

L" T i m e s N e w R o m a n , B o l d I t a l i c " 1 8

CLIENT INFORMATION

LABORATORY INFORMATION

Attention: Michael Salum	Contact: Ada Blythe, B.Sc., C.Chem.
Client Name: Philip Analytical Services Inc	Project: AN023026
Project: Misc.	Date Received: 17-Sep-2002
Project Desc:	Date Reported: 22-Oct-2002
Address: 4418 Pottsville Pike	Submission N: 210862
Reading, Pennsylvania	Sample No.: 060294-065481
19605	
Fax Number: 610 921-9667	
Phone Number: 610 921-8833	

NOTES: '-' = not analysed '<' = less than Method Detection Limit (MDL) 'NA' = no data available
LOQ can be determined for all analytes by multiplying the appropriate MDL X 3.33
Blank correction is only performed on oil and grease, BTEX, total purgeable hydrocarbons
and VOC analyses when Canadian methods are utilized.
Solids data is based on dry weight except for biota analyses.
Organic analyses are not corrected for extraction recovery standards except for isotope
dilution methods, (i.e. CARB 429 PAH, all PCDD/F and DBD/DBF analyses)
The enclosed copy of the Chain of Custody Record may contain information necessary for the
interpretation of the data.

Methods used by PSC Analytical Services are based upon those found in 'Standard Methods for the Examination of Water and Wastewater', Nineteenth Edition. Other methods are based on the principles of MISA or EPA methodologies. New York State: ELAP Identification Number 10756.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Any and all use of these test results shall be limited to the actual cost of the pertinent analysis done. There is no other warranty expressed or implied. Your samples will be retained at PSC Analytical Services for a period of three weeks from receipt of data or as per contract.

COMMENTS:

L" T i m e s N e w R o m a n , B o l d I t a l i c " 1 2
C e r t i

LDDCCTTImeNewRoomban,BolldItaIic"14PAS

		R02090972	R02090972	R02090972	R02090972	R02090972	R02090972
Client ID:		10A	11A	12A	13A	14A	15A
Lab No.:		060294 02	060295 02	060296 02	060297 02	060298 02	060299 02
Date Sampled:		12-Sep-2002	12-Sep-2002	12-Sep-2002	12-Sep-2002	12-Sep-2002	12-Sep-2002
Component	Units						
Total Tetrachlorodibenzofur	pg	190	140	120	49	280	240
Total Pentachlorodibenzofura	"	170	73	39	13	160	83
Total Hexachlorodibenzofur	"	140	45	31	8.0	78	52
Total Heptachlorodibenzofura	"	67	21	<16	<5.7	20	5.7
Octachlorodibenzofuran	"	99	18	15	5.8	26	15
Total Tetrachlorodibenzo-p-di	"	230	150	120	62	280	230
Total Pentachlorodibenzo-p-d	"	140	83	46	19	150	94
Total Hexachlorodibenzo-p-di	"	160	97	15	3.0	150	76
Total Heptachlorodibenzo-p-d	"	180	57	61	18	100	59
Octachlorodibenzo-p-dioxin	"	320	140	190	48	350	200
Internal Recoveries	%						
2,3,7,8-T4CDF-13C12		100	107	98	95	88	105
2,3,7,8-T4CDD-13C12		96	95	92	94	92	108
1,2,3,7,8-P5CDF-13C12		97	106	98	97	87	105
1,2,3,7,8-P5CDD-13C12		98	106	95	96	84	101
1,2,3,4,7,8-H6CDF-13C12		120	116	112	115	109	129
1,2,3,6,7,8-H6CDD-13C12		116	109	100	109	99	118
1,2,3,4,6,7,8-H7CDF-13C12		112	120	110	120	109	133
1,2,3,4,6,7,8-H7CDD-13C12		122	125	113	127	113	136
OCDD-13C12		128	140	124	147	129	158
2,3,7,8-Cl4-Dibenzofuran (D)	pg	40	<24	18	12	51	38
2,3,7,8-Cl4-Dibenzo-p-dioxin	"	<4.2	<5.6	<5.0	<4.5	<4.6	<4.4
1,2,3,7,8-Cl5-Dibenzofuran	"	<8.5	<3.8	<3.2	<2.6	7.5	<5.0
2,3,4,7,8-Cl5-Dibenzofuran	"	23	9.9	<7.0	<2.8	14	10
1,2,3,7,8-Cl5-Dibenzo-p-diox	"	<4.5	<6.0	<5.9	<5.2	<4.8	<5.6
1,2,3,4,7,8-Cl6-Dibenzofuran	"	35	11	6.2	3.3	16	11
1,2,3,6,7,8-Cl6-Dibenzofuran	"	15	6.0	3.7	<2.0	7.7	5.9
2,3,4,6,7,8-Cl6-Dibenzofuran	"	25	7.1	4.2	<2.4	7.9	5.6
1,2,3,7,8,9-Cl6-Dibenzofuran	"	<4.5	<2.3	<1.6	<2.9	<2.7	<1.3
1,2,3,4,7,8-Cl6-Dibenzo-p-di	"	5.3	<3.4	<2.4	<1.7	3.4	<2.6
1,2,3,6,7,8-Cl6-Dibenzo-p-di	"	11	3.9	<2.4	<1.7	6.4	3.4
1,2,3,7,8,9-Cl6-Dibenzo-p-di	"	14	6.3	5.0	<1.7	8.8	<2.5
1,2,3,4,6,7,8-Cl7-Dibenzofur	"	<68	18	<14	<4.9	<28	<18
1,2,3,4,7,8,9-Cl7-Dibenzofur	"	22	<7.0	<8.1	<4.1	<4.9	<4.6
1,2,3,4,6,7,8-Cl7-Dibenzo-p-	"	100	29	32	9.3	51	30
1,2,3,4,6,7,8,9-Cl8-Dibenzofi	"	99	18	15	5.8	26	15
1,2,3,4,6,7,8,9-Cl8-Dibenzo-j	"	320	140	190	48	350	200
2,3,7,8-TCDF (DB225)	pg	<4.5	<4.5	<3.2	<2.5	6.7	<6.0
Internal Recoveries	%						
2,3,7,8-TCDF-13C12		110	107	100	103	104	118
TEQ based on Nato Factors	pg	31.9	14.9	10.5	6.7	22.2	16.2

RCCIicent:PPhIIpAnaytIcaI

LDDCC"ITimms Nnew Rroman,Bolld Itallic"14PAS

		R02090972	R02090972	R02090972	R02090972	R02090972	R02090972
<i>Client ID:</i>		16A	17A	18A	01A	02A	03A
<i>Lab No.:</i>		060300 02	060301 02	060302 02	060304 02	060305 02	060306 02
<i>Date Sampled:</i>		12-Sep-2002	12-Sep-2002	12-Sep-2002	12-Sep-2002	12-Sep-2002	12-Sep-2002
Component	Units						
Total Tetrachlorodibenzofuran	pg	220	310	410	13	35	190
Total Pentachlorodibenzofuran	"	81	160	250	<2.5	7.4	70
Total Hexachlorodibenzofuran	"	37	63	120	2.4	13	38
Total Heptachlorodibenzofuran	"	31	32	56	5.2	23	62
Octachlorodibenzofuran	"	18	17	26	<3.3	9.6	31
Total Tetrachlorodibenzo-p-di	"	260	390	450	26	31	160
Total Pentachlorodibenzo-p-d	"	110	230	390	<5.4	11	95
Total Hexachlorodibenzo-p-di	"	59	130	240	<7.7	<14	54
Total Heptachlorodibenzo-p-d	"	51	76	120	15	32	260
Octachlorodibenzo-p-dioxin	"	190	240	360	31	140	1200
Internal Recoveries	%						
2,3,7,8-T4CDF-13C12		77	88	90	78	80	75
2,3,7,8-T4CDD-13C12		84	93	101	88	92	73
1,2,3,7,8-P5CDF-13C12		70	83	92	69	72	70
1,2,3,7,8-P5CDD-13C12		68	81	88	72	76	62
1,2,3,4,7,8-H6CDF-13C12		104	114	117	115	117	85
1,2,3,6,7,8-H6CDD-13C12		99	109	112	105	110	81
1,2,3,4,6,7,8-H7CDF-13C12		105	110	111	114	116	93
1,2,3,4,6,7,8-H7CDD-13C12		101	111	112	59	118	85
OCDD-13C12		104	97	115	125	127	96
2,3,7,8-Cl4-Dibenzofuran (D)	pg	29	59	<79	<6.2	<8.0	30
2,3,7,8-Cl4-Dibenzo-p-dioxin	"	<2.9	<2.8	<2.3	<3.2	<3.9	<4.2
1,2,3,7,8-Cl5-Dibenzofuran	"	<2.6	8.5	12	<2.4	<2.9	<3.3
2,3,4,7,8-Cl5-Dibenzofuran	"	6.7	13	25	<2.6	<3.2	7.3
1,2,3,7,8-Cl5-Dibenzo-p-diox	"	<2.5	4.2	6.8	<5.4	<3.6	<11
1,2,3,4,7,8-Cl6-Dibenzofuran	"	8.8	13	23	<1.3	3.6	8.9
1,2,3,6,7,8-Cl6-Dibenzofuran	"	<4.9	6.9	10.0	<1.3	<1.9	<4.0
2,3,4,6,7,8-Cl6-Dibenzofuran	"	6.3	6.3	11	<1.6	<2.3	4.2
1,2,3,7,8,9-Cl6-Dibenzofuran	"	<2.9	<2.6	<2.5	<1.9	<2.8	<3.2
1,2,3,4,7,8-Cl6-Dibenzo-p-di	"	<2.4	3.3	3.8	<2.0	<2.3	<4.2
1,2,3,6,7,8-Cl6-Dibenzo-p-di	"	2.8	4.4	9.0	<2.0	<2.3	<4.2
1,2,3,7,8,9-Cl6-Dibenzo-p-di	"	4.6	<3.8	11	<2.0	<2.2	<4.1
1,2,3,4,6,7,8-Cl7-Dibenzofur	"	17	21	30	4.4	11	33
1,2,3,4,7,8,9-Cl7-Dibenzofur	"	3.3	<2.9	<5.9	<4.8	<5.0	<4.5
1,2,3,4,6,7,8-Cl7-Dibenzo-p-	"	28	39	62	15	19	150
1,2,3,4,6,7,8,9-Cl8-Dibenzof	"	18	17	26	<3.3	9.6	31
1,2,3,4,6,7,8,9-Cl8-Dibenzo-j	"	190	240	360	31	140	1200
2,3,7,8-TCDF (DB225)	pg	5.5	7.0	10	<1.9	<2.9	5.3
Internal Recoveries	%						
2,3,7,8-TCDF-13C12		95	108	109	96	101	83
TEQ based on Nato Factors	pg	11.6	20.9	29.8	4.8	5.6	17.0

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LDDCCTTIme s N ew R o m a n , B o l d I t a l i c " 1 4 P A S

		R02090972	R02090972	R02090972	R02090972	R02090972	R02090972
Client ID:		04A	05A	06A	07A	08A	09A
Lab No.:		060307 02	060308 02	060309 02	060310 02	060311 02	060312 02
Date Sampled:		12-Sep-2002	12-Sep-2002	12-Sep-2002	12-Sep-2002	12-Sep-2002	12-Sep-2002
Component	Units						
Total Tetrachlorodibenzofuran	pg	4.5	280	<5.3	150	120	310
Total Pentachlorodibenzofuran	"	<3.1	70	<3.2	14	30	76
Total Hexachlorodibenzofuran	"	5.3	39	<4.5	16	4.1	25
Total Heptachlorodibenzofuran	"	<4.5	38	16	9.4	2.2	21
Octachlorodibenzofuran	"	<5.0	19	<5.2	<6.3	<8.9	13
Total Tetrachlorodibenzo-p-dioxin	"	35	310	27	200	140	380
Total Pentachlorodibenzo-p-dioxin	"	<8.4	82	<7.5	47	40	85
Total Hexachlorodibenzo-p-dioxin	"	<3.1	79	<10	<24	11	58
Total Heptachlorodibenzo-p-dioxin	"	<6.9	100	41	25	39	40
Octachlorodibenzo-p-dioxin	"	85	320	100	74	150	150
Internal Recoveries	%						
2,3,7,8-TCDF-13C12		76	83	64	74	83	77
2,3,7,8-TCDD-13C12		75	79	61	72	78	72
1,2,3,7,8-P5CDF-13C12		82	80	66	84	85	84
1,2,3,7,8-P5CDD-13C12		75	73	62	77	84	82
1,2,3,4,7,8-H6CDF-13C12		109	101	92	98	109	102
1,2,3,6,7,8-H6CDD-13C12		101	95	86	93	99	96
1,2,3,4,6,7,8-H7CDF-13C12		103	86	85	91	99	98
1,2,3,4,6,7,8-H7CDD-13C12		98	92	80	88	96	96
OCDD-13C12		110	103	92	102	112	111
2,3,7,8-Cl4-Dibenzofuran (D)	pg	4.5	43	<5.3	<21	<17	<35
2,3,7,8-Cl4-Dibenzo-p-dioxin	"	<7.0	<5.5	<5.2	<6.6	<2.8	<3.5
1,2,3,7,8-Cl5-Dibenzofuran	"	<3.0	7.2	<3.1	<3.1	<2.8	5.2
2,3,4,7,8-Cl5-Dibenzofuran	"	<3.2	11	<5.3	<3.4	<3.0	8.2
1,2,3,7,8-Cl5-Dibenzo-p-dioxin	"	<8.4	<8.3	<7.5	<7.1	<3.6	<3.6
1,2,3,4,7,8-Cl6-Dibenzofuran	"	2.4	10.0	<3.1	5.5	3.6	7.8
1,2,3,6,7,8-Cl6-Dibenzofuran	"	2.3	5.6	<3.1	3.1	<2.1	<3.8
2,3,4,6,7,8-Cl6-Dibenzofuran	"	<2.0	<5.0	<3.7	<2.0	<2.6	3.1
1,2,3,7,8,9-Cl6-Dibenzofuran	"	<2.5	<3.3	<4.5	<2.5	<3.0	<2.5
1,2,3,4,7,8-Cl6-Dibenzo-p-dioxin	"	<3.1	<4.3	<3.3	<2.3	<2.9	<2.4
1,2,3,6,7,8-Cl6-Dibenzo-p-dioxin	"	<3.1	5.5	<3.2	<2.2	<2.9	<2.4
1,2,3,7,8,9-Cl6-Dibenzo-p-dioxin	"	<3.1	<4.2	<3.2	<2.2	<2.8	<2.3
1,2,3,4,6,7,8-Cl7-Dibenzofuran	"	<3.8	24	13	8.0	<9.4	13
1,2,3,4,7,8,9-Cl7-Dibenzofuran	"	<5.4	<6.7	<7.8	<4.3	2.5	<2.4
1,2,3,4,6,7,8-Cl7-Dibenzo-p-dioxin	"	<6.9	52	22	14	22	21
1,2,3,4,6,7,8,9-Cl8-Dibenzofuran	"	<5.0	19	<5.2	<6.3	<8.9	13
1,2,3,4,6,7,8,9-Cl8-Dibenzo-p-dioxin	"	85	320	100	74	150	150
2,3,7,8-TCDF (DB225)	pg	<4.2	7.7	<6.3	-	-	-
Internal Recoveries	%						
2,3,7,8-TCDF-13C12		78	85	70	-	-	-
TEQ based on Nato Factors	pg	8.3	19.3	7.8	8.8	5.6	11.0

R C I i c e n t : P h i l i p A n a l y t i c a l

LDDCCTTIme s N ew R o m a n , B o l d I t a l i c " 1 4 P A S

Client ID: Lab No.: Date Sampled:		Method Blank 10/17 065481 02	Blank Spike#1 065481 02	Blank Spike#1 %Recoveries	Method Blank10/12 065469 02 12-Sep-2002	Blank Spike #1 065469 02	Blank Spike #1 %Recoveries
Component	Units						
Total Tetrachlorodibenzofuran	pg	<2.6	1900	-	<3.7	1000	-
Total Pentachlorodibenzofuran	"	<2.4	5300	-	<4.5	5700	-
Total Hexachlorodibenzofuran	"	3.1	8900	-	5.1	9300	-
Total Heptachlorodibenzofuran	"	<2.9	4300	-	5.2	4600	-
Octachlorodibenzofuran	"	15	4500	-	19	5300	-
Total Tetrachlorodibenzo-p-di	"	<2.5	970	-	<4.3	1000	-
Total Pentachlorodibenzo-p-d	"	<2.8	2700	-	<5.0	2700	-
Total Hexachlorodibenzo-p-di	"	4.4	7300	-	<4.8	7700	-
Total Heptachlorodibenzo-p-d	"	5.5	2300	-	8.0	2500	-
Octachlorodibenzo-p-dioxin	"	16	4800	-	17	5000	-
Internal Recoveries	%						
2,3,7,8-T4CDF-13C12		54	62	62	86	92	92
2,3,7,8-T4CDD-13C12		66	68	68	74	79	79
1,2,3,7,8-P5CDF-13C12		56	61	61	90	102	102
1,2,3,7,8-P5CDD-13C12		51	61	61	85	109	109
1,2,3,4,7,8-H6CDF-13C12		100	97	97	113	98	98
1,2,3,6,7,8-H6CDD-13C12		92	95	95	102	108	108
1,2,3,4,6,7,8-H7CDF-13C12		101	95	95	125	104	104
1,2,3,4,6,7,8-H7CDD-13C12		91	96	96	117	111	111
OCDD-13C12		101	110	110	133	110	110
2,3,7,8-Cl4-Dibenzofuran (D)	pg	<2.6	950	95	<3.7	990	99
2,3,7,8-Cl4-Dibenzo-p-dioxin	"	<2.5	970	97	<4.3	1000	101
1,2,3,7,8-Cl5-Dibenzofuran	"	<2.3	2500	99	<4.3	2600	106
2,3,4,7,8-Cl5-Dibenzofuran	"	<2.5	2800	113	<4.7	3000	120
1,2,3,7,8-Cl5-Dibenzo-p-diox	"	<2.8	2700	108	<5.0	2700	109
1,2,3,4,7,8-Cl6-Dibenzofuran	"	2.7	2200	87	<1.8	2300	91
1,2,3,6,7,8-Cl6-Dibenzofuran	"	<2.4	2300	93	2.7	2400	98
2,3,4,6,7,8-Cl6-Dibenzofuran	"	<2.8	2100	86	2.2	2500	99
1,2,3,7,8,9-Cl6-Dibenzofuran	"	<3.4	2200	89	<4.7	2000	80
1,2,3,4,7,8-Cl6-Dibenzo-p-di	"	<3.2	2400	97	<4.8	2700	110
1,2,3,6,7,8-Cl6-Dibenzo-p-di	"	4.4	2500	100	<4.8	2400	95
1,2,3,7,8,9-Cl6-Dibenzo-p-di	"	<3.1	2300	92	<4.7	2600	103
1,2,3,4,6,7,8-Cl7-Dibenzofur	"	<2.5	2100	86	4.5	2200	89
1,2,3,4,7,8,9-Cl7-Dibenzofur	"	<3.6	2100	85	<6.1	2400	96
1,2,3,4,6,7,8-Cl7-Dibenzo-p-d	"	5.5	2300	92	8.0	2500	100
1,2,3,4,6,7,8,9-Cl8-Dibenzof	"	15	4500	91	19	5300	106
1,2,3,4,6,7,8,9-Cl8-Dibenzo-j	"	16	4800	96	17	5000	101
2,3,7,8-TCDF (DB225)	pg	-	-	-			
Internal Recoveries	%						
2,3,7,8-TCDF-13C12		-	-	-			
TEQ based on Nato Factors	pg	4.2			6.6		

R C I i c e n t : P h i l i p A n a l y t i c a l

LDDC "Timmes New Room, Board Italic"14PASCS -
Su

Batch Code: 1012FB01 1012FB01 1017NZ01

PCDD/F(DB5)	060294 02	060300 02	060306 02
	060295 02	060301 02	060307 02
	060296 02	060302 02	060308 02
	060297 02	060304 02	060309 02
	060298 02	060305 02	060310 02
	060299 02	065481 02	060311 02
			060312 02

Date Analysed 02/10/19 02/10/20 02/10/21

Date Prepared: 02/10/12 02/10/12 02/10/17

Batch Code: 1012FB01 1012FB01 1017NZ02

2,3,7,8-TCDF	060294 02	060300 02	060306 02
	060295 02	060301 02	060307 02
	060296 02	060302 02	060308 02
	060297 02	060304 02	060309 02
	060298 02	060305 02	
	060299 02		

Date Analysed 02/10/21 02/10/21 02/10/21

Date Prepared: 02/10/12 02/10/12 02/10/17

RCDIneent:PhIP Annalytic