I	2,3,7,8-TCDF-13C	2.00	69
Total TCDF	0.66	-----	0.071	J	2,3,7,8-TCDD-13C	2.00	72
					1,2,3,7,8-PeCDF-13C	2.00	70
2,3,7,8-TCDD	0.14	-----	0.074	BJ	2,3,4,7,8-PeCDF-13C	2.00	71
Total TCDD	0.26	-----	0.074	BJ	1,2,3,7,8-PeCDD-13C	2.00	71
					1,2,3,4,7,8-HxCDF-13C	2.00	72
1,2,3,7,8-PeCDF	0.23	-----	0.120	J	1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	-----	0.21	0.098	I	2,3,4,6,7,8-HxCDF-13C	2.00	76
Total PeCDF	2.30	-----	0.110	J	1,2,3,7,8,9-HxCDF-13C	2.00	80
					1,2,3,4,7,8-HxCDD-13C	2.00	72
1,2,3,7,8-PeCDD	0.21	-----	0.150	J	1,2,3,6,7,8-HxCDD-13C	2.00	80
Total PeCDD	1.40	-----	0.150	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	67
					1,2,3,4,7,8,9-HpCDF-13C	2.00	65
1,2,3,4,7,8-HxCDF	0.28	-----	0.084	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	62
1,2,3,6,7,8-HxCDF	0.15	-----	0.094	J	OCDD-13C	4.00	59
2,3,4,6,7,8-HxCDF	0.23	-----	0.100	J			
1,2,3,7,8,9-HxCDF	ND	-----	0.100		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	4.50	-----	0.097	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.21	-----	0.140	J	2,3,7,8-TCDD-37Cl4	0.20	67
1,2,3,6,7,8-HxCDD	0.44	-----	0.140	J			
1,2,3,7,8,9-HxCDD	0.27	-----	0.150	J			
Total HxCDD	5.50	-----	0.140				
1,2,3,4,6,7,8-HpCDF	1.90	-----	0.080	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.078		Equivalence: 0.65 ng/Kg		
Total HpCDF	4.40	-----	0.079	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	7.60	-----	0.160				
Total HpCDD	18.00	-----	0.160				
OCDF	2.30	-----	0.086	J			
OCDD	44.00	-----	0.220				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	FF110-01		
Lab Sample ID	10140376011		
Filename	U101030A_03		
Injected By	BAL		
Total Amount Extracted	13.8 g	Matrix	Solid
% Moisture	27.2	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	10/09/2010 11:31
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_19	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 07:02

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.16		2,3,7,8-TCDF-13C	2.00	75
Total TCDF	ND	-----	0.16		2,3,7,8-TCDD-13C	2.00	68
					1,2,3,7,8-PeCDF-13C	2.00	71
2,3,7,8-TCDD	ND	-----	0.21		2,3,4,7,8-PeCDF-13C	2.00	72
Total TCDD	ND	-----	0.21		1,2,3,7,8-PeCDD-13C	2.00	63
					1,2,3,4,7,8-HxCDF-13C	2.00	65
1,2,3,7,8-PeCDF	ND	-----	0.25		1,2,3,6,7,8-HxCDF-13C	2.00	71
2,3,4,7,8-PeCDF	ND	-----	0.25		2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	0.50	-----	0.25	J	1,2,3,7,8,9-HxCDF-13C	2.00	73
					1,2,3,4,7,8-HxCDD-13C	2.00	58
1,2,3,7,8-PeCDD	ND	-----	0.38		1,2,3,6,7,8-HxCDD-13C	2.00	66
Total PeCDD	ND	-----	0.38		1,2,3,4,6,7,8-HpCDF-13C	2.00	53
					1,2,3,4,7,8,9-HpCDF-13C	2.00	48
1,2,3,4,7,8-HxCDF	0.26	-----	0.22	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	43
1,2,3,6,7,8-HxCDF	ND	-----	0.22		OCDD-13C	4.00	44
2,3,4,6,7,8-HxCDF	ND	-----	0.17				
1,2,3,7,8,9-HxCDF	ND	-----	0.23		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	2.50	-----	0.21	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.37		2,3,7,8-TCDD-37Cl4	0.20	69
1,2,3,6,7,8-HxCDD	-----	0.27	0.24	I			
1,2,3,7,8,9-HxCDD	ND	-----	0.29				
Total HxCDD	2.00	-----	0.30	J			
1,2,3,4,6,7,8-HpCDF	1.30	-----	0.15	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.20		Equivalence: 0.47 ng/Kg		
Total HpCDF	2.90	-----	0.18	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	4.30	0.41	I			
Total HpCDD	6.80	-----	0.41				
OCDF	1.70	-----	0.35	J			
OCDD	28.00	-----	0.85				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	II118-01		
Lab Sample ID	10140376012		
Filename	U101030B_08		
Injected By	BAL		
Total Amount Extracted	14.9 g	Matrix	Solid
% Moisture	32.3	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	10/09/2010 11:37
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101030B_01	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/30/2010 21:49

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.73	-----	0.058		2,3,7,8-TCDF-13C	2.00	96
Total TCDF	4.70	-----	0.058		2,3,7,8-TCDD-13C	2.00	88
					1,2,3,7,8-PeCDF-13C	2.00	103
2,3,7,8-TCDD	ND	-----	0.140		2,3,4,7,8-PeCDF-13C	2.00	102
Total TCDD	1.20	-----	0.140		1,2,3,7,8-PeCDD-13C	2.00	92
					1,2,3,4,7,8-HxCDF-13C	2.00	100
1,2,3,7,8-PeCDF	0.40	-----	0.110	J	1,2,3,6,7,8-HxCDF-13C	2.00	104
2,3,4,7,8-PeCDF	0.39	-----	0.150	J	2,3,4,6,7,8-HxCDF-13C	2.00	95
Total PeCDF	5.00	-----	0.130		1,2,3,7,8,9-HxCDF-13C	2.00	83
					1,2,3,4,7,8-HxCDD-13C	2.00	83
1,2,3,7,8-PeCDD	0.42	-----	0.190	J	1,2,3,6,7,8-HxCDD-13C	2.00	87
Total PeCDD	3.50	-----	0.190		1,2,3,4,6,7,8-HpCDF-13C	2.00	54
					1,2,3,4,7,8,9-HpCDF-13C	2.00	49
1,2,3,4,7,8-HxCDF	0.94	-----	0.160	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	50
1,2,3,6,7,8-HxCDF	0.41	-----	0.110	J	OCDD-13C	4.00	43
2,3,4,6,7,8-HxCDF	0.63	-----	0.120	J			
1,2,3,7,8,9-HxCDF	ND	-----	0.130		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	12.00	-----	0.130		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.38	-----	0.150	J	2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,6,7,8-HxCDD	2.10	-----	0.270	J			
1,2,3,7,8,9-HxCDD	1.00	-----	0.260	J			
Total HxCDD	23.00	-----	0.230				
1,2,3,4,6,7,8-HpCDF	11.00	-----	0.250		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.170		Equivalence: 1.9 ng/Kg		
Total HpCDF	26.00	-----	0.210		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	42.00	-----	0.590				
Total HpCDD	100.00	-----	0.590				
OCDF	18.00	-----	0.410				
OCDD	350.00	-----	1.200				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a total weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	XX127-01		
Lab Sample ID	10140376013		
Filename	U101030A_04		
Injected By	BAL		
Total Amount Extracted	14.5 g	Matrix	Solid
% Moisture	29.0	Dilution	NA
Dry Weight Extracted	10.3 g	Collected	10/09/2010 11:44
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_19	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 07:48

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.17		2,3,7,8-TCDF-13C	2.00	88
Total TCDF	ND	-----	0.17		2,3,7,8-TCDD-13C	2.00	77
					1,2,3,7,8-PeCDF-13C	2.00	84
2,3,7,8-TCDD	ND	-----	0.19		2,3,4,7,8-PeCDF-13C	2.00	86
Total TCDD	ND	-----	0.19		1,2,3,7,8-PeCDD-13C	2.00	73
					1,2,3,4,7,8-HxCDF-13C	2.00	75
1,2,3,7,8-PeCDF	ND	-----	0.25		1,2,3,6,7,8-HxCDF-13C	2.00	84
2,3,4,7,8-PeCDF	ND	-----	0.28		2,3,4,6,7,8-HxCDF-13C	2.00	84
Total PeCDF	1.20	-----	0.27	J	1,2,3,7,8,9-HxCDF-13C	2.00	88
					1,2,3,4,7,8-HxCDD-13C	2.00	67
1,2,3,7,8-PeCDD	ND	-----	0.45		1,2,3,6,7,8-HxCDD-13C	2.00	79
Total PeCDD	ND	-----	0.45		1,2,3,4,6,7,8-HpCDF-13C	2.00	63
					1,2,3,4,7,8,9-HpCDF-13C	2.00	54
1,2,3,4,7,8-HxCDF	0.25	-----	0.20	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	46
1,2,3,6,7,8-HxCDF	0.24	-----	0.22	J	OCDD-13C	4.00	48
2,3,4,6,7,8-HxCDF	ND	-----	0.13				
1,2,3,7,8,9-HxCDF	ND	-----	0.20		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	2.40	-----	0.19	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.30		2,3,7,8-TCDD-37Cl4	0.20	76
1,2,3,6,7,8-HxCDD	0.49	-----	0.22	J			
1,2,3,7,8,9-HxCDD	0.34	-----	0.25	J			
Total HxCDD	4.40	-----	0.26	J			
1,2,3,4,6,7,8-HpCDF	1.90	-----	0.25	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.38		Equivalence: 0.64 ng/Kg		
Total HpCDF	4.80	-----	0.31	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	6.40	-----	1.00				
Total HpCDD	16.00	-----	1.00				
OCDF	3.90	-----	0.51	J			
OCDD	44.00	-----	0.62				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	LLLL121-01		
Lab Sample ID	10140376014		
Filename	U101030B_09		
Injected By	BAL		
Total Amount Extracted	16.1 g	Matrix	Solid
% Moisture	35.6	Dilution	NA
Dry Weight Extracted	10.4 g	Collected	10/09/2010 11:51
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101030B_01	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/30/2010 22:35

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.74	-----	0.15	J	2,3,7,8-TCDF-13C	2.00	105
Total TCDF	5.80	-----	0.15		2,3,7,8-TCDD-13C	2.00	97
					1,2,3,7,8-PeCDF-13C	2.00	109
2,3,7,8-TCDD	ND	-----	0.18		2,3,4,7,8-PeCDF-13C	2.00	110
Total TCDD	1.10	-----	0.18		1,2,3,7,8-PeCDD-13C	2.00	98
					1,2,3,4,7,8-HxCDF-13C	2.00	113
1,2,3,7,8-PeCDF	0.39	-----	0.19	J	1,2,3,6,7,8-HxCDF-13C	2.00	113
2,3,4,7,8-PeCDF	0.53	-----	0.20	J	2,3,4,6,7,8-HxCDF-13C	2.00	104
Total PeCDF	4.90	-----	0.19		1,2,3,7,8,9-HxCDF-13C	2.00	92
					1,2,3,4,7,8-HxCDD-13C	2.00	93
1,2,3,7,8-PeCDD	ND	-----	0.30		1,2,3,6,7,8-HxCDD-13C	2.00	97
Total PeCDD	2.10	-----	0.30	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	62
					1,2,3,4,7,8,9-HpCDF-13C	2.00	55
1,2,3,4,7,8-HxCDF	0.89	-----	0.36	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	58
1,2,3,6,7,8-HxCDF	0.69	-----	0.36	J	OCDD-13C	4.00	47
2,3,4,6,7,8-HxCDF	0.63	-----	0.38	J			
1,2,3,7,8,9-HxCDF	0.35	-----	0.31	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	11.00	-----	0.35		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	-----	0.59	0.49	I	2,3,7,8-TCDD-37Cl4	0.20	97
1,2,3,6,7,8-HxCDD	1.60	-----	0.51	J			
1,2,3,7,8,9-HxCDD	1.00	-----	0.30	J			
Total HxCDD	23.00	-----	0.44				
1,2,3,4,6,7,8-HpCDF	8.50	-----	0.24		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.37		Equivalence: 1.6 ng/Kg		
Total HpCDF	20.00	-----	0.31		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	38.00	-----	0.62				
Total HpCDD	92.00	-----	0.62				
OCDF	14.00	-----	0.71				
OCDD	300.00	-----	1.20				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	OOOO123-01		
Lab Sample ID	10140376015		
Filename	U101030B_10		
Injected By	BAL		
Total Amount Extracted	13.2 g	Matrix	Solid
% Moisture	22.8	Dilution	NA
Dry Weight Extracted	10.2 g	Collected	10/10/2010 12:05
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101030B_01	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/30/2010 23:21

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.19	-----	0.13	J	2,3,7,8-TCDF-13C	2.00	101
Total TCDF	1.60	-----	0.13		2,3,7,8-TCDD-13C	2.00	90
					1,2,3,7,8-PeCDF-13C	2.00	108
2,3,7,8-TCDD	ND	-----	0.19		2,3,4,7,8-PeCDF-13C	2.00	106
Total TCDD	ND	-----	0.19		1,2,3,7,8-PeCDD-13C	2.00	94
					1,2,3,4,7,8-HxCDF-13C	2.00	102
1,2,3,7,8-PeCDF	0.19	-----	0.12	J	1,2,3,6,7,8-HxCDF-13C	2.00	108
2,3,4,7,8-PeCDF	0.24	-----	0.15	J	2,3,4,6,7,8-HxCDF-13C	2.00	99
Total PeCDF	2.10	-----	0.14	J	1,2,3,7,8,9-HxCDF-13C	2.00	87
					1,2,3,4,7,8-HxCDD-13C	2.00	82
1,2,3,7,8-PeCDD	0.30	-----	0.26	J	1,2,3,6,7,8-HxCDD-13C	2.00	88
Total PeCDD	1.90	-----	0.26	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	54
					1,2,3,4,7,8,9-HpCDF-13C	2.00	49
1,2,3,4,7,8-HxCDF	0.25	-----	0.19	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	49
1,2,3,6,7,8-HxCDF	ND	-----	0.20		OCDD-13C	4.00	44
2,3,4,6,7,8-HxCDF	ND	-----	0.19				
1,2,3,7,8,9-HxCDF	ND	-----	0.18		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	3.70	-----	0.19	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.35	-----	0.34	J	2,3,7,8-TCDD-37Cl4	0.20	91
1,2,3,6,7,8-HxCDD	0.68	-----	0.28	J			
1,2,3,7,8,9-HxCDD	0.43	-----	0.26	J			
Total HxCDD	9.30	-----	0.29				
1,2,3,4,6,7,8-HpCDF	2.50	-----	0.26	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.32		Equivalence: 0.86 ng/Kg		
Total HpCDF	6.00	-----	0.29		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	12.00	-----	0.40				
Total HpCDD	31.00	-----	0.40				
OCDF	4.10	-----	0.40	J			
OCDD	92.00	-----	0.99				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	CCCC131-01		
Lab Sample ID	10140376016		
Filename	U101030B_11		
Injected By	BAL		
Total Amount Extracted	15.8 g	Matrix	Solid
% Moisture	34.0	Dilution	NA
Dry Weight Extracted	10.5 g	Collected	10/10/2010 12:11
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101030B_01	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/31/2010 00:07

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.74	-----	0.10	J	2,3,7,8-TCDF-13C	2.00	106
Total TCDF	6.40	-----	0.10		2,3,7,8-TCDD-13C	2.00	95
					1,2,3,7,8-PeCDF-13C	2.00	110
2,3,7,8-TCDD	ND	-----	0.18		2,3,4,7,8-PeCDF-13C	2.00	110
Total TCDD	1.00	-----	0.18		1,2,3,7,8-PeCDD-13C	2.00	95
					1,2,3,4,7,8-HxCDF-13C	2.00	106
1,2,3,7,8-PeCDF	0.51	-----	0.21	J	1,2,3,6,7,8-HxCDF-13C	2.00	110
2,3,4,7,8-PeCDF	0.56	-----	0.24	J	2,3,4,6,7,8-HxCDF-13C	2.00	102
Total PeCDF	5.50	-----	0.22		1,2,3,7,8,9-HxCDF-13C	2.00	91
					1,2,3,4,7,8-HxCDD-13C	2.00	90
1,2,3,7,8-PeCDD	0.57	-----	0.38	J	1,2,3,6,7,8-HxCDD-13C	2.00	92
Total PeCDD	4.50	-----	0.38	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	59
					1,2,3,4,7,8,9-HpCDF-13C	2.00	53
1,2,3,4,7,8-HxCDF	1.00	-----	0.24	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	54
1,2,3,6,7,8-HxCDF	0.63	-----	0.28	J	OCDD-13C	4.00	49
2,3,4,6,7,8-HxCDF	-----	0.45	0.21	I			
1,2,3,7,8,9-HxCDF	0.33	-----	0.24	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	20.00	-----	0.24		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.66	-----	0.28	J	2,3,7,8-TCDD-37Cl4	0.20	90
1,2,3,6,7,8-HxCDD	2.30	-----	0.24	J			
1,2,3,7,8,9-HxCDD	1.10	-----	0.33	J			
Total HxCDD	25.00	-----	0.28				
1,2,3,4,6,7,8-HpCDF	10.00	-----	0.35		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.48		Equivalence: 2.2 ng/Kg		
Total HpCDF	24.00	-----	0.41		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	44.00	-----	0.66				
Total HpCDD	100.00	-----	0.66				
OCDF	16.00	-----	0.65				
OCDD	330.00	-----	1.40				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	IIII142-01		
Lab Sample ID	10140376017		
Filename	U101030B_12		
Injected By	BAL		
Total Amount Extracted	15.6 g	Matrix	Solid
% Moisture	32.0	Dilution	NA
Dry Weight Extracted	10.6 g	Collected	10/10/2010 12:16
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101030B_01	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/31/2010 00:53

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.95	-----	0.15		2,3,7,8-TCDF-13C	2.00	101
Total TCDF	4.90	-----	0.15		2,3,7,8-TCDD-13C	2.00	93
					1,2,3,7,8-PeCDF-13C	2.00	107
2,3,7,8-TCDD	ND	-----	0.25		2,3,4,7,8-PeCDF-13C	2.00	108
Total TCDD	1.50	-----	0.25		1,2,3,7,8-PeCDD-13C	2.00	95
					1,2,3,4,7,8-HxCDF-13C	2.00	103
1,2,3,7,8-PeCDF	0.55	-----	0.22	J	1,2,3,6,7,8-HxCDF-13C	2.00	104
2,3,4,7,8-PeCDF	0.70	-----	0.28	J	2,3,4,6,7,8-HxCDF-13C	2.00	97
Total PeCDF	5.50	-----	0.25		1,2,3,7,8,9-HxCDF-13C	2.00	84
					1,2,3,4,7,8-HxCDD-13C	2.00	100
1,2,3,7,8-PeCDD	0.81	-----	0.37	J	1,2,3,6,7,8-HxCDD-13C	2.00	79
Total PeCDD	6.60	-----	0.37		1,2,3,4,6,7,8-HpCDF-13C	2.00	56
					1,2,3,4,7,8,9-HpCDF-13C	2.00	49
1,2,3,4,7,8-HxCDF	1.00	-----	0.48	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	52
1,2,3,6,7,8-HxCDF	0.79	-----	0.46	J	OCDD-13C	4.00	43
2,3,4,6,7,8-HxCDF	0.90	-----	0.37	J			
1,2,3,7,8,9-HxCDF	ND	-----	0.35		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	19.00	-----	0.41		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.87	-----	0.64	J	2,3,7,8-TCDD-37Cl4	0.20	93
1,2,3,6,7,8-HxCDD	2.60	-----	0.49	J			
1,2,3,7,8,9-HxCDD	1.90	-----	0.30	J			
Total HxCDD	37.00	-----	0.47				
1,2,3,4,6,7,8-HpCDF	9.30	-----	0.48		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.56		Equivalence: 2.8 ng/Kg		
Total HpCDF	21.00	-----	0.52		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	50.00	-----	0.67				
Total HpCDD	120.00	-----	0.67				
OCDF	13.00	-----	0.99				
OCDD	340.00	-----	1.20				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	ZZZZ144-01		
Lab Sample ID	10140376018		
Filename	U101030A_05		
Injected By	BAL		
Total Amount Extracted	13.4 g	Matrix	Solid
% Moisture	24.2	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	10/10/2010 12:19
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_19	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 08:34

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.10		2,3,7,8-TCDF-13C	2.00	83
Total TCDF	0.61	-----	0.10	J	2,3,7,8-TCDD-13C	2.00	69
					1,2,3,7,8-PeCDF-13C	2.00	70
2,3,7,8-TCDD	ND	-----	0.13		2,3,4,7,8-PeCDF-13C	2.00	69
Total TCDD	ND	-----	0.13		1,2,3,7,8-PeCDD-13C	2.00	56
					1,2,3,4,7,8-HxCDF-13C	2.00	64
1,2,3,7,8-PeCDF	ND	-----	0.15		1,2,3,6,7,8-HxCDF-13C	2.00	75
2,3,4,7,8-PeCDF	ND	-----	0.20		2,3,4,6,7,8-HxCDF-13C	2.00	72
Total PeCDF	0.54	-----	0.17	J	1,2,3,7,8,9-HxCDF-13C	2.00	78
					1,2,3,4,7,8-HxCDD-13C	2.00	57
1,2,3,7,8-PeCDD	ND	-----	0.26		1,2,3,6,7,8-HxCDD-13C	2.00	66
Total PeCDD	ND	-----	0.26		1,2,3,4,6,7,8-HpCDF-13C	2.00	52
					1,2,3,4,7,8,9-HpCDF-13C	2.00	47
1,2,3,4,7,8-HxCDF	ND	-----	0.18		1,2,3,4,6,7,8-HpCDD-13C	2.00	40
1,2,3,6,7,8-HxCDF	ND	-----	0.17		OCDD-13C	4.00	45
2,3,4,6,7,8-HxCDF	ND	-----	0.16				
1,2,3,7,8,9-HxCDF	ND	-----	0.16		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	1.20	-----	0.17	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.27		2,3,7,8-TCDD-37Cl4	0.20	72
1,2,3,6,7,8-HxCDD	ND	-----	0.35				
1,2,3,7,8,9-HxCDD	ND	-----	0.29				
Total HxCDD	2.70	-----	0.30	J			
1,2,3,4,6,7,8-HpCDF	1.00	-----	0.17	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.36		Equivalence: 0.37 ng/Kg		
Total HpCDF	2.30	-----	0.27	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	3.90	-----	0.29	J			
Total HpCDD	9.40	-----	0.29				
OCDF	1.30	-----	0.26	J			
OCDD	22.00	-----	0.50				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	OOO148-01		
Lab Sample ID	10140376019		
Filename	U101030B_13		
Injected By	BAL		
Total Amount Extracted	16.1 g	Matrix	Solid
% Moisture	37.6	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	10/10/2010 12:23
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101030B_01	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/31/2010 01:38

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	1.20	-----	0.21		2,3,7,8-TCDF-13C	2.00	102
Total TCDF	12.00	-----	0.21		2,3,7,8-TCDD-13C	2.00	93
					1,2,3,7,8-PeCDF-13C	2.00	107
2,3,7,8-TCDD	0.25	-----	0.22	J	2,3,4,7,8-PeCDF-13C	2.00	108
Total TCDD	3.30	-----	0.22		1,2,3,7,8-PeCDD-13C	2.00	97
					1,2,3,4,7,8-HxCDF-13C	2.00	109
1,2,3,7,8-PeCDF	0.81	-----	0.18	J	1,2,3,6,7,8-HxCDF-13C	2.00	103
2,3,4,7,8-PeCDF	1.10	-----	0.33	J	2,3,4,6,7,8-HxCDF-13C	2.00	99
Total PeCDF	11.00	-----	0.25		1,2,3,7,8,9-HxCDF-13C	2.00	87
					1,2,3,4,7,8-HxCDD-13C	2.00	101
1,2,3,7,8-PeCDD	0.90	-----	0.36	J	1,2,3,6,7,8-HxCDD-13C	2.00	81
Total PeCDD	8.90	-----	0.36		1,2,3,4,6,7,8-HpCDF-13C	2.00	57
					1,2,3,4,7,8,9-HpCDF-13C	2.00	51
1,2,3,4,7,8-HxCDF	1.80	-----	0.36	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	53
1,2,3,6,7,8-HxCDF	1.40	-----	0.32	J	OCDD-13C	4.00	46
2,3,4,6,7,8-HxCDF	1.40	-----	0.42	J			
1,2,3,7,8,9-HxCDF	ND	-----	0.43		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	23.00	-----	0.38		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.20	-----	0.50	J	2,3,7,8-TCDD-37Cl4	0.20	86
1,2,3,6,7,8-HxCDD	3.90	-----	0.52	J			
1,2,3,7,8,9-HxCDD	2.20	-----	0.52	J			
Total HxCDD	43.00	-----	0.51				
1,2,3,4,6,7,8-HpCDF	18.00	-----	0.31		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.49		Equivalence: 3.9 ng/Kg		
Total HpCDF	44.00	-----	0.40		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	73.00	-----	0.87				
Total HpCDD	170.00	-----	0.87				
OCDF	29.00	-----	1.40				
OCDD	540.00	-----	2.00				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	RRR159-01		
Lab Sample ID	10140376020		
Filename	U101030A_06		
Injected By	BAL		
Total Amount Extracted	14.1 g	Matrix	Solid
% Moisture	27.5	Dilution	NA
Dry Weight Extracted	10.2 g	Collected	10/10/2010 12:27
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_19	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 09:20

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.17		2,3,7,8-TCDF-13C	2.00	97
Total TCDF	1.70	-----	0.17		2,3,7,8-TCDD-13C	2.00	75
					1,2,3,7,8-PeCDF-13C	2.00	100
2,3,7,8-TCDD	ND	-----	0.18		2,3,4,7,8-PeCDF-13C	2.00	99
Total TCDD	ND	-----	0.18		1,2,3,7,8-PeCDD-13C	2.00	79
					1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	0.51	-----	0.28	J	1,2,3,6,7,8-HxCDF-13C	2.00	93
2,3,4,7,8-PeCDF	0.36	-----	0.32	J	2,3,4,6,7,8-HxCDF-13C	2.00	93
Total PeCDF	5.80	-----	0.30		1,2,3,7,8,9-HxCDF-13C	2.00	94
					1,2,3,4,7,8-HxCDD-13C	2.00	65
1,2,3,7,8-PeCDD	ND	-----	0.35		1,2,3,6,7,8-HxCDD-13C	2.00	84
Total PeCDD	ND	-----	0.35		1,2,3,4,6,7,8-HpCDF-13C	2.00	58
					1,2,3,4,7,8,9-HpCDF-13C	2.00	52
1,2,3,4,7,8-HxCDF	0.48	-----	0.27	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	40
1,2,3,6,7,8-HxCDF	0.38	-----	0.26	J	OCDD-13C	4.00	51
2,3,4,6,7,8-HxCDF	ND	-----	0.24				
1,2,3,7,8,9-HxCDF	ND	-----	0.26		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	6.30	-----	0.26		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.34		2,3,7,8-TCDD-37Cl4	0.20	76
1,2,3,6,7,8-HxCDD	0.64	-----	0.28	J			
1,2,3,7,8,9-HxCDD	ND	-----	0.39				
Total HxCDD	5.80	-----	0.33				
1,2,3,4,6,7,8-HpCDF	2.70	-----	0.23	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.27		Equivalence: 0.76 ng/Kg		
Total HpCDF	6.40	-----	0.25		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	11.00	-----	0.49				
Total HpCDD	27.00	-----	0.49				
OCDF	4.40	-----	0.30	J			
OCDD	68.00	-----	1.20				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	ZZZ157-01		
Lab Sample ID	10140376021		
Filename	U101030B_14		
Injected By	BAL		
Total Amount Extracted	14.7 g	Matrix	Solid
% Moisture	30.0	Dilution	NA
Dry Weight Extracted	10.3 g	Collected	10/10/2010 12:31
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101030B_01	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/31/2010 01:24

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.75	-----	0.14	J	2,3,7,8-TCDF-13C	2.00	101
Total TCDF	5.10	-----	0.14		2,3,7,8-TCDD-13C	2.00	91
					1,2,3,7,8-PeCDF-13C	2.00	107
2,3,7,8-TCDD	ND	-----	0.19		2,3,4,7,8-PeCDF-13C	2.00	107
Total TCDD	ND	-----	0.19		1,2,3,7,8-PeCDD-13C	2.00	95
					1,2,3,4,7,8-HxCDF-13C	2.00	107
1,2,3,7,8-PeCDF	0.46	-----	0.15	J	1,2,3,6,7,8-HxCDF-13C	2.00	108
2,3,4,7,8-PeCDF	0.57	-----	0.21	J	2,3,4,6,7,8-HxCDF-13C	2.00	99
Total PeCDF	4.50	-----	0.18	J	1,2,3,7,8,9-HxCDF-13C	2.00	86
					1,2,3,4,7,8-HxCDD-13C	2.00	87
1,2,3,7,8-PeCDD	0.67	-----	0.30	J	1,2,3,6,7,8-HxCDD-13C	2.00	93
Total PeCDD	5.70	-----	0.30		1,2,3,4,6,7,8-HpCDF-13C	2.00	57
					1,2,3,4,7,8,9-HpCDF-13C	2.00	51
1,2,3,4,7,8-HxCDF	1.00	-----	0.37	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	53
1,2,3,6,7,8-HxCDF	0.64	-----	0.35	J	OCDD-13C	4.00	45
2,3,4,6,7,8-HxCDF	0.68	-----	0.22	J			
1,2,3,7,8,9-HxCDF	0.51	-----	0.31	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	15.00	-----	0.31		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.64	-----	0.36	J	2,3,7,8-TCDD-37Cl4	0.20	89
1,2,3,6,7,8-HxCDD	2.00	-----	0.39	J			
1,2,3,7,8,9-HxCDD	0.98	-----	0.59	J			
Total HxCDD	27.00	-----	0.45				
1,2,3,4,6,7,8-HpCDF	20.00	-----	0.40		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.47		Equivalence: 2.4 ng/Kg		
Total HpCDF	38.00	-----	0.43		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	45.00	-----	0.83				
Total HpCDD	110.00	-----	0.83				
OCDF	23.00	-----	1.00				
OCDD	360.00	-----	1.20				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	CCCC165-01		
Lab Sample ID	10140376022		
Filename	U101030A_07		
Injected By	BAL		
Total Amount Extracted	14.3 g	Matrix	Solid
% Moisture	29.0	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	10/10/2010 12:55
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_19	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 10:05

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.19		2,3,7,8-TCDF-13C	2.00	92
Total TCDF	1.30	-----	0.19		2,3,7,8-TCDD-13C	2.00	71
					1,2,3,7,8-PeCDF-13C	2.00	93
2,3,7,8-TCDD	ND	-----	0.29		2,3,4,7,8-PeCDF-13C	2.00	93
Total TCDD	ND	-----	0.29		1,2,3,7,8-PeCDD-13C	2.00	70
					1,2,3,4,7,8-HxCDF-13C	2.00	85
1,2,3,7,8-PeCDF	0.32	-----	0.31	J	1,2,3,6,7,8-HxCDF-13C	2.00	94
2,3,4,7,8-PeCDF	ND	-----	0.32		2,3,4,6,7,8-HxCDF-13C	2.00	94
Total PeCDF	1.00	-----	0.32	J	1,2,3,7,8,9-HxCDF-13C	2.00	100
					1,2,3,4,7,8-HxCDD-13C	2.00	62
1,2,3,7,8-PeCDD	ND	-----	0.52		1,2,3,6,7,8-HxCDD-13C	2.00	83
Total PeCDD	ND	-----	0.52		1,2,3,4,6,7,8-HpCDF-13C	2.00	53
					1,2,3,4,7,8,9-HpCDF-13C	2.00	53
1,2,3,4,7,8-HxCDF	ND	-----	0.28		1,2,3,4,6,7,8-HpCDD-13C	2.00	36
1,2,3,6,7,8-HxCDF	ND	-----	0.33		OCDD-13C	4.00	50
2,3,4,6,7,8-HxCDF	ND	-----	0.26				
1,2,3,7,8,9-HxCDF	ND	-----	0.21		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	3.70	-----	0.27	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.54		2,3,7,8-TCDD-37Cl4	0.20	72
1,2,3,6,7,8-HxCDD	0.55	-----	0.44	J			
1,2,3,7,8,9-HxCDD	-----	0.37	0.37	I			
Total HxCDD	4.50	-----	0.45	J			
1,2,3,4,6,7,8-HpCDF	-----	1.60	0.35	I	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.52		Equivalence: 0.71 ng/Kg		
Total HpCDF	2.00	-----	0.44	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	6.60	-----	0.87				
Total HpCDD	16.00	-----	0.87				
OCDF	1.90	-----	0.45	J			
OCDD	34.00	-----	1.10				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	KKKK159-01		
Lab Sample ID	10140376023		
Filename	U101030B_15		
Injected By	BAL		
Total Amount Extracted	14.3 g	Matrix	Solid
% Moisture	29.3	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	10/10/2010 12:44
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101030B_01	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/31/2010 02:10

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.71	-----	0.10	J	2,3,7,8-TCDF-13C	2.00	92
Total TCDF	2.70	-----	0.10		2,3,7,8-TCDD-13C	2.00	81
					1,2,3,7,8-PeCDF-13C	2.00	96
2,3,7,8-TCDD	ND	-----	0.18		2,3,4,7,8-PeCDF-13C	2.00	95
Total TCDD	ND	-----	0.18		1,2,3,7,8-PeCDD-13C	2.00	84
					1,2,3,4,7,8-HxCDF-13C	2.00	95
1,2,3,7,8-PeCDF	0.29	-----	0.23	J	1,2,3,6,7,8-HxCDF-13C	2.00	99
2,3,4,7,8-PeCDF	0.47	-----	0.23	J	2,3,4,6,7,8-HxCDF-13C	2.00	88
Total PeCDF	3.20	-----	0.23	J	1,2,3,7,8,9-HxCDF-13C	2.00	79
					1,2,3,4,7,8-HxCDD-13C	2.00	81
1,2,3,7,8-PeCDD	0.57	-----	0.25	J	1,2,3,6,7,8-HxCDD-13C	2.00	81
Total PeCDD	3.40	-----	0.25	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	51
					1,2,3,4,7,8,9-HpCDF-13C	2.00	47
1,2,3,4,7,8-HxCDF	0.67	-----	0.32	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	47
1,2,3,6,7,8-HxCDF	0.51	-----	0.36	J	OCDD-13C	4.00	40
2,3,4,6,7,8-HxCDF	0.62	-----	0.28	J			
1,2,3,7,8,9-HxCDF	ND	-----	0.38		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	12.00	-----	0.34		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.40	-----	0.40	J	2,3,7,8-TCDD-37Cl4	0.20	78
1,2,3,6,7,8-HxCDD	1.60	-----	0.34	J			
1,2,3,7,8,9-HxCDD	1.20	-----	0.47	J			
Total HxCDD	21.00	-----	0.40				
1,2,3,4,6,7,8-HpCDF	6.10	-----	0.22		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.49		Equivalence: 1.9 ng/Kg		
Total HpCDF	14.00	-----	0.36		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	35.00	-----	0.70				
Total HpCDD	83.00	-----	0.70				
OCDF	10.00	-----	0.76				
OCDD	260.00	-----	1.40				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	UUU169-01		
Lab Sample ID	10140376024		
Filename	U101030A_08		
Injected By	BAL		
Total Amount Extracted	14.1 g	Matrix	Solid
% Moisture	28.9	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	10/10/2010 12:59
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_19	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 10:51

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.19		2,3,7,8-TCDF-13C	2.00	94
Total TCDF	0.86	-----	0.19	J	2,3,7,8-TCDD-13C	2.00	69
					1,2,3,7,8-PeCDF-13C	2.00	99
2,3,7,8-TCDD	ND	-----	0.32		2,3,4,7,8-PeCDF-13C	2.00	100
Total TCDD	ND	-----	0.32		1,2,3,7,8-PeCDD-13C	2.00	75
					1,2,3,4,7,8-HxCDF-13C	2.00	90
1,2,3,7,8-PeCDF	0.36	-----	0.30	J	1,2,3,6,7,8-HxCDF-13C	2.00	99
2,3,4,7,8-PeCDF	ND	-----	0.33		2,3,4,6,7,8-HxCDF-13C	2.00	100
Total PeCDF	3.20	-----	0.31	J	1,2,3,7,8,9-HxCDF-13C	2.00	104
					1,2,3,4,7,8-HxCDD-13C	2.00	65
1,2,3,7,8-PeCDD	ND	-----	0.45		1,2,3,6,7,8-HxCDD-13C	2.00	86
Total PeCDD	0.90	-----	0.45	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	53
					1,2,3,4,7,8,9-HpCDF-13C	2.00	50
1,2,3,4,7,8-HxCDF	ND	-----	0.33		1,2,3,4,6,7,8-HpCDD-13C	2.00	34
1,2,3,6,7,8-HxCDF	ND	-----	0.25		OCDD-13C	4.00	50
2,3,4,6,7,8-HxCDF	ND	-----	0.29				
1,2,3,7,8,9-HxCDF	ND	-----	0.21		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	3.40	-----	0.27	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.38		2,3,7,8-TCDD-37Cl4	0.20	75
1,2,3,6,7,8-HxCDD	0.65	-----	0.35	J			
1,2,3,7,8,9-HxCDD	0.41	-----	0.30	J			
Total HxCDD	6.10	-----	0.35				
1,2,3,4,6,7,8-HpCDF	2.20	-----	0.28	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.49		Equivalence: 0.76 ng/Kg		
Total HpCDF	4.80	-----	0.38	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	8.40	-----	0.98				
Total HpCDD	20.00	-----	0.98				
OCDF	2.90	-----	0.19	J			
OCDD	45.00	-----	0.77				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	AAAA175-01		
Lab Sample ID	10140376025		
Filename	U101030A_09		
Injected By	BAL		
Total Amount Extracted	14.8 g	Matrix	Solid
% Moisture	28.5	Dilution	NA
Dry Weight Extracted	10.6 g	Collected	10/10/2010 01:04
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_19	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 11:37

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.25		2,3,7,8-TCDF-13C	2.00	76
Total TCDF	0.53	-----	0.25	J	2,3,7,8-TCDD-13C	2.00	55
					1,2,3,7,8-PeCDF-13C	2.00	68
2,3,7,8-TCDD	ND	-----	0.26		2,3,4,7,8-PeCDF-13C	2.00	68
Total TCDD	ND	-----	0.26		1,2,3,7,8-PeCDD-13C	2.00	50
					1,2,3,4,7,8-HxCDF-13C	2.00	72
1,2,3,7,8-PeCDF	-----	0.34	0.30	I	1,2,3,6,7,8-HxCDF-13C	2.00	81
2,3,4,7,8-PeCDF	ND	-----	0.54		2,3,4,6,7,8-HxCDF-13C	2.00	80
Total PeCDF	5.30	-----	0.42		1,2,3,7,8,9-HxCDF-13C	2.00	81
					1,2,3,4,7,8-HxCDD-13C	2.00	54
1,2,3,7,8-PeCDD	ND	-----	0.71		1,2,3,6,7,8-HxCDD-13C	2.00	64
Total PeCDD	ND	-----	0.71		1,2,3,4,6,7,8-HpCDF-13C	2.00	39
					1,2,3,4,7,8,9-HpCDF-13C	2.00	37
1,2,3,4,7,8-HxCDF	ND	-----	0.38		1,2,3,4,6,7,8-HpCDD-13C	2.00	26
1,2,3,6,7,8-HxCDF	ND	-----	0.27		OCDD-13C	4.00	37
2,3,4,6,7,8-HxCDF	0.26	-----	0.25	J			
1,2,3,7,8,9-HxCDF	ND	-----	0.28		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	5.00	-----	0.30		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.55		2,3,7,8-TCDD-37Cl4	0.20	54
1,2,3,6,7,8-HxCDD	-----	0.65	0.54	I			
1,2,3,7,8,9-HxCDD	ND	-----	0.40				
Total HxCDD	5.70	-----	0.50				
1,2,3,4,6,7,8-HpCDF	1.90	-----	0.41	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.52		Equivalence: 0.84 ng/Kg		
Total HpCDF	4.30	-----	0.46	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	7.80	-----	0.86				
Total HpCDD	20.00	-----	0.86				
OCDF	2.50	-----	0.44	J			
OCDD	45.00	-----	1.20				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	RRR181-01		
Lab Sample ID	10140376026		
Filename	F101030B_11		
Injected By	BAL		
Total Amount Extracted	14.7 g	Matrix	Solid
% Moisture	30.7	Dilution	NA
Dry Weight Extracted	10.2 g	Collected	10/10/2010 01:08
ICAL ID	F101012	Received	10/13/2010 10:00
CCal Filename(s)	F101030B_03	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/31/2010 00:15

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.72	-----	0.28	J	2,3,7,8-TCDF-13C	2.00	80
Total TCDF	4.50	-----	0.28		2,3,7,8-TCDD-13C	2.00	93
					1,2,3,7,8-PeCDF-13C	2.00	89
2,3,7,8-TCDD	ND	-----	0.47		2,3,4,7,8-PeCDF-13C	2.00	91
Total TCDD	0.75	-----	0.47	J	1,2,3,7,8-PeCDD-13C	2.00	114
					1,2,3,4,7,8-HxCDF-13C	2.00	85
1,2,3,7,8-PeCDF	ND	-----	0.33		1,2,3,6,7,8-HxCDF-13C	2.00	81
2,3,4,7,8-PeCDF	0.57	-----	0.19	J	2,3,4,6,7,8-HxCDF-13C	2.00	77
Total PeCDF	6.00	-----	0.26		1,2,3,7,8,9-HxCDF-13C	2.00	83
					1,2,3,4,7,8-HxCDD-13C	2.00	95
1,2,3,7,8-PeCDD	0.49	-----	0.29	J	1,2,3,6,7,8-HxCDD-13C	2.00	84
Total PeCDD	2.90	-----	0.29	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	62
					1,2,3,4,7,8,9-HpCDF-13C	2.00	63
1,2,3,4,7,8-HxCDF	0.89	-----	0.54	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	57
1,2,3,6,7,8-HxCDF	-----	0.64	0.44	I	OCDD-13C	4.00	63
2,3,4,6,7,8-HxCDF	0.89	-----	0.47	J			
1,2,3,7,8,9-HxCDF	ND	-----	0.61		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	10.00	-----	0.51		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.61		2,3,7,8-TCDD-37Cl4	0.20	89
1,2,3,6,7,8-HxCDD	2.00	-----	0.56	J			
1,2,3,7,8,9-HxCDD	0.99	-----	0.41	J			
Total HxCDD	23.00	-----	0.52				
1,2,3,4,6,7,8-HpCDF	11.00	-----	0.28		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.24		Equivalence: 2.2 ng/Kg		
Total HpCDF	25.00	-----	0.26		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	48.00	-----	0.68				
Total HpCDD	120.00	-----	0.68				
OCDF	19.00	-----	1.20				
OCDD	340.00	-----	1.60				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	RRR181-02		
Lab Sample ID	10140376027		
Filename	F101030B_12		
Injected By	BAL		
Total Amount Extracted	15.5 g	Matrix	Solid
% Moisture	30.2	Dilution	NA
Dry Weight Extracted	10.8 g	Collected	10/10/2010 01:11
ICAL ID	F101012	Received	10/13/2010 10:00
CCal Filename(s)	F101030B_03	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/31/2010 01:01

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.64	-----	0.29	J	2,3,7,8-TCDF-13C	2.00	77
Total TCDF	6.10	-----	0.29		2,3,7,8-TCDD-13C	2.00	91
					1,2,3,7,8-PeCDF-13C	2.00	85
2,3,7,8-TCDD	ND	-----	0.32		2,3,4,7,8-PeCDF-13C	2.00	87
Total TCDD	0.79	-----	0.32	J	1,2,3,7,8-PeCDD-13C	2.00	106
					1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	0.59	-----	0.34	J	1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	0.62	-----	0.28	J	2,3,4,6,7,8-HxCDF-13C	2.00	77
Total PeCDF	8.50	-----	0.31		1,2,3,7,8,9-HxCDF-13C	2.00	81
					1,2,3,4,7,8-HxCDD-13C	2.00	100
1,2,3,7,8-PeCDD	0.54	-----	0.28	J	1,2,3,6,7,8-HxCDD-13C	2.00	78
Total PeCDD	3.60	-----	0.28	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	56
					1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	1.30	-----	0.63	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	55
1,2,3,6,7,8-HxCDF	1.10	-----	0.66	J	OCDD-13C	4.00	56
2,3,4,6,7,8-HxCDF	ND	-----	0.66				
1,2,3,7,8,9-HxCDF	ND	-----	0.47		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	13.00	-----	0.61		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.67		2,3,7,8-TCDD-37Cl4	0.20	88
1,2,3,6,7,8-HxCDD	2.70	-----	0.72	J			
1,2,3,7,8,9-HxCDD	-----	1.3	0.55	I			
Total HxCDD	25.00	-----	0.64				
1,2,3,4,6,7,8-HpCDF	15.00	-----	0.44		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.33		Equivalence: 2.5 ng/Kg		
Total HpCDF	35.00	-----	0.39		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	58.00	-----	0.74				
Total HpCDD	140.00	-----	0.74				
OCDF	26.00	-----	1.10				
OCDD	460.00	-----	2.70				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	QQQQ184-01		
Lab Sample ID	10140376028		
Filename	F101030B_13		
Injected By	BAL		
Total Amount Extracted	15.4 g	Matrix	Solid
% Moisture	33.6	Dilution	NA
Dry Weight Extracted	10.2 g	Collected	10/10/2010 01:41
ICAL ID	F101012	Received	10/13/2010 10:00
CCal Filename(s)	F101030B_03	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/31/2010 01:47

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.73	-----	0.39	J	2,3,7,8-TCDF-13C	2.00	76
Total TCDF	3.00	-----	0.39		2,3,7,8-TCDD-13C	2.00	89
					1,2,3,7,8-PeCDF-13C	2.00	80
2,3,7,8-TCDD	ND	-----	0.27		2,3,4,7,8-PeCDF-13C	2.00	80
Total TCDD	ND	-----	0.27		1,2,3,7,8-PeCDD-13C	2.00	102
					1,2,3,4,7,8-HxCDF-13C	2.00	83
1,2,3,7,8-PeCDF	-----	0.38	0.34	I	1,2,3,6,7,8-HxCDF-13C	2.00	76
2,3,4,7,8-PeCDF	0.62	-----	0.26	J	2,3,4,6,7,8-HxCDF-13C	2.00	75
Total PeCDF	6.20	-----	0.30		1,2,3,7,8,9-HxCDF-13C	2.00	78
					1,2,3,4,7,8-HxCDD-13C	2.00	94
1,2,3,7,8-PeCDD	0.70	-----	0.35	J	1,2,3,6,7,8-HxCDD-13C	2.00	75
Total PeCDD	3.20	-----	0.35	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	54
					1,2,3,4,7,8,9-HpCDF-13C	2.00	52
1,2,3,4,7,8-HxCDF	-----	0.79	0.50	I	1,2,3,4,6,7,8-HpCDD-13C	2.00	50
1,2,3,6,7,8-HxCDF	-----	0.66	0.52	I	OCDD-13C	4.00	49
2,3,4,6,7,8-HxCDF	ND	-----	0.52				
1,2,3,7,8,9-HxCDF	ND	-----	0.39		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	8.00	-----	0.48		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.56		2,3,7,8-TCDD-37Cl4	0.20	89
1,2,3,6,7,8-HxCDD	2.40	-----	0.45	J			
1,2,3,7,8,9-HxCDD	1.90	-----	0.58	J			
Total HxCDD	28.00	-----	0.53				
1,2,3,4,6,7,8-HpCDF	9.10	-----	0.73		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.70		Equivalence: 2.4 ng/Kg		
Total HpCDF	21.00	-----	0.71		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	54.00	-----	1.10				
Total HpCDD	130.00	-----	1.10				
OCDF	15.00	-----	1.80				
OCDD	380.00	-----	1.70				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	YYY190-01		
Lab Sample ID	10140376029		
Filename	U101030A_10		
Injected By	BAL		
Total Amount Extracted	15.7 g	Matrix	Solid
% Moisture	30.1	Dilution	NA
Dry Weight Extracted	11.0 g	Collected	10/10/2010 01:13
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_19	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 12:23

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.24		2,3,7,8-TCDF-13C	2.00	98
Total TCDF	0.59	-----	0.24	J	2,3,7,8-TCDD-13C	2.00	70
					1,2,3,7,8-PeCDF-13C	2.00	95
2,3,7,8-TCDD	ND	-----	0.37		2,3,4,7,8-PeCDF-13C	2.00	95
Total TCDD	ND	-----	0.37		1,2,3,7,8-PeCDD-13C	2.00	69
					1,2,3,4,7,8-HxCDF-13C	2.00	97
1,2,3,7,8-PeCDF	ND	-----	0.47		1,2,3,6,7,8-HxCDF-13C	2.00	103
2,3,4,7,8-PeCDF	ND	-----	0.49		2,3,4,6,7,8-HxCDF-13C	2.00	104
Total PeCDF	0.95	-----	0.48	J	1,2,3,7,8,9-HxCDF-13C	2.00	106
					1,2,3,4,7,8-HxCDD-13C	2.00	68
1,2,3,7,8-PeCDD	ND	-----	0.66		1,2,3,6,7,8-HxCDD-13C	2.00	82
Total PeCDD	ND	-----	0.66		1,2,3,4,6,7,8-HpCDF-13C	2.00	52
					1,2,3,4,7,8,9-HpCDF-13C	2.00	49
1,2,3,4,7,8-HxCDF	ND	-----	0.26		1,2,3,4,6,7,8-HpCDD-13C	2.00	36
1,2,3,6,7,8-HxCDF	ND	-----	0.32		OCDD-13C	4.00	51
2,3,4,6,7,8-HxCDF	ND	-----	0.21				
1,2,3,7,8,9-HxCDF	ND	-----	0.32		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	3.40	-----	0.28	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.50		2,3,7,8-TCDD-37Cl4	0.20	72
1,2,3,6,7,8-HxCDD	0.45	-----	0.41	J			
1,2,3,7,8,9-HxCDD	ND	-----	0.46				
Total HxCDD	3.70	-----	0.45	J			
1,2,3,4,6,7,8-HpCDF	1.20	-----	0.40	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.62		Equivalence: 0.84 ng/Kg		
Total HpCDF	1.20	-----	0.51	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	5.30	-----	0.92				
Total HpCDD	5.30	-----	0.92				
OCDF	1.90	-----	0.43	J			
OCDD	34.00	-----	0.90				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	RRR200-01		
Lab Sample ID	10140376030-R		
Filename	F101104B_04		
Injected By	SMT		
Total Amount Extracted	17.1 g	Matrix	Solid
% Moisture	28.8	Dilution	NA
Dry Weight Extracted	12.1 g	Collected	10/10/2010 01:19
ICAL ID	F101012	Received	10/13/2010 10:00
CCal Filename(s)	F101104A_15	Extracted	11/01/2010 15:30
Method Blank ID	BLANK-26847	Analyzed	11/04/2010 16:07

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.29		2,3,7,8-TCDF-13C	2.00	71
Total TCDF	ND	-----	0.29		2,3,7,8-TCDD-13C	2.00	81
					1,2,3,7,8-PeCDF-13C	2.00	80
2,3,7,8-TCDD	ND	-----	0.26		2,3,4,7,8-PeCDF-13C	2.00	84
Total TCDD	ND	-----	0.26		1,2,3,7,8-PeCDD-13C	2.00	99
					1,2,3,4,7,8-HxCDF-13C	2.00	64
1,2,3,7,8-PeCDF	ND	-----	0.29		1,2,3,6,7,8-HxCDF-13C	2.00	62
2,3,4,7,8-PeCDF	ND	-----	0.21		2,3,4,6,7,8-HxCDF-13C	2.00	62
Total PeCDF	1.20	-----	0.25	J	1,2,3,7,8,9-HxCDF-13C	2.00	64
					1,2,3,4,7,8-HxCDD-13C	2.00	70
1,2,3,7,8-PeCDD	ND	-----	0.18		1,2,3,6,7,8-HxCDD-13C	2.00	71
Total PeCDD	0.37	-----	0.18	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	53
					1,2,3,4,7,8,9-HpCDF-13C	2.00	54
1,2,3,4,7,8-HxCDF	-----	0.27	0.18	I	1,2,3,4,6,7,8-HpCDD-13C	2.00	61
1,2,3,6,7,8-HxCDF	-----	0.18	0.18	I	OCDD-13C	4.00	53
2,3,4,6,7,8-HxCDF	-----	0.17	0.15	I			
1,2,3,7,8,9-HxCDF	ND	-----	0.19		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	2.10	-----	0.17	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.18		2,3,7,8-TCDD-37Cl4	0.20	82
1,2,3,6,7,8-HxCDD	0.38	-----	0.18	J			
1,2,3,7,8,9-HxCDD	0.30	-----	0.18	J			
Total HxCDD	4.40	-----	0.18				
1,2,3,4,6,7,8-HpCDF	2.80	-----	0.20	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.22		Equivalence: 0.52 ng/Kg		
Total HpCDF	6.30	-----	0.21		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	8.40	-----	0.28				
Total HpCDD	19.00	-----	0.28				
OCDF	3.50	-----	0.28	J			
OCDD	61.00	-----	0.25				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	FFF209-01		
Lab Sample ID	10140376031		
Filename	U101030A_12		
Injected By	BAL		
Total Amount Extracted	14.0 g	Matrix	Solid
% Moisture	27.2	Dilution	NA
Dry Weight Extracted	10.2 g	Collected	10/10/2010 01:25
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_19	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 13:55

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.36		2,3,7,8-TCDF-13C	2.00	104
Total TCDF	4.70	-----	0.36		2,3,7,8-TCDD-13C	2.00	68
					1,2,3,7,8-PeCDF-13C	2.00	98
2,3,7,8-TCDD	ND	-----	0.63		2,3,4,7,8-PeCDF-13C	2.00	97
Total TCDD	ND	-----	0.63		1,2,3,7,8-PeCDD-13C	2.00	65
					1,2,3,4,7,8-HxCDF-13C	2.00	89
1,2,3,7,8-PeCDF	0.48	-----	0.46	J	1,2,3,6,7,8-HxCDF-13C	2.00	102
2,3,4,7,8-PeCDF	ND	-----	0.66		2,3,4,6,7,8-HxCDF-13C	2.00	95
Total PeCDF	2.20	-----	0.56	J	1,2,3,7,8,9-HxCDF-13C	2.00	96
					1,2,3,4,7,8-HxCDD-13C	2.00	62
1,2,3,7,8-PeCDD	ND	-----	0.89		1,2,3,6,7,8-HxCDD-13C	2.00	75
Total PeCDD	ND	-----	0.89		1,2,3,4,6,7,8-HpCDF-13C	2.00	41
					1,2,3,4,7,8,9-HpCDF-13C	2.00	36
1,2,3,4,7,8-HxCDF	ND	-----	0.60		1,2,3,4,6,7,8-HpCDD-13C	2.00	25
1,2,3,6,7,8-HxCDF	ND	-----	0.47		OCDD-13C	4.00	37
2,3,4,6,7,8-HxCDF	ND	-----	0.40				
1,2,3,7,8,9-HxCDF	ND	-----	0.47		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	5.60	-----	0.49		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.85		2,3,7,8-TCDD-37Cl4	0.20	83
1,2,3,6,7,8-HxCDD	ND	-----	0.98				
1,2,3,7,8,9-HxCDD	ND	-----	0.92				
Total HxCDD	5.90	-----	0.92				
1,2,3,4,6,7,8-HpCDF	2.60	-----	0.82	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.97		Equivalence: 1.2 ng/Kg		
Total HpCDF	2.60	-----	0.90	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	8.3	2.20	I			
Total HpCDD	16.00	-----	2.20				
OCDF	5.50	-----	1.30	J			
OCDD	65.00	-----	2.90				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	QQQQ204-01		
Lab Sample ID	10140376032		
Filename	U101030A_13		
Injected By	BAL		
Total Amount Extracted	14.3 g	Matrix	Solid
% Moisture	29.3	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	10/10/2010 01:33
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_19	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 14:41

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	ND	-----	0.24		2,3,7,8-TCDF-13C	2.00	117	
Total TCDF	1.1	-----	0.24		2,3,7,8-TCDD-13C	2.00	81	
					1,2,3,7,8-PeCDF-13C	2.00	119	
2,3,7,8-TCDD	ND	-----	0.52		2,3,4,7,8-PeCDF-13C	2.00	115	
Total TCDD	ND	-----	0.52		1,2,3,7,8-PeCDD-13C	2.00	80	
					1,2,3,4,7,8-HxCDF-13C	2.00	116	
1,2,3,7,8-PeCDF	ND	-----	0.45		1,2,3,6,7,8-HxCDF-13C	2.00	129	R
2,3,4,7,8-PeCDF	ND	-----	0.55		2,3,4,6,7,8-HxCDF-13C	2.00	115	
Total PeCDF	1.2	-----	0.50	J	1,2,3,7,8,9-HxCDF-13C	2.00	104	
					1,2,3,4,7,8-HxCDD-13C	2.00	76	
1,2,3,7,8-PeCDD	ND	-----	0.95		1,2,3,6,7,8-HxCDD-13C	2.00	86	
Total PeCDD	ND	-----	0.95		1,2,3,4,6,7,8-HpCDF-13C	2.00	50	
					1,2,3,4,7,8,9-HpCDF-13C	2.00	42	
1,2,3,4,7,8-HxCDF	ND	-----	0.36		1,2,3,4,6,7,8-HpCDD-13C	2.00	32	
1,2,3,6,7,8-HxCDF	ND	-----	0.38		OCDD-13C	4.00	38	
2,3,4,6,7,8-HxCDF	ND	-----	0.36					
1,2,3,7,8,9-HxCDF	ND	-----	0.49		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	6.0	-----	0.40		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	ND	-----	0.49		2,3,7,8-TCDD-37Cl4	0.20	88	
1,2,3,6,7,8-HxCDD	ND	-----	0.62					
1,2,3,7,8,9-HxCDD	ND	-----	0.58					
Total HxCDD	3.8	-----	0.56	J				
1,2,3,4,6,7,8-HpCDF	1.3	-----	0.70	J	Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	ND	-----	0.97		Equivalence: 1.1 ng/Kg			
Total HpCDF	1.3	-----	0.84	J	(Using 2005 WHO Factors - Using PRL/2 where ND)			
1,2,3,4,6,7,8-HpCDD	5.3	-----	1.90					
Total HpCDD	11.0	-----	1.90					
OCDF	2.9	-----	0.97	J				
OCDD	36.0	-----	2.50					

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
R = Recovery outside target range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	VVVV200-01		
Lab Sample ID	10140376033		
Filename	F101030B_14		
Injected By	BAL		
Total Amount Extracted	16.2 g	Matrix	Solid
% Moisture	34.9	Dilution	NA
Dry Weight Extracted	10.5 g	Collected	10/10/2010 01:31
ICAL ID	F101012	Received	10/13/2010 10:00
CCal Filename(s)	F101030B_03	Extracted	10/28/2010 15:20
Method Blank ID	BLANK-26826	Analyzed	10/31/2010 01:33

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.77	-----	0.23	J	2,3,7,8-TCDF-13C	2.00	73
Total TCDF	4.50	-----	0.23		2,3,7,8-TCDD-13C	2.00	89
					1,2,3,7,8-PeCDF-13C	2.00	82
2,3,7,8-TCDD	ND	-----	0.26		2,3,4,7,8-PeCDF-13C	2.00	81
Total TCDD	ND	-----	0.26		1,2,3,7,8-PeCDD-13C	2.00	105
					1,2,3,4,7,8-HxCDF-13C	2.00	79
1,2,3,7,8-PeCDF	0.40	-----	0.24	J	1,2,3,6,7,8-HxCDF-13C	2.00	72
2,3,4,7,8-PeCDF	0.62	-----	0.19	J	2,3,4,6,7,8-HxCDF-13C	2.00	71
Total PeCDF	7.80	-----	0.22		1,2,3,7,8,9-HxCDF-13C	2.00	74
					1,2,3,4,7,8-HxCDD-13C	2.00	84
1,2,3,7,8-PeCDD	0.50	-----	0.21	J	1,2,3,6,7,8-HxCDD-13C	2.00	75
Total PeCDD	4.30	-----	0.21	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	57
					1,2,3,4,7,8,9-HpCDF-13C	2.00	59
1,2,3,4,7,8-HxCDF	1.10	-----	0.33	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	55
1,2,3,6,7,8-HxCDF	0.88	-----	0.28	J	OCDD-13C	4.00	58
2,3,4,6,7,8-HxCDF	0.92	-----	0.24	J			
1,2,3,7,8,9-HxCDF	ND	-----	0.30		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	14.00	-----	0.29		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.10	-----	0.53	J	2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,6,7,8-HxCDD	2.80	-----	0.76	J			
1,2,3,7,8,9-HxCDD	1.80	-----	0.41	J			
Total HxCDD	34.00	-----	0.57				
1,2,3,4,6,7,8-HpCDF	14.00	-----	0.44		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.30		Equivalence: 2.8 ng/Kg		
Total HpCDF	33.00	-----	0.37		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	68.00	-----	0.79				
Total HpCDD	160.00	-----	0.79				
OCDF	25.00	-----	1.00				
OCDD	510.00	-----	1.40				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Thurston County Health Dept

Client's Sample ID	XXXX198-01		
Lab Sample ID	10140376034		
Filename	U101030A_14		
Injected By	BAL		
Total Amount Extracted	15.6 g	Matrix	Solid
% Moisture	34.4	Dilution	NA
Dry Weight Extracted	10.2 g	Collected	10/10/2010 01:35
ICAL ID	U100929	Received	10/13/2010 10:00
CCal Filename(s)	U101029A_19	Extracted	10/28/2010 15:35
Method Blank ID	BLANK-26823	Analyzed	10/30/2010 15:28

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.23		2,3,7,8-TCDF-13C	2.00	115
Total TCDF	2.10	-----	0.23		2,3,7,8-TCDD-13C	2.00	73
					1,2,3,7,8-PeCDF-13C	2.00	119
2,3,7,8-TCDD	ND	-----	0.49		2,3,4,7,8-PeCDF-13C	2.00	118
Total TCDD	ND	-----	0.49		1,2,3,7,8-PeCDD-13C	2.00	78
					1,2,3,4,7,8-HxCDF-13C	2.00	97
1,2,3,7,8-PeCDF	ND	-----	0.50		1,2,3,6,7,8-HxCDF-13C	2.00	111
2,3,4,7,8-PeCDF	ND	-----	0.46		2,3,4,6,7,8-HxCDF-13C	2.00	107
Total PeCDF	2.00	-----	0.48	J	1,2,3,7,8,9-HxCDF-13C	2.00	109
					1,2,3,4,7,8-HxCDD-13C	2.00	57
1,2,3,7,8-PeCDD	ND	-----	0.78		1,2,3,6,7,8-HxCDD-13C	2.00	84
Total PeCDD	ND	-----	0.78		1,2,3,4,6,7,8-HpCDF-13C	2.00	44
					1,2,3,4,7,8,9-HpCDF-13C	2.00	42
1,2,3,4,7,8-HxCDF	0.49	-----	0.33	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	29
1,2,3,6,7,8-HxCDF	ND	-----	0.39		OCDD-13C	4.00	55
2,3,4,6,7,8-HxCDF	ND	-----	0.23				
1,2,3,7,8,9-HxCDF	ND	-----	0.28		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	7.20	-----	0.31		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.88		2,3,7,8-TCDD-37Cl4	0.20	82
1,2,3,6,7,8-HxCDD	ND	-----	0.63				
1,2,3,7,8,9-HxCDD	ND	-----	0.62				
Total HxCDD	5.10	-----	0.71				
1,2,3,4,6,7,8-HpCDF	1.80	-----	0.56	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.80		Equivalence: 1.1 ng/Kg		
Total HpCDF	1.80	-----	0.68	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	9.20	-----	1.40				
Total HpCDD	22.00	-----	1.40				
OCDF	2.80	-----	0.79	J			
OCDD	51.00	-----	0.91				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Blank Analysis Results

Lab Sample ID	BLANK-26771	Matrix	Water
Filename	P101025B_07	Dilution	NA
Total Amount Extracted	1020 mL	Extracted	10/22/2010 14:35
ICAL ID	P100312	Analyzed	10/26/2010 00:45
CCal Filename(s)	P101025B_01	Injected By	

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.90		2,3,7,8-TCDF-13C	2.00	57
Total TCDF	ND	-----	1.90		2,3,7,8-TCDD-13C	2.00	68
					1,2,3,7,8-PeCDF-13C	2.00	56
2,3,7,8-TCDD	ND	-----	1.80		2,3,4,7,8-PeCDF-13C	2.00	67
Total TCDD	ND	-----	1.80		1,2,3,7,8-PeCDD-13C	2.00	69
					1,2,3,4,7,8-HxCDF-13C	2.00	85
1,2,3,7,8-PeCDF	2.6	-----	1.90	J	1,2,3,6,7,8-HxCDF-13C	2.00	85
2,3,4,7,8-PeCDF	2.2	-----	1.10	J	2,3,4,6,7,8-HxCDF-13C	2.00	82
Total PeCDF	4.8	-----	1.50	J	1,2,3,7,8,9-HxCDF-13C	2.00	81
					1,2,3,4,7,8-HxCDD-13C	2.00	83
1,2,3,7,8-PeCDD	ND	-----	2.20		1,2,3,6,7,8-HxCDD-13C	2.00	94
Total PeCDD	ND	-----	2.20		1,2,3,4,6,7,8-HpCDF-13C	2.00	80
					1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	ND	-----	0.92		1,2,3,4,6,7,8-HpCDD-13C	2.00	80
1,2,3,6,7,8-HxCDF	ND	-----	1.20		OCDD-13C	4.00	46
2,3,4,6,7,8-HxCDF	ND	-----	1.10				
1,2,3,7,8,9-HxCDF	ND	-----	1.70		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	1.20		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	1.30		2,3,7,8-TCDD-37Cl4	0.20	70
1,2,3,6,7,8-HxCDD	ND	-----	1.50				
1,2,3,7,8,9-HxCDD	ND	-----	0.95				
Total HxCDD	ND	-----	1.30				
1,2,3,4,6,7,8-HpCDF	ND	-----	1.00		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	1.30		Equivalence: 3.3 pg/L		
Total HpCDF	ND	-----	1.20		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	1.30				
Total HpCDD	1.8	-----	1.30	J			
OCDF	1.7	-----	1.70	J			
OCDD	-----	2.5	1.40	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Blank Analysis Results

Lab Sample ID	BLANK-26823	Matrix	Solid
Filename	U101029A_11	Dilution	NA
Total Amount Extracted	10.0 g	Extracted	10/28/2010 15:35
ICAL ID	U100929	Analyzed	10/29/2010 22:37
CCal Filename(s)	U101029A_03	Injected By	BAL

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.081		2,3,7,8-TCDF-13C	2.00	58
Total TCDF	ND	-----	0.081		2,3,7,8-TCDD-13C	2.00	67
					1,2,3,7,8-PeCDF-13C	2.00	65
2,3,7,8-TCDD	0.110	-----	0.091	J	2,3,4,7,8-PeCDF-13C	2.00	68
Total TCDD	0.110	-----	0.091	J	1,2,3,7,8-PeCDD-13C	2.00	78
					1,2,3,4,7,8-HxCDF-13C	2.00	74
1,2,3,7,8-PeCDF	ND	-----	0.110		1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	ND	-----	0.098		2,3,4,6,7,8-HxCDF-13C	2.00	78
Total PeCDF	ND	-----	0.100		1,2,3,7,8,9-HxCDF-13C	2.00	75
					1,2,3,4,7,8-HxCDD-13C	2.00	81
1,2,3,7,8-PeCDD	ND	-----	0.120		1,2,3,6,7,8-HxCDD-13C	2.00	86
Total PeCDD	ND	-----	0.120		1,2,3,4,6,7,8-HpCDF-13C	2.00	75
					1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	ND	-----	0.063		1,2,3,4,6,7,8-HpCDD-13C	2.00	79
1,2,3,6,7,8-HxCDF	ND	-----	0.053		OCDD-13C	4.00	64
2,3,4,6,7,8-HxCDF	ND	-----	0.053				
1,2,3,7,8,9-HxCDF	ND	-----	0.056		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.056		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.072		2,3,7,8-TCDD-37Cl4	0.20	61
1,2,3,6,7,8-HxCDD	ND	-----	0.077				
1,2,3,7,8,9-HxCDD	ND	-----	0.083				
Total HxCDD	ND	-----	0.077				
1,2,3,4,6,7,8-HpCDF	-----	0.066	0.053	I	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.067		Equivalence: 0.21 ng/Kg		
Total HpCDF	ND	-----	0.060		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	0.088	-----	0.066	J			
Total HpCDD	0.250	-----	0.066	J			
OCDF	0.120	-----	0.072	J			
OCDD	0.230	-----	0.110	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Blank Analysis Results

Lab Sample ID	BLANK-26826	Matrix	Solid
Filename	F101030B_09	Dilution	NA
Total Amount Extracted	10.0 g	Extracted	10/28/2010 15:20
ICAL ID	F101012	Analyzed	10/30/2010 22:43
CCal Filename(s)	F101030B_03	Injected By	BAL

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.21		2,3,7,8-TCDF-13C	2.00	81
Total TCDF	ND	-----	0.21		2,3,7,8-TCDD-13C	2.00	94
					1,2,3,7,8-PeCDF-13C	2.00	90
2,3,7,8-TCDD	ND	-----	0.30		2,3,4,7,8-PeCDF-13C	2.00	92
Total TCDD	ND	-----	0.30		1,2,3,7,8-PeCDD-13C	2.00	113
					1,2,3,4,7,8-HxCDF-13C	2.00	87
1,2,3,7,8-PeCDF	ND	-----	0.28		1,2,3,6,7,8-HxCDF-13C	2.00	82
2,3,4,7,8-PeCDF	ND	-----	0.22		2,3,4,6,7,8-HxCDF-13C	2.00	79
Total PeCDF	ND	-----	0.25		1,2,3,7,8,9-HxCDF-13C	2.00	87
					1,2,3,4,7,8-HxCDD-13C	2.00	105
1,2,3,7,8-PeCDD	ND	-----	0.56		1,2,3,6,7,8-HxCDD-13C	2.00	78
Total PeCDD	ND	-----	0.56		1,2,3,4,6,7,8-HpCDF-13C	2.00	56
					1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	ND	-----	0.49		1,2,3,4,6,7,8-HpCDD-13C	2.00	53
1,2,3,6,7,8-HxCDF	ND	-----	0.38		OCDD-13C	4.00	53
2,3,4,6,7,8-HxCDF	ND	-----	0.39				
1,2,3,7,8,9-HxCDF	ND	-----	0.83		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.52		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.37		2,3,7,8-TCDD-37Cl4	0.20	89
1,2,3,6,7,8-HxCDD	ND	-----	0.40				
1,2,3,7,8,9-HxCDD	ND	-----	0.35				
Total HxCDD	ND	-----	0.37				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.46		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.39		Equivalence: 0.65 ng/Kg		
Total HpCDF	ND	-----	0.43		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	ND	-----	0.50				
Total HpCDD	ND	-----	0.50				
OCDF	ND	-----	1.70				
OCDD	2.2	-----	1.70	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Blank Analysis Results

Lab Sample ID	BLANK-26847	Matrix	Solid
Filename	F101104A_11	Dilution	NA
Total Amount Extracted	20.0 g	Extracted	11/01/2010 15:30
ICAL ID	F101012	Analyzed	11/04/2010 09:56
CCal Filename(s)	F101103C_16	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.066		2,3,7,8-TCDF-13C	2.00	71
Total TCDF	ND	-----	0.066		2,3,7,8-TCDD-13C	2.00	81
					1,2,3,7,8-PeCDF-13C	2.00	81
2,3,7,8-TCDD	ND	-----	0.075		2,3,4,7,8-PeCDF-13C	2.00	89
Total TCDD	ND	-----	0.075		1,2,3,7,8-PeCDD-13C	2.00	109
					1,2,3,4,7,8-HxCDF-13C	2.00	70
1,2,3,7,8-PeCDF	ND	-----	0.080		1,2,3,6,7,8-HxCDF-13C	2.00	73
2,3,4,7,8-PeCDF	ND	-----	0.045		2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	ND	-----	0.062		1,2,3,7,8,9-HxCDF-13C	2.00	72
					1,2,3,4,7,8-HxCDD-13C	2.00	83
1,2,3,7,8-PeCDD	ND	-----	0.051		1,2,3,6,7,8-HxCDD-13C	2.00	71
Total PeCDD	ND	-----	0.051		1,2,3,4,6,7,8-HpCDF-13C	2.00	66
					1,2,3,4,7,8,9-HpCDF-13C	2.00	64
1,2,3,4,7,8-HxCDF	ND	-----	0.043		1,2,3,4,6,7,8-HpCDD-13C	2.00	71
1,2,3,6,7,8-HxCDF	ND	-----	0.039		OCDD-13C	4.00	62
2,3,4,6,7,8-HxCDF	ND	-----	0.031				
1,2,3,7,8,9-HxCDF	ND	-----	0.051		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.041		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.046		2,3,7,8-TCDD-37Cl4	0.20	80
1,2,3,6,7,8-HxCDD	ND	-----	0.048				
1,2,3,7,8,9-HxCDD	ND	-----	0.060				
Total HxCDD	ND	-----	0.051				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.049		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.073		Equivalence: 0.091 ng/Kg		
Total HpCDF	ND	-----	0.061		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	0.066	0.064	I			
Total HpCDD	0.095	-----	0.064	J			
OCDF	0.260	-----	0.130	J			
OCDD	0.660	-----	0.140	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-26772		
Filename	P101025B_02	Matrix	Water
Total Amount Extracted	1020 mL	Dilution	NA
ICAL ID	P100312	Extracted	10/22/2010 14:35
CCal Filename	P101025B_01	Analyzed	10/25/2010 20:48
Method Blank ID	BLANK-26771	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	115
2,3,7,8-TCDD	10	11	6.7	15.8	110
1,2,3,7,8-PeCDF	50	56	40.0	67.0	113
2,3,4,7,8-PeCDF	50	54	34.0	80.0	107
1,2,3,7,8-PeCDD	50	50	35.0	71.0	99
1,2,3,4,7,8-HxCDF	50	56	36.0	67.0	111
1,2,3,6,7,8-HxCDF	50	58	42.0	65.0	116
2,3,4,6,7,8-HxCDF	50	57	35.0	78.0	115
1,2,3,7,8,9-HxCDF	50	57	39.0	65.0	114
1,2,3,4,7,8-HxCDD	50	54	35.0	82.0	108
1,2,3,6,7,8-HxCDD	50	53	38.0	67.0	107
1,2,3,7,8,9-HxCDD	50	55	32.0	81.0	109
1,2,3,4,6,7,8-HpCDF	50	56	41.0	61.0	111
1,2,3,4,7,8,9-HpCDF	50	55	39.0	69.0	109
1,2,3,4,6,7,8-HpCDD	50	52	35.0	70.0	103
OCDF	100	120	63.0	170.0	118
OCDD	100	120	78.0	144.0	117
2,3,7,8-TCDD-37Cl4	10	7.1	3.1	19.1	71
2,3,7,8-TCDF-13C	100	61	22.0	152.0	61
2,3,7,8-TCDD-13C	100	69	20.0	175.0	69
1,2,3,7,8-PeCDF-13C	100	54	21.0	192.0	54
2,3,4,7,8-PeCDF-13C	100	63	13.0	328.0	63
1,2,3,7,8-PeCDD-13C	100	64	21.0	227.0	64
1,2,3,4,7,8-HxCDF-13C	100	79	19.0	202.0	79
1,2,3,6,7,8-HxCDF-13C	100	78	21.0	159.0	78
2,3,4,6,7,8-HxCDF-13C	100	78	22.0	176.0	78
1,2,3,7,8,9-HxCDF-13C	100	80	17.0	205.0	80
1,2,3,4,7,8-HxCDD-13C	100	82	21.0	193.0	82
1,2,3,6,7,8-HxCDD-13C	100	86	25.0	163.0	86
1,2,3,4,6,7,8-HpCDF-13C	100	82	21.0	158.0	82
1,2,3,4,7,8,9-HpCDF-13C	100	75	20.0	186.0	75
1,2,3,4,6,7,8-HpCDD-13C	100	88	26.0	166.0	88
OCDD-13C	200	93	26.0	397.0	47

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-26824		
Filename	U101029A_06	Matrix	Solid
Total Amount Extracted	10.2 g	Dilution	NA
ICAL ID	U100929	Extracted	10/28/2010 15:35
CCal Filename	U101029A_03	Analyzed	10/29/2010 18:47
Method Blank ID	BLANK-26823	Injected By	BAL

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	12	7.5	15.8	116
2,3,7,8-TCDD	10	11	6.7	15.8	109
1,2,3,7,8-PeCDF	50	57	40.0	67.0	114
2,3,4,7,8-PeCDF	50	56	34.0	80.0	112
1,2,3,7,8-PeCDD	50	51	35.0	71.0	103
1,2,3,4,7,8-HxCDF	50	57	36.0	67.0	115
1,2,3,6,7,8-HxCDF	50	59	42.0	65.0	118
2,3,4,6,7,8-HxCDF	50	59	35.0	78.0	117
1,2,3,7,8,9-HxCDF	50	59	39.0	65.0	117
1,2,3,4,7,8-HxCDD	50	57	35.0	82.0	114
1,2,3,6,7,8-HxCDD	50	54	38.0	67.0	109
1,2,3,7,8,9-HxCDD	50	58	32.0	81.0	115
1,2,3,4,6,7,8-HpCDF	50	59	41.0	61.0	118
1,2,3,4,7,8,9-HpCDF	50	59	39.0	69.0	118
1,2,3,4,6,7,8-HpCDD	50	56	35.0	70.0	112
OCDF	100	130	63.0	170.0	127
OCDD	100	130	78.0	144.0	125
2,3,7,8-TCDD-37Cl4	10	7.1	3.1	19.1	71
2,3,7,8-TCDF-13C	100	65	22.0	152.0	65
2,3,7,8-TCDD-13C	100	73	20.0	175.0	73
1,2,3,7,8-PeCDF-13C	100	65	21.0	192.0	65
2,3,4,7,8-PeCDF-13C	100	66	13.0	328.0	66
1,2,3,7,8-PeCDD-13C	100	74	21.0	227.0	74
1,2,3,4,7,8-HxCDF-13C	100	71	19.0	202.0	71
1,2,3,6,7,8-HxCDF-13C	100	72	21.0	159.0	72
2,3,4,6,7,8-HxCDF-13C	100	74	22.0	176.0	74
1,2,3,7,8,9-HxCDF-13C	100	73	17.0	205.0	73
1,2,3,4,7,8-HxCDD-13C	100	76	21.0	193.0	76
1,2,3,6,7,8-HxCDD-13C	100	84	25.0	163.0	84
1,2,3,4,6,7,8-HpCDF-13C	100	76	21.0	158.0	76
1,2,3,4,7,8,9-HpCDF-13C	100	72	20.0	186.0	72
1,2,3,4,6,7,8-HpCDD-13C	100	78	26.0	166.0	78
OCDD-13C	200	130	26.0	397.0	64

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-26827		
Filename	F101030B_04	Matrix	Solid
Total Amount Extracted	10.2 g	Dilution	NA
ICAL ID	F101012	Extracted	10/28/2010 15:20
CCal Filename	F101030B_03	Analyzed	10/30/2010 18:54
Method Blank ID	BLANK-26826	Injected By	BAL

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	113
2,3,7,8-TCDD	10	9.8	6.7	15.8	98
1,2,3,7,8-PeCDF	50	53	40.0	67.0	105
2,3,4,7,8-PeCDF	50	51	34.0	80.0	102
1,2,3,7,8-PeCDD	50	47	35.0	71.0	94
1,2,3,4,7,8-HxCDF	50	50	36.0	67.0	100
1,2,3,6,7,8-HxCDF	50	54	42.0	65.0	108
2,3,4,6,7,8-HxCDF	50	54	35.0	78.0	109
1,2,3,7,8,9-HxCDF	50	52	39.0	65.0	105
1,2,3,4,7,8-HxCDD	50	52	35.0	82.0	105
1,2,3,6,7,8-HxCDD	50	54	38.0	67.0	109
1,2,3,7,8,9-HxCDD	50	54	32.0	81.0	108
1,2,3,4,6,7,8-HpCDF	50	56	41.0	61.0	111
1,2,3,4,7,8,9-HpCDF	50	56	39.0	69.0	113
1,2,3,4,6,7,8-HpCDD	50	56	35.0	70.0	113
OCDF	100	140	63.0	170.0	139
OCDD	100	130	78.0	144.0	125
2,3,7,8-TCDD-37Cl4	10	9.1	3.1	19.1	91
2,3,7,8-TCDF-13C	100	80	22.0	152.0	80
2,3,7,8-TCDD-13C	100	96	20.0	175.0	96
1,2,3,7,8-PeCDF-13C	100	89	21.0	192.0	89
2,3,4,7,8-PeCDF-13C	100	84	13.0	328.0	84
1,2,3,7,8-PeCDD-13C	100	110	21.0	227.0	106
1,2,3,4,7,8-HxCDF-13C	100	88	19.0	202.0	88
1,2,3,6,7,8-HxCDF-13C	100	86	21.0	159.0	86
2,3,4,6,7,8-HxCDF-13C	100	77	22.0	176.0	77
1,2,3,7,8,9-HxCDF-13C	100	81	17.0	205.0	81
1,2,3,4,7,8-HxCDD-13C	100	93	21.0	193.0	93
1,2,3,6,7,8-HxCDD-13C	100	80	25.0	163.0	80
1,2,3,4,6,7,8-HpCDF-13C	100	54	21.0	158.0	54
1,2,3,4,7,8,9-HpCDF-13C	100	55	20.0	186.0	55
1,2,3,4,6,7,8-HpCDD-13C	100	55	26.0	166.0	55
OCDD-13C	200	100	26.0	397.0	50

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-26848		
Filename	F101104A_09	Matrix	Solid
Total Amount Extracted	20.3 g	Dilution	NA
ICAL ID	F101012	Extracted	11/01/2010 15:30
CCal Filename	F101103C_16	Analyzed	11/04/2010 08:25
Method Blank ID	BLANK-26847	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	12	7.5	15.8	121
2,3,7,8-TCDD	10	10	6.7	15.8	104
1,2,3,7,8-PeCDF	50	54	40.0	67.0	109
2,3,4,7,8-PeCDF	50	52	34.0	80.0	105
1,2,3,7,8-PeCDD	50	49	35.0	71.0	99
1,2,3,4,7,8-HxCDF	50	55	36.0	67.0	110
1,2,3,6,7,8-HxCDF	50	54	42.0	65.0	107
2,3,4,6,7,8-HxCDF	50	55	35.0	78.0	111
1,2,3,7,8,9-HxCDF	50	56	39.0	65.0	111
1,2,3,4,7,8-HxCDD	50	51	35.0	82.0	102
1,2,3,6,7,8-HxCDD	50	53	38.0	67.0	106
1,2,3,7,8,9-HxCDD	50	58	32.0	81.0	115
1,2,3,4,6,7,8-HpCDF	50	58	41.0	61.0	117
1,2,3,4,7,8,9-HpCDF	50	57	39.0	69.0	114
1,2,3,4,6,7,8-HpCDD	50	53	35.0	70.0	106
OCDF	100	110	63.0	170.0	112
OCDD	100	120	78.0	144.0	121
2,3,7,8-TCDD-37Cl4	10	7.8	3.1	19.1	78
2,3,7,8-TCDF-13C	100	66	22.0	152.0	66
2,3,7,8-TCDD-13C	100	78	20.0	175.0	78
1,2,3,7,8-PeCDF-13C	100	78	21.0	192.0	78
2,3,4,7,8-PeCDF-13C	100	82	13.0	328.0	82
1,2,3,7,8-PeCDD-13C	100	100	21.0	227.0	103
1,2,3,4,7,8-HxCDF-13C	100	65	19.0	202.0	65
1,2,3,6,7,8-HxCDF-13C	100	66	21.0	159.0	66
2,3,4,6,7,8-HxCDF-13C	100	63	22.0	176.0	63
1,2,3,7,8,9-HxCDF-13C	100	65	17.0	205.0	65
1,2,3,4,7,8-HxCDD-13C	100	77	21.0	193.0	77
1,2,3,6,7,8-HxCDD-13C	100	64	25.0	163.0	64
1,2,3,4,6,7,8-HpCDF-13C	100	59	21.0	158.0	59
1,2,3,4,7,8,9-HpCDF-13C	100	55	20.0	186.0	55
1,2,3,4,6,7,8-HpCDD-13C	100	62	26.0	166.0	62
OCDD-13C	200	110	26.0	397.0	56

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCSD-26773		
Filename	P101025B_03	Matrix	Water
Total Amount Extracted	1020 mL	Dilution	NA
ICAL ID	P100312	Extracted	10/22/2010 14:35
CCal Filename	P101025B_01	Analyzed	10/25/2010 21:35
Method Blank ID	BLANK-26771	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	12	7.5	15.8	117
2,3,7,8-TCDD	10	11	6.7	15.8	110
1,2,3,7,8-PeCDF	50	58	40.0	67.0	116
2,3,4,7,8-PeCDF	50	55	34.0	80.0	110
1,2,3,7,8-PeCDD	50	49	35.0	71.0	97
1,2,3,4,7,8-HxCDF	50	58	36.0	67.0	116
1,2,3,6,7,8-HxCDF	50	60	42.0	65.0	119
2,3,4,6,7,8-HxCDF	50	58	35.0	78.0	116
1,2,3,7,8,9-HxCDF	50	58	39.0	65.0	116
1,2,3,4,7,8-HxCDD	50	54	35.0	82.0	108
1,2,3,6,7,8-HxCDD	50	56	38.0	67.0	112
1,2,3,7,8,9-HxCDD	50	56	32.0	81.0	111
1,2,3,4,6,7,8-HpCDF	50	58	41.0	61.0	116
1,2,3,4,7,8,9-HpCDF	50	56	39.0	69.0	111
1,2,3,4,6,7,8-HpCDD	50	52	35.0	70.0	103
OCDF	100	120	63.0	170.0	116
OCDD	100	120	78.0	144.0	118
2,3,7,8-TCDD-37Cl4	10	8.6	3.1	19.1	86
2,3,7,8-TCDF-13C	100	75	22.0	152.0	75
2,3,7,8-TCDD-13C	100	84	20.0	175.0	84
1,2,3,7,8-PeCDF-13C	100	60	21.0	192.0	60
2,3,4,7,8-PeCDF-13C	100	69	13.0	328.0	69
1,2,3,7,8-PeCDD-13C	100	73	21.0	227.0	73
1,2,3,4,7,8-HxCDF-13C	100	86	19.0	202.0	86
1,2,3,6,7,8-HxCDF-13C	100	86	21.0	159.0	86
2,3,4,6,7,8-HxCDF-13C	100	88	22.0	176.0	88
1,2,3,7,8,9-HxCDF-13C	100	82	17.0	205.0	82
1,2,3,4,7,8-HxCDD-13C	100	89	21.0	193.0	89
1,2,3,6,7,8-HxCDD-13C	100	96	25.0	163.0	96
1,2,3,4,6,7,8-HpCDF-13C	100	84	21.0	158.0	84
1,2,3,4,7,8,9-HpCDF-13C	100	72	20.0	186.0	72
1,2,3,4,6,7,8-HpCDD-13C	100	87	26.0	166.0	87
OCDD-13C	200	81	26.0	397.0	41

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCSD-26825		
Filename	U101029A_07	Matrix	Solid
Total Amount Extracted	10.1 g	Dilution	NA
ICAL ID	U100929	Extracted	10/28/2010 15:35
CCal Filename	U101029A_03	Analyzed	10/29/2010 19:33
Method Blank ID	BLANK-26823	Injected By	BAL

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	110
2,3,7,8-TCDD	10	10.0	6.7	15.8	100
1,2,3,7,8-PeCDF	50	53	40.0	67.0	106
2,3,4,7,8-PeCDF	50	50	34.0	80.0	100
1,2,3,7,8-PeCDD	50	48	35.0	71.0	96
1,2,3,4,7,8-HxCDF	50	53	36.0	67.0	106
1,2,3,6,7,8-HxCDF	50	56	42.0	65.0	112
2,3,4,6,7,8-HxCDF	50	54	35.0	78.0	108
1,2,3,7,8,9-HxCDF	50	59	39.0	65.0	117
1,2,3,4,7,8-HxCDD	50	49	35.0	82.0	98
1,2,3,6,7,8-HxCDD	50	54	38.0	67.0	108
1,2,3,7,8,9-HxCDD	50	53	32.0	81.0	107
1,2,3,4,6,7,8-HpCDF	50	54	41.0	61.0	108
1,2,3,4,7,8,9-HpCDF	50	56	39.0	69.0	111
1,2,3,4,6,7,8-HpCDD	50	52	35.0	70.0	105
OCDF	100	100	63.0	170.0	104
OCDD	100	110	78.0	144.0	113
2,3,7,8-TCDD-37Cl4	10	6.9	3.1	19.1	69
2,3,7,8-TCDF-13C	100	67	22.0	152.0	67
2,3,7,8-TCDD-13C	100	73	20.0	175.0	73
1,2,3,7,8-PeCDF-13C	100	63	21.0	192.0	63
2,3,4,7,8-PeCDF-13C	100	63	13.0	328.0	63
1,2,3,7,8-PeCDD-13C	100	70	21.0	227.0	70
1,2,3,4,7,8-HxCDF-13C	100	69	19.0	202.0	69
1,2,3,6,7,8-HxCDF-13C	100	74	21.0	159.0	74
2,3,4,6,7,8-HxCDF-13C	100	72	22.0	176.0	72
1,2,3,7,8,9-HxCDF-13C	100	68	17.0	205.0	68
1,2,3,4,7,8-HxCDD-13C	100	75	21.0	193.0	75
1,2,3,6,7,8-HxCDD-13C	100	84	25.0	163.0	84
1,2,3,4,6,7,8-HpCDF-13C	100	77	21.0	158.0	77
1,2,3,4,7,8,9-HpCDF-13C	100	70	20.0	186.0	70
1,2,3,4,6,7,8-HpCDD-13C	100	78	26.0	166.0	78
OCDD-13C	200	130	26.0	397.0	64

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCSD-26828		
Filename	F101030B_05	Matrix	Solid
Total Amount Extracted	10.0 g	Dilution	NA
ICAL ID	F101012	Extracted	10/28/2010 15:20
CCal Filename	F101030B_03	Analyzed	10/30/2010 19:38
Method Blank ID	BLANK-26826	Injected By	BAL

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	114
2,3,7,8-TCDD	10	10.0	6.7	15.8	100
1,2,3,7,8-PeCDF	50	51	40.0	67.0	102
2,3,4,7,8-PeCDF	50	49	34.0	80.0	98
1,2,3,7,8-PeCDD	50	47	35.0	71.0	94
1,2,3,4,7,8-HxCDF	50	50	36.0	67.0	99
1,2,3,6,7,8-HxCDF	50	53	42.0	65.0	107
2,3,4,6,7,8-HxCDF	50	54	35.0	78.0	107
1,2,3,7,8,9-HxCDF	50	54	39.0	65.0	107
1,2,3,4,7,8-HxCDD	50	51	35.0	82.0	101
1,2,3,6,7,8-HxCDD	50	53	38.0	67.0	106
1,2,3,7,8,9-HxCDD	50	54	32.0	81.0	108
1,2,3,4,6,7,8-HpCDF	50	56	41.0	61.0	112
1,2,3,4,7,8,9-HpCDF	50	57	39.0	69.0	115
1,2,3,4,6,7,8-HpCDD	50	56	35.0	70.0	112
OCDF	100	120	63.0	170.0	124
OCDD	100	120	78.0	144.0	118
2,3,7,8-TCDD-37Cl4	10	8.9	3.1	19.1	89
2,3,7,8-TCDF-13C	100	79	22.0	152.0	79
2,3,7,8-TCDD-13C	100	94	20.0	175.0	94
1,2,3,7,8-PeCDF-13C	100	91	21.0	192.0	91
2,3,4,7,8-PeCDF-13C	100	92	13.0	328.0	92
1,2,3,7,8-PeCDD-13C	100	120	21.0	227.0	117
1,2,3,4,7,8-HxCDF-13C	100	84	19.0	202.0	84
1,2,3,6,7,8-HxCDF-13C	100	82	21.0	159.0	82
2,3,4,6,7,8-HxCDF-13C	100	75	22.0	176.0	75
1,2,3,7,8,9-HxCDF-13C	100	81	17.0	205.0	81
1,2,3,4,7,8-HxCDD-13C	100	97	21.0	193.0	97
1,2,3,6,7,8-HxCDD-13C	100	82	25.0	163.0	82
1,2,3,4,6,7,8-HpCDF-13C	100	64	21.0	158.0	64
1,2,3,4,7,8,9-HpCDF-13C	100	64	20.0	186.0	64
1,2,3,4,6,7,8-HpCDD-13C	100	66	26.0	166.0	66
OCDD-13C	200	130	26.0	397.0	66

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B

Spike Recovery Relative Percent Difference (RPD) Results

Client	Thurston County Health Dept		
Spike 1 ID	LCS-26772	Spike 2 ID	LCSD-26773
Spike 1 Filename	P101025B_02	Spike 2 Filename	P101025B_03

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	115	117	1.7
2,3,7,8-TCDD	110	110	0.0
1,2,3,7,8-PeCDF	113	116	2.6
2,3,4,7,8-PeCDF	107	110	2.8
1,2,3,7,8-PeCDD	99	97	2.0
1,2,3,4,7,8-HxCDF	111	116	4.4
1,2,3,6,7,8-HxCDF	116	119	2.6
2,3,4,6,7,8-HxCDF	115	116	0.9
1,2,3,7,8,9-HxCDF	114	116	1.7
1,2,3,4,7,8-HxCDD	108	108	0.0
1,2,3,6,7,8-HxCDD	107	112	4.6
1,2,3,7,8,9-HxCDD	109	111	1.8
1,2,3,4,6,7,8-HpCDF	111	116	4.4
1,2,3,4,7,8,9-HpCDF	109	111	1.8
1,2,3,4,6,7,8-HpCDD	103	103	0.0
OCDF	118	116	1.7
OCDD	117	118	0.9

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B

Spike Recovery Relative Percent Difference (RPD) Results

Client	Thurston County Health Dept		
Spike 1 ID	LCS-26824	Spike 2 ID	LCSD-26825
Spike 1 Filename	U101029A_06	Spike 2 Filename	U101029A_07

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	116	110	5.3
2,3,7,8-TCDD	109	100	8.6
1,2,3,7,8-PeCDF	114	106	7.3
2,3,4,7,8-PeCDF	112	100	11.3
1,2,3,7,8-PeCDD	103	96	7.0
1,2,3,4,7,8-HxCDF	115	106	8.1
1,2,3,6,7,8-HxCDF	118	112	5.2
2,3,4,6,7,8-HxCDF	117	108	8.0
1,2,3,7,8,9-HxCDF	117	117	0.0
1,2,3,4,7,8-HxCDD	114	98	15.1
1,2,3,6,7,8-HxCDD	109	108	0.9
1,2,3,7,8,9-HxCDD	115	107	7.2
1,2,3,4,6,7,8-HpCDF	118	108	8.8
1,2,3,4,7,8,9-HpCDF	118	111	6.1
1,2,3,4,6,7,8-HpCDD	112	105	6.5
OCDF	127	104	19.9
OCDD	125	113	10.1

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B

Spike Recovery Relative Percent Difference (RPD) Results

Client	Thurston County Health Dept		
Spike 1 ID	LCS-26827	Spike 2 ID	LCSD-26828
Spike 1 Filename	F101030B_04	Spike 2 Filename	F101030B_05

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	113	114	0.9
2,3,7,8-TCDD	98	100	2.0
1,2,3,7,8-PeCDF	105	102	2.9
2,3,4,7,8-PeCDF	102	98	4.0
1,2,3,7,8-PeCDD	94	94	0.0
1,2,3,4,7,8-HxCDF	100	99	1.0
1,2,3,6,7,8-HxCDF	108	107	0.9
2,3,4,6,7,8-HxCDF	109	107	1.9
1,2,3,7,8,9-HxCDF	105	107	1.9
1,2,3,4,7,8-HxCDD	105	101	3.9
1,2,3,6,7,8-HxCDD	109	106	2.8
1,2,3,7,8,9-HxCDD	108	108	0.0
1,2,3,4,6,7,8-HpCDF	111	112	0.9
1,2,3,4,7,8,9-HpCDF	113	115	1.8
1,2,3,4,6,7,8-HpCDD	113	112	0.9
OCDF	139	124	11.4
OCDD	125	118	5.8

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

REPORT OF LABORATORY ANALYSIS