

Gilsenan, Michael

From: Theodorellys, Penny
Sent: Tuesday, December 24, 2002 10:17 AM
To: Radhakrishnan, Krish
Cc: Gilsenan, Michael
Subject: FW: Corrected Dioxin Reports

The reference is to some changes and additions I requested for the last draft of the report.

-----Original Message-----

From: Benjamin M. Sallemi [mailto:sallemi15@atc-enviro.com]
Sent: Tuesday, December 24, 2002 9:02 AM
To: Penny Theodorellys
Subject: Corrected Dioxin Reports

Penny,

Following are the corrected Excel reports for the Dioxin "post test" wipe samples for 125 Cedar Street. The TEQ (or TEF, as referenced in the spreadsheet) results have been corrected to include 50% of the non-detects, and also reported with units of ng/m2.

I will finalize your comments on the final report after the X-mass holiday. I'm waiting for verbage from our lab about the analytical procedures taken for the various types of analysis performed (i.e., PAH, Dioxin, Mercury, etc.)

Have a great holiday.

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3/11/2003

**PSC Analytical Services
Certificate of Analysis**

	R02100400	R02100400	R02100400
Client ID:	01A	01A	01A
Lab No.:	039046 02	039046 02	039046 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.09	pg	1.6	0.16
2,3,7,8-Cl4DBD	0.19	"	1.1	1.1
1,2,3,7,8-Cl5DBF	0.21	"	1.2	0.062
2,3,4,7,8-Cl5DBF	0.21	"	1.1	0.57
1,2,3,7,8-Cl5DBD	0.14	"	0.89	0.44
1,2,3,4,7,8-Cl6DBF	0.59	"	1.9	0.19
1,2,3,6,7,8-Cl6DBF	2.2	"	<2.2	<0.22
2,3,4,6,7,8-Cl6DBF	0.67	"	6.3	0.63
1,2,3,7,8,9-Cl6DBF	0.74	"	5.8	0.58
1,2,3,4,7,8-Cl6DBD	1.3	"	<1.3	<0.13
1,2,3,6,7,8-Cl6DBD	0.25	"	1.8	0.18
1,2,3,7,8,9-Cl6DBD	0.25	"	2.6	0.26
1,2,3,4,6,7,8-Cl7DBF	4.8	"	<4.8	<0.048
1,2,3,4,7,8,9-Cl7DBF	0.7	"	6.4	0.064
1,2,3,4,6,7,8-Cl7DBD	2.5	"	<2.5	<0.025
1,2,3,4,6,7,8,9-Cl8DBF	0.27	"	5.7	0.0057
1,2,3,4,6,7,8,9-Cl8DBD	0.24	"	9.3	0.0093
TEF		pg	4.2	
EPA Requested TEQ			< 4.45	
MAX TEF		"	< 4.7	
Units Ng/m²			0.45	
ΣT4CDF	0.09	pg	2.4	4
ΣP5CDF	0.21	"	2.3	2
ΣH6CDF	0.67	"	14	3
ΣH7CDF	0.68	"	6.4	1
OCDF	0.27	"	5.7	1
ΣT4CDD	0.19	"	1.1	1
ΣP5CDD	0.14	"	0.89	1
ΣH6CDD	0.25	"	4.5	2
ΣH7CDD	0.24	"	0.46	1
OCDD	0.24	"	9.3	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			92	
2,3,7,8-T4CDD-13C12			78	
1,2,3,7,8-P5CDF-13C12			73	
1,2,3,7,8-P5CDD-13C12			64	
1,2,3,6,7,8-H6CDF-13C12			25	
1,2,3,6,7,8-H6CDD-13C12			56	
1,2,3,4,6,7,8-H7CDF-13C12			22	
1,2,3,4,6,7,8-H7CDD-13C12			69	
OCDD-13C12			61	

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Certificate of Analysis**

	R02100400	R02100400	R02100400
Client ID:	02A	02A	02A
Lab No.:	039047 02	039047 02	039047 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.33	pg	3.2	0.32
2,3,7,8-Cl4DBD	0.61	"	<0.61	<0.61
1,2,3,7,8-Cl5DBF	1.00	"	<1.00	<0.050
2,3,4,7,8-Cl5DBF	0.22	"	0.82	0.41
1,2,3,7,8-Cl5DBD	0.54	"	<0.54	<0.27
1,2,3,4,7,8-Cl6DBF	0.60	"	<0.60	<0.060
1,2,3,6,7,8-Cl6DBF	0.63	"	<0.63	<0.063
2,3,4,6,7,8-Cl6DBF	0.67	"	0.96	0.096
1,2,3,7,8,9-Cl6DBF	0.99	"	<0.99	<0.099
1,2,3,4,7,8-Cl6DBD	0.41	"	<0.41	<0.041
1,2,3,6,7,8-Cl6DBD	0.39	"	<0.39	<0.039
1,2,3,7,8,9-Cl6DBD	1.4	"	<1.4	<0.14
1,2,3,4,6,7,8-Cl7DBF	8.0	"	<8.0	<0.080
1,2,3,4,7,8,9-Cl7DBF	2.1	"	<2.1	<0.021
1,2,3,4,6,7,8-Cl7DBD	0.87	"	1.9	0.019
1,2,3,4,6,7,8,9-Cl8DBF	0.5	"	11	0.011
1,2,3,4,6,7,8,9-Cl8DBD	0.63	"	9.1	0.0092
TEF		pg		0.87
EPA Requested TEQ			<	1.59
MAX TEF		"	<	2.3
Units Ng/m²				0.16
ΣT4CDF	0.33	pg	3.8	2
ΣP5CDF	0.22	"	0.82	1
ΣH6CDF	0.67	"	0.96	1
ΣH7CDF	1.6	"	<1.6	0
OCDF	0.5	"	11	1
ΣT4CDD	0.34	"	4.4	2
ΣP5CDD	0.93	"	2.6	1
ΣH6CDD	0.41	"	<0.41	0
ΣH7CDD	0.87	"	1.9	1
OCDD	0.63	"	9.1	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			98	
2,3,7,8-T4CDD-13C12			79	
1,2,3,7,8-P5CDF-13C12			74	
1,2,3,7,8-P5CDD-13C12			65	
1,2,3,6,7,8-H6CDF-13C12			76	
1,2,3,6,7,8-H6CDD-13C12			83	
1,2,3,4,6,7,8-H7CDF-13C12			48	
1,2,3,4,6,7,8-H7CDD-13C12			67	
OCDD-13C12			49	

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Certificate of Analysis**

	R02100400	R02100400	R02100400
Client ID:	03A	03A	03A
Lab No.:	039048 02	039048 02	039048 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.13	pg	5.4	0.54
2,3,7,8-Cl4DBD	0.18	"	1.8	1.8
1,2,3,7,8-Cl5DBF	0.13	"	1.5	0.074
2,3,4,7,8-Cl5DBF	0.12	"	1.7	0.84
1,2,3,7,8-Cl5DBD	0.27	"	0.44	0.22
1,2,3,4,7,8-Cl6DBF	0.15	"	<0.15	<0.015
1,2,3,6,7,8-Cl6DBF	1.5	"	<1.5	<0.15
2,3,4,6,7,8-Cl6DBF	0.17	"	2.2	0.22
1,2,3,7,8,9-Cl6DBF	0.19	"	0.32	0.032
1,2,3,4,7,8-Cl6DBD	0.19	"	<0.19	<0.019
1,2,3,6,7,8-Cl6DBD	0.58	"	<0.58	<0.058
1,2,3,7,8,9-Cl6DBD	0.13	"	0.95	0.095
1,2,3,4,6,7,8-Cl7DBF	11	"	<11	<0.11
1,2,3,4,7,8,9-Cl7DBF	13	"	<13	<0.13
1,2,3,4,6,7,8-Cl7DBD	0.16	"	3.2	0.032
1,2,3,4,6,7,8,9-Cl8DBF	0.78	"	<0.78	<0.00078
1,2,3,4,6,7,8,9-Cl8DBD	0.19	"	16	0.016
TEF		pg	3.8	
EPA Requested TEQ			< 4.05	
MAX TEF		"	< 4.3	
Units Ng/m²			0.41	
ΣT4CDF	0.13	pg	13	7
ΣP5CDF	0.13	"	5.9	6
ΣH6CDF	0.17	"	2.5	2
ΣH7CDF	13	"	<13	0
OCDF	0.78	"	<0.78	0
ΣT4CDD	0.18	"	7.1	5
ΣP5CDD	0.27	"	9.3	8
ΣH6CDD	0.13	"	9.9	4
ΣH7CDD	0.16	"	7.2	2
OCDD	0.19	"	16	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			159	
2,3,7,8-T4CDD-13C12			133	
1,2,3,7,8-P5CDF-13C12			161	
1,2,3,7,8-P5CDD-13C12			166	
1,2,3,6,7,8-H6CDF-13C12			49	
1,2,3,6,7,8-H6CDD-13C12			75	
1,2,3,4,6,7,8-H7CDF-13C12			37	
1,2,3,4,6,7,8-H7CDD-13C12			95	
OCDD-13C12			77	

**PSC Analytical Services
Certificate of Analysis**

	R02100400	R02100400	R02100400
Client ID:	04A	04A	04A
Lab No.:	039049 02	039049 02	039049 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.21	pg	5.0	0.50
2,3,7,8-Cl4DBD	0.13	"	1.6	1.6
1,2,3,7,8-Cl5DBF	0.89	"	<0.89	<0.045
2,3,4,7,8-Cl5DBF	0.79	"	<0.79	<0.39
1,2,3,7,8-Cl5DBD	0.33	"	<0.33	<0.17
1,2,3,4,7,8-Cl6DBF	0.23	"	1.2	0.12
1,2,3,6,7,8-Cl6DBF	0.71	"	<0.71	<0.071
2,3,4,6,7,8-Cl6DBF	0.26	"	1.4	0.14
1,2,3,7,8,9-Cl6DBF	0.29	"	<0.29	<0.029
1,2,3,4,7,8-Cl6DBD	0.21	"	<0.21	<0.021
1,2,3,6,7,8-Cl6DBD	0.20	"	<0.20	<0.020
1,2,3,7,8,9-Cl6DBD	0.2	"	0.69	0.069
1,2,3,4,6,7,8-Cl7DBF	11	"	<11	<0.11
1,2,3,4,7,8,9-Cl7DBF	140	"	<140	<1.4
1,2,3,4,6,7,8-Cl7DBD	0.11	"	3.4	0.034
1,2,3,4,6,7,8,9-Cl8DBF	1.1	"	<1.1	<0.0011
1,2,3,4,6,7,8,9-Cl8DBD	0.2	"	24	0.024
	TEF	pg	2.5	
EPA Requested TEQ			<	3.60
MAX TEF		"	<	4.7
Units Ng/m²				0.36
ΣT4CDF	0.21	pg	17	9
ΣP5CDF	0.15	"	3.1	5
ΣH6CDF	0.23	"	2.5	2
ΣH7CDF	140	"	<140	0
OCDF	1.1	"	<1.1	0
ΣT4CDD	0.13	"	8.6	9
ΣP5CDD	0.66	"	4.2	4
ΣH6CDD	0.21	"	1.6	2
ΣH7CDD	0.11	"	6.8	2
OCDD	0.2	"	24	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			71	
2,3,7,8-T4CDD-13C12			93	
1,2,3,7,8-P5CDF-13C12			112	
1,2,3,7,8-P5CDD-13C12			107	
1,2,3,6,7,8-H6CDF-13C12			30	
1,2,3,6,7,8-H6CDD-13C12			73	
1,2,3,4,6,7,8-H7CDF-13C12			13	
1,2,3,4,6,7,8-H7CDD-13C12			85	
OCDD-13C12			76	

**PSC Analytical Services
Certificate of Analysis**

	R02100400	R02100400	R02100400
Client ID:	05A	05A	05A
Lab No.:	039050 02	039050 02	039050 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.33	pg	1.8	0.18
2,3,7,8-Cl4DBD	0.13	"	<0.13	<0.13
1,2,3,7,8-Cl5DBF	0.36	"	<0.36	<0.018
2,3,4,7,8-Cl5DBF	0.2	"	0.35	0.18
1,2,3,7,8-Cl5DBD	0.66	"	<0.66	<0.33
1,2,3,4,7,8-Cl6DBF	0.31	"	<0.31	<0.031
1,2,3,6,7,8-Cl6DBF	0.31	"	<0.31	<0.031
2,3,4,6,7,8-Cl6DBF	0.35	"	0.42	0.042
1,2,3,7,8,9-Cl6DBF	0.39	"	<0.39	<0.039
1,2,3,4,7,8-Cl6DBD	0.21	"	<0.21	<0.021
1,2,3,6,7,8-Cl6DBD	0.20	"	<0.20	<0.020
1,2,3,7,8,9-Cl6DBD	0.20	"	<0.20	<0.020
1,2,3,4,6,7,8-Cl7DBF	89	"	<89	<0.89
1,2,3,4,7,8,9-Cl7DBF	36	"	<36	<0.36
1,2,3,4,6,7,8-Cl7DBD	0.53	"	<0.53	<0.0053
1,2,3,4,6,7,8,9-Cl8DBF	5.6	"	<5.6	<0.0056
1,2,3,4,6,7,8,9-Cl8DBD	0.3	"	2.7	0.0027
TEF		pg	0.40	
EPA Requested TEQ			<	1.35
MAX TEF		"	<	2.3
Units Ng/m²				0.14
ΣT4CDF	0.33	pg	3.6	4
ΣP5CDF	0.21	"	0.35	1
ΣH6CDF	0.35	"	0.42	1
ΣH7CDF	99	"	<99	0
OCDF	5.6	"	<5.6	0
ΣT4CDD	0.13	"	0.90	2
ΣP5CDD	0.66	"	0.69	1
ΣH6CDD	0.21	"	<0.21	0
ΣH7CDD	0.19	"	<0.19	0
OCDD	0.3	"	2.7	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			134	
2,3,7,8-T4CDD-13C12			129	
1,2,3,7,8-P5CDF-13C12			120	
1,2,3,7,8-P5CDD-13C12			114	
1,2,3,6,7,8-H6CDF-13C12			50	
1,2,3,6,7,8-H6CDD-13C12			91	
1,2,3,4,6,7,8-H7CDF-13C12			29	
1,2,3,4,6,7,8-H7CDD-13C12			98	
OCDD-13C12			92	

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**PSC Analytical Services
Certificate of Analysis**

	R02100400	R02100400	R02100400
Client ID:	06A	06A	06A
Lab No.:	039051 02	039051 02	039051 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.13	pg	7.9	0.79
2,3,7,8-Cl4DBD	1.4	"	<1.4	<1.4
1,2,3,7,8-Cl5DBF	0.21	"	1.5	0.076
2,3,4,7,8-Cl5DBF	0.2	"	2.2	1.1
1,2,3,7,8-Cl5DBD	0.89	"	0.65	0.33
1,2,3,4,7,8-Cl6DBF	0.12	"	1.4	0.14
1,2,3,6,7,8-Cl6DBF	0.12	"	1.1	0.11
2,3,4,6,7,8-Cl6DBF	0.13	"	1.6	0.16
1,2,3,7,8,9-Cl6DBF	0.39	"	<0.39	<0.039
1,2,3,4,7,8-Cl6DBD	0.16	"	0.75	0.075
1,2,3,6,7,8-Cl6DBD	0.75	"	<0.75	<0.075
1,2,3,7,8,9-Cl6DBD	0.15	"	1.1	0.11
1,2,3,4,6,7,8-Cl7DBF	9.0	"	<9.0	<0.090
1,2,3,4,7,8,9-Cl7DBF	17	"	<17	<0.17
1,2,3,4,6,7,8-Cl7DBD	0.14	"	2.6	0.026
1,2,3,4,6,7,8,9-Cl8DBF	1.1	"	1.9	0.0019
1,2,3,4,6,7,8,9-Cl8DBD	0.47	"	11	0.011
TEF		pg	2.9	
EPA Requested TEQ			<	3.80
MAX TEF		"	<	4.7
Units Ng/m ²				0.38
ΣT4CDF	0.13	pg	23	10
ΣP5CDF	0.21	"	12	7
ΣH6CDF	0.12	"	4.1	3
ΣH7CDF	25	"	<25	0
OCDF	1.1	"	1.9	1
ΣT4CDD	0.25	"	12	7
ΣP5CDD	0.89	"	12	4
ΣH6CDD	0.15	"	13	6
ΣH7CDD	0.14	"	2.6	1
OCDD	0.47	"	11	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			96	
2,3,7,8-T4CDD-13C12			88	
1,2,3,7,8-P5CDF-13C12			93	
1,2,3,7,8-P5CDD-13C12			98	
1,2,3,6,7,8-H6CDF-13C12			66	
1,2,3,6,7,8-H6CDD-13C12			88	
1,2,3,4,6,7,8-H7CDF-13C12			73	
1,2,3,4,6,7,8-H7CDD-13C12			86	
OCDD-13C12			77	

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**PSC Analytical Services
Certificate of Analysis**

	R02100400	R02100400	R02100400
Client ID:	07A	07A	07A
Lab No.:	039052 02	039052 02	039052 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.13	pg	2.1	0.21
2,3,7,8-Cl4DBD	0.48	"	<0.48	<0.48
1,2,3,7,8-Cl5DBF	0.26	"	0.69	0.035
2,3,4,7,8-Cl5DBF	0.25	"	0.55	0.28
1,2,3,7,8-Cl5DBD	1.2	"	<1.2	<0.61
1,2,3,4,7,8-Cl6DBF	0.66	"	<0.66	<0.066
1,2,3,6,7,8-Cl6DBF	0.28	"	0.82	0.082
2,3,4,6,7,8-Cl6DBF	0.32	"	0.70	0.070
1,2,3,7,8,9-Cl6DBF	0.36	"	<0.36	<0.036
1,2,3,4,7,8-Cl6DBD	0.18	"	<0.18	<0.018
1,2,3,6,7,8-Cl6DBD	0.17	"	<0.17	<0.017
1,2,3,7,8,9-Cl6DBD	0.42	"	<0.42	<0.042
1,2,3,4,6,7,8-Cl7DBF	22	"	<22	<0.22
1,2,3,4,7,8,9-Cl7DBF	19	"	<19	<0.19
1,2,3,4,6,7,8-Cl7DBD	0.31	"	1.3	0.013
1,2,3,4,6,7,8,9-Cl8DBF	0.25	"	6.3	0.0063
1,2,3,4,6,7,8,9-Cl8DBD	0.4	"	8.7	0.0087
TEF		pg	0.70	
EPA Requested TEQ			< 1.55	
MAX TEF		"	< 2.4	
Units Ng/m ²			0.16	
ΣT4CDF	0.13	pg	4.4	5
ΣP5CDF	0.26	"	1.8	3
ΣH6CDF	0.32	"	1.9	3
ΣH7CDF	20	"	<20	0
OCDF	0.25	"	6.3	1
ΣT4CDD	0.22	"	0.43	1
ΣP5CDD	1	"	1.3	2
ΣH6CDD	0.17	"	<0.17	0
ΣH7CDD	0.31	"	2.6	2
OCDD	0.4	"	8.7	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			108	
2,3,7,8-T4CDD-13C12			95	
1,2,3,7,8-P5CDF-13C12			105	
1,2,3,7,8-P5CDD-13C12			111	
1,2,3,6,7,8-H6CDF-13C12			70	
1,2,3,6,7,8-H6CDD-13C12			89	
1,2,3,4,6,7,8-H7CDF-13C12			60	
1,2,3,4,6,7,8-H7CDD-13C12			86	
OCDD-13C12			76	

**PSC Analytical Services
Certificate of Analysis**

	R02100400	R02100400	R02100400
Client ID:	08A	08A	08A
Lab No.:	039053 02	039053 02	039053 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	1.6	pg	<1.6	<0.16
2,3,7,8-Cl4DBD	0.36	"	<0.36	<0.36
1,2,3,7,8-Cl5DBF	0.32	"	0.65	0.033
2,3,4,7,8-Cl5DBF	0.31	"	<0.31	<0.16
1,2,3,7,8-Cl5DBD	0.41	"	<0.41	<0.20
1,2,3,4,7,8-Cl6DBF	0.55	"	<0.55	<0.055
1,2,3,6,7,8-Cl6DBF	0.55	"	<0.55	<0.055
2,3,4,6,7,8-Cl6DBF	0.63	"	<0.63	<0.063
1,2,3,7,8,9-Cl6DBF	0.70	"	<0.70	<0.070
1,2,3,4,7,8-Cl6DBD	0.45	"	<0.45	<0.045
1,2,3,6,7,8-Cl6DBD	0.43	"	<0.43	<0.043
1,2,3,7,8,9-Cl6DBD	0.42	"	<0.42	<0.042
1,2,3,4,6,7,8-Cl7DBF	16	"	<16	<0.16
1,2,3,4,7,8,9-Cl7DBF	18	"	<18	<0.18
1,2,3,4,6,7,8-Cl7DBD	1.3	"	<1.3	<0.013
1,2,3,4,6,7,8,9-Cl8DBF	1.1	"	<1.1	<0.0011
1,2,3,4,6,7,8,9-Cl8DBD	3.9	"	<3.9	<0.0039
TEF		pg	0.033	
EPA Requested TEQ			< 0.82	
MAX TEF		"	< 1.6	
Units Ng/m²			0.08	
ΣT4CDF	0.27	pg	<0.27	0
ΣP5CDF	0.32	"	0.65	1
ΣH6CDF	0.63	"	<0.63	0
ΣH7CDF	17	"	<17	0
OCDF	1.1	"	<1.1	0
ΣT4CDD	0.36	"	<0.36	0
ΣP5CDD	0.41	"	0.63	1
ΣH6CDD	0.45	"	<0.45	0
ΣH7CDD	1.3	"	<1.3	0
OCDD	3.9	"	<3.9	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			86	
2,3,7,8-T4CDD-13C12			82	
1,2,3,7,8-P5CDF-13C12			71	
1,2,3,7,8-P5CDD-13C12			65	
1,2,3,6,7,8-H6CDF-13C12			48	
1,2,3,6,7,8-H6CDD-13C12			75	
1,2,3,4,6,7,8-H7CDF-13C12			47	
1,2,3,4,6,7,8-H7CDD-13C12			82	
OCDD-13C12			67	

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	R02100400	R02100400	R02100400
Client ID:	09A	09A	09A
Lab No.:	039054 02	039054 02	039054 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.32	pg	3.1	0.31
2,3,7,8-Cl4DBD	0.78	"	<0.78	<0.78
1,2,3,7,8-Cl5DBF	0.31	"	<0.31	<0.015
2,3,4,7,8-Cl5DBF	0.24	"	0.69	0.35
1,2,3,7,8-Cl5DBD	0.81	"	<0.81	<0.41
1,2,3,4,7,8-Cl6DBF	1.0	"	<1.0	<0.10
1,2,3,6,7,8-Cl6DBF	1.0	"	<1.0	<0.10
2,3,4,6,7,8-Cl6DBF	1.2	"	<1.2	<0.12
1,2,3,7,8,9-Cl6DBF	1.3	"	<1.3	<0.13
1,2,3,4,7,8-Cl6DBD	0.53	"	<0.53	<0.053
1,2,3,6,7,8-Cl6DBD	0.50	"	<0.50	<0.050
1,2,3,7,8,9-Cl6DBD	0.49	"	<0.49	<0.049
1,2,3,4,6,7,8-Cl7DBF	14	"	<14	<0.14
1,2,3,4,7,8,9-Cl7DBF	1.4	"	<1.4	<0.014
1,2,3,4,6,7,8-Cl7DBD	1.0	"	2.5	0.025
1,2,3,4,6,7,8,9-Cl8DBF	0.86	"	4.2	0.0042
1,2,3,4,6,7,8,9-Cl8DBD	1.0	"	30	0.030
TEF		pg		0.71
EPA Requested TEQ			<	1.71
MAX TEF		"	<	2.7
Units Ng/m²				0.17
ΣT4CDF	0.32	pg	6.8	5
ΣP5CDF	0.31	"	1.3	2
ΣH6CDF	1.0	"	<1.0	0
ΣH7CDF	16	"	<16	0
OCDF	0.86	"	4.2	1
ΣT4CDD	0.53	"	0.70	1
ΣP5CDD	0.81	"	<0.81	0
ΣH6CDD	0.53	"	3.5	1
ΣH7CDD	1.0	"	5.5	2
OCDD	1.0	"	30	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			97	
2,3,7,8-T4CDD-13C12			77	
1,2,3,7,8-P5CDF-13C12			73	
1,2,3,7,8-P5CDD-13C12			64	
1,2,3,6,7,8-H6CDF-13C12			69	
1,2,3,6,7,8-H6CDD-13C12			80	
1,2,3,4,6,7,8-H7CDF-13C12			59	
1,2,3,4,6,7,8-H7CDD-13C12			76	
OCDD-13C12			52	

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	R02100400	R02100400	R02100400
Client ID:	10A	10A	10A
Lab No.:	039055 02	039055 02	039055 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.14	pg	1.7	0.17
2,3,7,8-Cl4DBD	0.47	"	<0.47	<0.47
1,2,3,7,8-Cl5DBF	0.14	"	0.72	0.036
2,3,4,7,8-Cl5DBF	0.14	"	1.1	0.55
1,2,3,7,8-Cl5DBD	0.54	"	<0.54	<0.27
1,2,3,4,7,8-Cl6DBF	0.21	"	2.0	0.20
1,2,3,6,7,8-Cl6DBF	1.9	"	<1.9	<0.19
2,3,4,6,7,8-Cl6DBF	0.24	"	2.4	0.24
1,2,3,7,8,9-Cl6DBF	2.3	"	<2.3	<0.23
1,2,3,4,7,8-Cl6DBD	0.31	"	1.3	0.13
1,2,3,6,7,8-Cl6DBD	0.29	"	1.4	0.14
1,2,3,7,8,9-Cl6DBD	0.28	"	2.0	0.20
1,2,3,4,6,7,8-Cl7DBF	6.2	"	<6.2	<0.062
1,2,3,4,7,8,9-Cl7DBF	3.3	"	<3.3	<0.033
1,2,3,4,6,7,8-Cl7DBD	0.34	"	1.9	0.019
1,2,3,4,6,7,8,9-Cl8DBF	0.98	"	4.2	0.0042
1,2,3,4,6,7,8,9-Cl8DBD	0.66	"	12	0.012
TEF		pg	1.7	
EPA Requested TEQ			<	2.35
- MAX TEF		"	<	3.0
Units Ng/m²				0.24
ΣT4CDF	0.14	pg	2.5	2
ΣP5CDF	0.14	"	3.8	6
ΣH6CDF	0.24	"	7.3	5
ΣH7CDF	26	"	<26	0
OCDF	0.98	"	4.2	1
ΣT4CDD	0.13	"	1.7	3
ΣP5CDD	0.60	"	<0.60	0
ΣH6CDD	0.31	"	6.2	5
ΣH7CDD	0.34	"	3.8	2
OCDD	0.66	"	12	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			110	
2,3,7,8-T4CDD-13C12			85	
1,2,3,7,8-P5CDF-13C12			77	
1,2,3,7,8-P5CDD-13C12			60	
1,2,3,6,7,8-H6CDF-13C12			59	
1,2,3,6,7,8-H6CDD-13C12			80	
1,2,3,4,6,7,8-H7CDF-13C12			51	
1,2,3,4,6,7,8-H7CDD-13C12			90	
OCDD-13C12			73	

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	R02100400	R02100400	R02100400
Client ID:	11A	11A	11A
Lab No.:	039056 02	039056 02	039056 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	1.8	pg	2.6	0.26
2,3,7,8-Cl4DBD	1.3	"	<1.3	<1.3
1,2,3,7,8-Cl5DBF	2.0	"	<2.0	<0.098
2,3,4,7,8-Cl5DBF	1.9	"	<1.9	<0.95
1,2,3,7,8-Cl5DBD	2.2	"	<2.2	<1.1
1,2,3,4,7,8-Cl6DBF	1.0	"	<1.0	<0.10
1,2,3,6,7,8-Cl6DBF	1.0	"	<1.0	<0.10
2,3,4,6,7,8-Cl6DBF	1.2	"	<1.2	<0.12
1,2,3,7,8,9-Cl6DBF	1.3	"	<1.3	<0.13
1,2,3,4,7,8-Cl6DBD	2.1	"	<2.1	<0.21
1,2,3,6,7,8-Cl6DBD	2.0	"	<2.0	<0.20
1,2,3,7,8,9-Cl6DBD	2.0	"	<2.0	<0.20
1,2,3,4,6,7,8-Cl7DBF	1.8	"	<1.8	<0.018
1,2,3,4,7,8,9-Cl7DBF	4.8	"	<4.8	<0.048
1,2,3,4,6,7,8-Cl7DBD	2.7	"	<2.7	<0.027
1,2,3,4,6,7,8,9-Cl8DBF	2.8	"	<2.8	<0.0028
1,2,3,4,6,7,8,9-Cl8DBD	4.7	"	5.0	0.0050
TEF		pg		0.27
EPA Requested TEQ			<	2.59
MAX TEF		"	<	4.9
Units Ng/m²				0.26
ΣT4CDF	1.8	pg	2.6	1
ΣP5CDF	2.0	"	<2.0	0
ΣH6CDF	1.2	"	<1.2	0
ΣH7CDF	2.0	"	<2.0	0
OCDF	2.8	"	<2.8	0
ΣT4CDD	1.3	"	<1.3	0
ΣP5CDD	2.2	"	<2.2	0
ΣH6CDD	2.1	"	<2.1	0
ΣH7CDD	2.7	"	<2.7	0
OCDD	4.7	"	5.0	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			91	
2,3,7,8-T4CDD-13C12			85	
1,2,3,7,8-P5CDF-13C12			58	
1,2,3,7,8-P5CDD-13C12			65	
1,2,3,6,7,8-H6CDF-13C12			89	
1,2,3,6,7,8-H6CDD-13C12			69	
1,2,3,4,6,7,8-H7CDF-13C12			61	
1,2,3,4,6,7,8-H7CDD-13C12			64	
OCDD-13C12			93	

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	R02100400	R02100400	R02100400
Client ID:	12A	12A	12A
Lab No.:	039057 02	039057 02	039057 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	1.2	pg	<1.2	<0.12
2,3,7,8-Cl4DBD	3.1	"	<3.1	<3.1
1,2,3,7,8-Cl5DBF	2.3	"	<2.3	<0.11
2,3,4,7,8-Cl5DBF	2.2	"	<2.2	<1.1
1,2,3,7,8-Cl5DBD	2.5	"	<2.5	<1.3
1,2,3,4,7,8-Cl6DBF	2.6	"	<2.6	<0.26
1,2,3,6,7,8-Cl6DBF	16	"	<16	<1.6
2,3,4,6,7,8-Cl6DBF	80	"	<80	<8.0
1,2,3,7,8,9-Cl6DBF	3.2	"	<3.2	<0.32
1,2,3,4,7,8-Cl6DBD	61	"	<61	<6.1
1,2,3,6,7,8-Cl6DBD	6.0	"	<6.0	<0.60
1,2,3,7,8,9-Cl6DBD	5.9	"	<5.9	<0.59
1,2,3,4,6,7,8-Cl7DBF	5.6	"	<5.6	<0.056
1,2,3,4,7,8,9-Cl7DBF	6.4	"	<6.4	<0.064
1,2,3,4,6,7,8-Cl7DBD	3.5	"	<3.5	<0.035
1,2,3,4,6,7,8,9-Cl8DBF	3.2	"	5.4	0.0054
1,2,3,4,6,7,8,9-Cl8DBD	3.0	"	<3.0	<0.030
TEF		pg	0.0054	
EPA Requested TEQ			< 11.50	
MAX TEF		"	< 23	
Units Ng/m²			1.15	
ΣT4CDF	1.2	pg	<1.2	0
ΣP5CDF	2.3	"	<2.3	0
ΣH6CDF	2.6	"	<2.6	0
ΣH7CDF	6.2	"	<6.2	0
OCDF	3.2	"	5.4	1
ΣT4CDD	3.1	"	<3.1	0
ΣP5CDD	2.5	"	<2.5	0
ΣH6CDD	290	"	<290	0
ΣH7CDD	3.5	"	<3.5	0
OCDD	3.0	"	<3.0	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			76	
2,3,7,8-T4CDD-13C12			84	
1,2,3,7,8-P5CDF-13C12			51	
1,2,3,7,8-P5CDD-13C12			46	
1,2,3,6,7,8-H6CDF-13C12			68	
1,2,3,6,7,8-H6CDD-13C12			69	
1,2,3,4,6,7,8-H7CDF-13C12			60	
1,2,3,4,6,7,8-H7CDD-13C12			61	
OCDD-13C12			117	

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Certificate of Analysis**

	R02100400	R02100400	R02100400
Client ID:	13A	13A	13A
Lab No.:	039058 02	039058 02	039058 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl ₄ DBF	1.3	pg	<1.3	<0.13
2,3,7,8-Cl ₄ DBD	1.1	"	<1.1	<1.1
1,2,3,7,8-Cl ₅ DBF	0.99	"	<0.99	<0.050
2,3,4,7,8-Cl ₅ DBF	0.96	"	<0.96	<0.48
1,2,3,7,8-Cl ₅ DBD	3.8	"	<3.8	<1.9
1,2,3,4,7,8-Cl ₆ DBF	1.5	"	<1.5	<0.15
1,2,3,6,7,8-Cl ₆ DBF	1.4	"	<1.4	<0.14
2,3,4,6,7,8-Cl ₆ DBF	1.6	"	<1.6	<0.16
1,2,3,7,8,9-Cl ₆ DBF	1.8	"	<1.8	<0.18
1,2,3,4,7,8-Cl ₆ DBD	0.59	"	<0.59	<0.059
1,2,3,6,7,8-Cl ₆ DBD	0.56	"	<0.56	<0.056
1,2,3,7,8,9-Cl ₆ DBD	0.54	"	<0.54	<0.054
1,2,3,4,6,7,8-Cl ₇ DBF	5.2	"	<5.2	<0.052
1,2,3,4,7,8,9-Cl ₇ DBF	6.0	"	<6.0	<0.060
1,2,3,4,6,7,8-Cl ₇ DBD	1.2	"	<1.2	<0.012
1,2,3,4,6,7,8,9-Cl ₈ DBF	1.3	"	<1.3	<0.0013
1,2,3,4,6,7,8,9-Cl ₈ DBD	0.85	"	4.5	0.0045
		TEF	pg	0.0045
		EPA Requested TEQ	<	2.30
		MAX TEF	<	4.6
		Units Ng/m ²		0.23
ΣT ₄ CDF	1.3	pg	<1.3	0
ΣP ₅ CDF	0.99	"	<0.99	0
ΣH ₆ CDF	1.5	"	<1.5	0
ΣH ₇ CDF	5.8	"	<5.8	0
OCDF	1.3	"	<1.3	0
ΣT ₄ CDD	1.1	"	1.9	1
ΣP ₅ CDD	3.8	"	<3.8	0
ΣH ₆ CDD	0.56	"	<0.56	0
ΣH ₇ CDD	1.2	"	<1.2	0
OCDD	0.85	"	4.5	1
Surrogate Recoveries		%		
2,3,7,8-T ₄ CDF-13C ₁₂			80	
2,3,7,8-T ₄ CDD-13C ₁₂			83	
1,2,3,7,8-P ₅ CDF-13C ₁₂			69	
1,2,3,7,8-P ₅ CDD-13C ₁₂			67	
1,2,3,6,7,8-H ₆ CDF-13C ₁₂			77	
1,2,3,6,7,8-H ₆ CDD-13C ₁₂			90	
1,2,3,4,6,7,8-H ₇ CDF-13C ₁₂			88	
1,2,3,4,6,7,8-H ₇ CDD-13C ₁₂			99	
OCDD-13C ₁₂			94	

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	R02100400	R02100400	R02100400
Client ID:	14A	14A	14A
Lab No.:	039059 02	039059 02	039059 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	1.1	pg	<1.1	<0.11
2,3,7,8-Cl4DBD	1.1	"	<1.1	<1.1
1,2,3,7,8-Cl5DBF	1.2	"	<1.2	<0.061
2,3,4,7,8-Cl5DBF	1.2	"	<1.2	<0.59
1,2,3,7,8-Cl5DBD	1.4	"	<1.4	<0.72
1,2,3,4,7,8-Cl6DBF	1.0	"	<1.0	<0.10
1,2,3,6,7,8-Cl6DBF	1.0	"	<1.0	<0.10
2,3,4,6,7,8-Cl6DBF	1.1	"	<1.1	<0.11
1,2,3,7,8,9-Cl6DBF	1.3	"	<1.3	<0.13
1,2,3,4,7,8-Cl6DBD	1.2	"	<1.2	<0.12
1,2,3,6,7,8-Cl6DBD	1.1	"	<1.1	<0.11
1,2,3,7,8,9-Cl6DBD	1.1	"	<1.1	<0.11
1,2,3,4,6,7,8-Cl7DBF	1.2	"	<1.2	<0.012
1,2,3,4,7,8,9-Cl7DBF	1.4	"	<1.4	<0.014
1,2,3,4,6,7,8-Cl7DBD	1.2	"	<1.2	<0.012
1,2,3,4,6,7,8,9-Cl8DBF	2.1	"	<2.1	<0.0021
1,2,3,4,6,7,8,9-Cl8DBD	4.3	"	<4.3	<0.0043
TEF		pg	0	
EPA Requested TEQ			< 1.70	
MAX TEF		"	< 3.4	
Units Ng/m ²			0.17	
ΣT4CDF	1.1	pg	<1.1	0
ΣP5CDF	1.2	"	<1.2	0
ΣH6CDF	1.0	"	<1.0	0
ΣH7CDF	1.4	"	<1.4	0
OCDF	2.1	"	<2.1	0
ΣT4CDD	1.1	"	<1.1	0
ΣP5CDD	1.4	"	<1.4	0
ΣH6CDD	1.1	"	<1.1	0
ΣH7CDD	1.2	"	<1.2	0
OCDD	4.3	"	<4.3	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			84	
2,3,7,8-T4CDD-13C12			85	
1,2,3,7,8-P5CDF-13C12			70	
1,2,3,7,8-P5CDD-13C12			79	
1,2,3,6,7,8-H6CDF-13C12			77	
1,2,3,6,7,8-H6CDD-13C12			90	
1,2,3,4,6,7,8-H7CDF-13C12			87	
1,2,3,4,6,7,8-H7CDD-13C12			98	
OCDD-13C12			87	

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	R02100400	R02100400	R02100400
Client ID:	15A	15A	15A
Lab No.:	039060 02	039060 02	039060 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	1.0	pg	1.9	0.19
2,3,7,8-Cl4DBD	2.0	"	<2.0	<2.0
1,2,3,7,8-Cl5DBF	1.7	"	<1.7	<0.087
2,3,4,7,8-Cl5DBF	1.7	"	<1.7	<0.84
1,2,3,7,8-Cl5DBD	1.5	"	<1.5	<0.77
1,2,3,4,7,8-Cl6DBF	1.4	"	<1.4	<0.14
1,2,3,6,7,8-Cl6DBF	1.4	"	<1.4	<0.14
2,3,4,6,7,8-Cl6DBF	1.6	"	<1.6	<0.16
1,2,3,7,8,9-Cl6DBF	1.7	"	<1.7	<0.17
1,2,3,4,7,8-Cl6DBD	1.3	"	<1.3	<0.13
1,2,3,6,7,8-Cl6DBD	1.3	"	<1.3	<0.13
1,2,3,7,8,9-Cl6DBD	1.2	"	<1.2	<0.12
1,2,3,4,6,7,8-Cl7DBF	2.8	"	<2.8	<0.028
1,2,3,4,7,8,9-Cl7DBF	3.2	"	<3.2	<0.032
1,2,3,4,6,7,8-Cl7DBD	1.4	"	<1.4	<0.014
1,2,3,4,6,7,8,9-Cl8DBF	1.6	"	2.0	0.0020
1,2,3,4,6,7,8,9-Cl8DBD	1.9	"	11	0.011
TEF		pg	0.21	
EPA Requested TEQ			<	2.56
MAX TEF		"	<	4.9
Units Ng/m²				0.26
ΣT4CDF	1.0	pg	1.9	1
ΣP5CDF	1.7	"	<1.7	0
ΣH6CDF	1.6	"	<1.6	0
ΣH7CDF	3.1	"	<3.1	0
OCDF	1.6	"	2.0	1
ΣT4CDD	2.0	"	<2.0	0
ΣP5CDD	1.5	"	<1.5	0
ΣH6CDD	1.3	"	<1.3	0
ΣH7CDD	1.4	"	<1.4	0
OCDD	1.9	"	11	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			66	
2,3,7,8-T4CDD-13C12			79	
1,2,3,7,8-P5CDF-13C12			59	
1,2,3,7,8-P5CDD-13C12			67	
1,2,3,6,7,8-H6CDF-13C12			48	
1,2,3,6,7,8-H6CDD-13C12			65	
1,2,3,4,6,7,8-H7CDF-13C12			44	
1,2,3,4,6,7,8-H7CDD-13C12			81	
OCDD-13C12			182	

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	R02100400	R02100400	R02100400
Client ID:	16A	16A	16A
Lab No.:	039061 02	039061 02	039061 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	12	pg	<12	<1.2
2,3,7,8-Cl4DBD	1.4	"	13	13
1,2,3,7,8-Cl5DBF	1.1	"	<1.1	<0.056
2,3,4,7,8-Cl5DBF	1.1	"	2.3	1.1
1,2,3,7,8-Cl5DBD	1.2	"	<1.2	<0.59
1,2,3,4,7,8-Cl6DBF	3.5	"	<3.5	<0.35
1,2,3,6,7,8-Cl6DBF	1.4	"	<1.4	<0.14
2,3,4,6,7,8-Cl6DBF	1.6	"	<1.6	<0.16
1,2,3,7,8,9-Cl6DBF	1.8	"	<1.8	<0.18
1,2,3,4,7,8-Cl6DBD	1.3	"	<1.3	<0.13
1,2,3,6,7,8-Cl6DBD	1.2	"	<1.2	<0.12
1,2,3,7,8,9-Cl6DBD	1.2	"	<1.2	<0.12
1,2,3,4,6,7,8-Cl7DBF	1.6	"	<1.6	<0.017
1,2,3,4,7,8,9-Cl7DBF	1.9	"	<1.9	<0.019
1,2,3,4,6,7,8-Cl7DBD	2.0	"	12	0.12
1,2,3,4,6,7,8,9-Cl8DBF	5.4	"	<5.4	<0.0054
1,2,3,4,6,7,8,9-Cl8DBD	1.7	"	110	0.11
TEF		pg	15	
EPA Requested TEQ			<	16.50
MAX TEF		"	<	18
Units Ng/m²				1.65
ΣT4CDF	0.82	pg	16	4
ΣP5CDF	1.1	"	11	4
ΣH6CDF	1.4	"	<1.4	0
ΣH7CDF	1.8	"	<1.8	0
OCDF	5.4	"	<5.4	0
ΣT4CDD	1.4	"	58	5
ΣP5CDD	1.2	"	21	3
ΣH6CDD	1.2	"	22	2
ΣH7CDD	2.0	"	25	2
OCDD	1.7	"	110	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			74	
2,3,7,8-T4CDD-13C12			40	
1,2,3,7,8-P5CDF-13C12			64	
1,2,3,7,8-P5CDD-13C12			68	
1,2,3,6,7,8-H6CDF-13C12			54	
1,2,3,6,7,8-H6CDD-13C12			70	
1,2,3,4,6,7,8-H7CDF-13C12			49	
1,2,3,4,6,7,8-H7CDD-13C12			78	
OCDD-13C12			105	

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	R02100400	R02100400	R02100400
Client ID:	17A	17A	17A
Lab No.:	039062 02	039062 02	039062 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.89	pg	<0.89	<0.089
2,3,7,8-Cl4DBD	1.5	"	<1.5	<1.5
1,2,3,7,8-Cl5DBF	1.2	"	<1.2	<0.060
2,3,4,7,8-Cl5DBF	1.2	"	<1.2	<0.58
1,2,3,7,8-Cl5DBD	1.9	"	<1.9	<0.96
1,2,3,4,7,8-Cl6DBF	1.1	"	<1.1	<0.11
1,2,3,6,7,8-Cl6DBF	1.1	"	<1.1	<0.11
2,3,4,6,7,8-Cl6DBF	1.3	"	<1.3	<0.13
1,2,3,7,8,9-Cl6DBF	1.4	"	<1.4	<0.14
1,2,3,4,7,8-Cl6DBD	2.5	"	<2.5	<0.25
1,2,3,6,7,8-Cl6DBD	2.4	"	<2.4	<0.24
1,2,3,7,8,9-Cl6DBD	2.3	"	<2.3	<0.23
1,2,3,4,6,7,8-Cl7DBF	2.7	"	<2.7	<0.027
1,2,3,4,7,8,9-Cl7DBF	3.1	"	<3.1	<0.031
1,2,3,4,6,7,8-Cl7DBD	1.4	"	<1.4	<0.014
1,2,3,4,6,7,8,9-Cl8DBF	3.4	"	<3.4	<0.0034
1,2,3,4,6,7,8,9-Cl8DBD	5.4	"	<5.4	<0.0054
TEF		pg	0	
EPA Requested TEQ			< 2.25	
MAX TEF		"	< 4.5	
Units Ng/m ²			0.23	
ΣT4CDF	0.89	pg	<0.89	0
ΣP5CDF	1.2	"	<1.2	0
ΣH6CDF	1.3	"	<1.3	0
ΣH7CDF	3.0	"	<3.0	0
OCDF	3.4	"	<3.4	0
ΣT4CDD	1.5	"	<1.5	0
ΣP5CDD	1.9	"	<1.9	0
ΣH6CDD	2.5	"	<2.5	0
ΣH7CDD	1.4	"	<1.4	0
OCDD	5.4	"	<5.4	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			69	
2,3,7,8-T4CDD-13C12			73	
1,2,3,7,8-P5CDF-13C12			49	
1,2,3,7,8-P5CDD-13C12			51	
1,2,3,6,7,8-H6CDF-13C12			75	
1,2,3,6,7,8-H6CDD-13C12			80	
1,2,3,4,6,7,8-H7CDF-13C12			57	
1,2,3,4,6,7,8-H7CDD-13C12			71	
OCDD-13C12			50	

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	R02100400	R02100400	R02100400
Client ID:	18A	18A	18A
Lab No.:	039063 02	039063 02	039063 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl ₄ DBF	4.7	pg	<4.7	<0.47
2,3,7,8-Cl ₄ DBD	0.72	"	<0.72	<0.72
1,2,3,7,8-Cl ₅ DBF	0.40	"	<0.40	<0.020
2,3,4,7,8-Cl ₅ DBF	0.36	"	1.2	0.58
1,2,3,7,8-Cl ₅ DBD	1.1	"	<1.1	<0.55
1,2,3,4,7,8-Cl ₆ DBF	1.9	"	<1.9	<0.19
1,2,3,6,7,8-Cl ₆ DBF	1.5	"	<1.5	<0.15
2,3,4,6,7,8-Cl ₆ DBF	2.3	"	<2.3	<0.23
1,2,3,7,8,9-Cl ₆ DBF	0.64	"	2.2	0.22
1,2,3,4,7,8-Cl ₆ DBD	0.81	"	<0.81	<0.081
1,2,3,6,7,8-Cl ₆ DBD	1.7	"	<1.7	<0.17
1,2,3,7,8,9-Cl ₆ DBD	0.73	"	2.3	0.23
1,2,3,4,6,7,8-Cl ₇ DBF	3.7	"	<3.7	<0.037
1,2,3,4,7,8,9-Cl ₇ DBF	2.7	"	<2.7	<0.027
1,2,3,4,6,7,8-Cl ₇ DBD	4.4	"	<4.4	<0.044
1,2,3,4,6,7,8,9-Cl ₈ DBF	1.4	"	11	0.011
1,2,3,4,6,7,8,9-Cl ₈ DBD	2.8	"	22	0.022
TEF		pg	1.1	
EPA Requested TEQ			< 2.40	
MAX TEF		"	< 3.7	
Units Ng/m ²			0.24	
ΣT ₄ CDF	0.27	pg	11	9
ΣP ₅ CDF	0.4	"	2.7	2
ΣH ₆ CDF	0.59	"	2.2	1
ΣH ₇ CDF	5.9	"	<5.9	0
OCDF	1.4	"	11	1
ΣT ₄ CDD	0.47	"	23	3
ΣP ₅ CDD	1.1	"	3.3	1
ΣH ₆ CDD	0.75	"	2.3	1
ΣH ₇ CDD	0.20	"	<0.20	0
OCDD	2.8	"	22	1
Surrogate Recoveries		%		
2,3,7,8-T ₄ CDF-13C ₁₂			94	
2,3,7,8-T ₄ CDD-13C ₁₂			85	
1,2,3,7,8-P ₅ CDF-13C ₁₂			79	
1,2,3,7,8-P ₅ CDD-13C ₁₂			68	
1,2,3,6,7,8-H ₆ CDF-13C ₁₂			95	
1,2,3,6,7,8-H ₆ CDD-13C ₁₂			71	
1,2,3,4,6,7,8-H ₇ CDF-13C ₁₂			81	
1,2,3,4,6,7,8-H ₇ CDD-13C ₁₂			67	
OCDD-13C ₁₂			47	

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	R02100400	R02100400	R02100400
Client ID:	19A	19A	19A
Lab No.:	039064 02	039064 02	039064 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.58	pg	7.5	0.75
2,3,7,8-Cl4DBD	0.49	"	1.5	1.5
1,2,3,7,8-Cl5DBF	0.33	"	1.0	0.051
2,3,4,7,8-Cl5DBF	0.77	"	<0.77	<0.39
1,2,3,7,8-Cl5DBD	0.54	"	<0.54	<0.27
1,2,3,4,7,8-Cl6DBF	0.19	"	1.1	0.11
1,2,3,6,7,8-Cl6DBF	0.18	"	0.58	0.058
2,3,4,6,7,8-Cl6DBF	0.21	"	<0.21	<0.021
1,2,3,7,8,9-Cl6DBF	0.23	"	<0.23	<0.023
1,2,3,4,7,8-Cl6DBD	0.35	"	<0.35	<0.035
1,2,3,6,7,8-Cl6DBD	0.33	"	<0.33	<0.033
1,2,3,7,8,9-Cl6DBD	0.32	"	<0.32	<0.032
1,2,3,4,6,7,8-Cl7DBF	4.3	"	<4.3	<0.043
1,2,3,4,7,8,9-Cl7DBF	3.0	"	<3.0	<0.030
1,2,3,4,6,7,8-Cl7DBD	0.52	"	8.7	0.087
1,2,3,4,6,7,8,9-Cl8DBF	1.7	"	1.9	0.0019
1,2,3,4,6,7,8,9-Cl8DBD	0.64	"	26	0.026
TEF		pg	2.6	
EPA Requested TEQ			< 3.05	
MAX TEF		"	< 3.5	
Units Ng/m²			0.31	
ΣT4CDF	0.58	pg	39	11
ΣP5CDF	0.33	"	7.8	4
ΣH6CDF	0.21	"	4.0	4
ΣH7CDF	2.8	"	<2.8	0
OCDF	1.7	"	1.9	1
ΣT4CDD	0.49	"	30	7
ΣP5CDD	0.54	"	10	4
ΣH6CDD	0.33	"	5.6	3
ΣH7CDD	0.52	"	18	2
OCDD	0.64	"	26	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			89	
2,3,7,8-T4CDD-13C12			76	
1,2,3,7,8-P5CDF-13C12			94	
1,2,3,7,8-P5CDD-13C12			93	
1,2,3,6,7,8-H6CDF-13C12			84	
1,2,3,6,7,8-H6CDD-13C12			87	
1,2,3,4,6,7,8-H7CDF-13C12			98	
1,2,3,4,6,7,8-H7CDD-13C12			42	
OCDD-13C12			83	

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	R02100400	R02100400	R02100400
Client ID:	20A	20A	20A
Lab No.:	039065 02	039065 02	039065 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.20	pg	0.72	0.072
2,3,7,8-Cl4DBD	0.37	"	<0.37	<0.37
1,2,3,7,8-Cl5DBF	0.53	"	<0.53	<0.026
2,3,4,7,8-Cl5DBF	0.51	"	<0.51	<0.25
1,2,3,7,8-Cl5DBD	0.33	"	<0.33	<0.16
1,2,3,4,7,8-Cl6DBF	0.12	"	<0.12	<0.012
1,2,3,6,7,8-Cl6DBF	0.11	"	<0.11	<0.011
2,3,4,6,7,8-Cl6DBF	0.13	"	<0.13	<0.013
1,2,3,7,8,9-Cl6DBF	0.14	"	<0.14	<0.014
1,2,3,4,7,8-Cl6DBD	0.32	"	<0.32	<0.032
1,2,3,6,7,8-Cl6DBD	0.30	"	<0.30	<0.030
1,2,3,7,8,9-Cl6DBD	0.29	"	<0.29	<0.029
1,2,3,4,6,7,8-Cl7DBF	11	"	<11	<0.11
1,2,3,4,7,8,9-Cl7DBF	13	"	<13	<0.13
1,2,3,4,6,7,8-Cl7DBD	0.32	"	<0.32	<0.0032
1,2,3,4,6,7,8,9-Cl8DBF	0.29	"	8.7	0.0087
1,2,3,4,6,7,8,9-Cl8DBD	1.7	"	<1.7	<0.0017
TEF		pg	0.081	
EPA Requested TEQ			< 0.69	
MAX TEF		"	< 1.3	
Units Ng/m ²			0.07	
ΣT4CDF	0.20	pg	0.72	1
ΣP5CDF	0.53	"	<0.53	0
ΣH6CDF	0.15	"	<0.15	0
ΣH7CDF	12	"	<12	0
OCDF	0.29	"	8.7	1
ΣT4CDD	0.37	"	<0.37	0
ΣP5CDD	0.33	"	<0.33	0
ΣH6CDD	0.30	"	<0.30	0
ΣH7CDD	0.32	"	<0.32	0
OCDD	1.7	"	<1.7	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			95	
2,3,7,8-T4CDD-13C12			86	
1,2,3,7,8-P5CDF-13C12			97	
1,2,3,7,8-P5CDD-13C12			93	
1,2,3,6,7,8-H6CDF-13C12			89	
1,2,3,6,7,8-H6CDD-13C12			90	
1,2,3,4,6,7,8-H7CDF-13C12			101	
1,2,3,4,6,7,8-H7CDD-13C12			55	
OCDD-13C12			83	

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	R02100401	R02100401	R02100401
Client ID:	01A	01A	01A
Lab No.:	039066 02	039066 02	039066 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.55	pg	<0.55	<0.055
2,3,7,8-Cl4DBD	0.40	"	<0.40	<0.40
1,2,3,7,8-Cl5DBF	0.55	"	<0.55	<0.028
2,3,4,7,8-Cl5DBF	0.35	"	0.46	0.23
1,2,3,7,8-Cl5DBD	0.42	"	<0.42	<0.21
1,2,3,4,7,8-Cl6DBF	0.15	"	<0.15	<0.015
1,2,3,6,7,8-Cl6DBF	0.14	"	<0.14	<0.014
2,3,4,6,7,8-Cl6DBF	0.16	"	0.49	0.049
1,2,3,7,8,9-Cl6DBF	0.18	"	<0.18	<0.018
1,2,3,4,7,8-Cl6DBD	0.26	"	<0.26	<0.026
1,2,3,6,7,8-Cl6DBD	0.24	"	<0.24	<0.024
1,2,3,7,8,9-Cl6DBD	0.23	"	<0.23	<0.023
1,2,3,4,6,7,8-Cl7DBF	10	"	<10	<0.10
1,2,3,4,7,8,9-Cl7DBF	12	"	<12	<0.12
1,2,3,4,6,7,8-Cl7DBD	0.56	"	0.79	0.0079
1,2,3,4,6,7,8,9-Cl8DBF	0.46	"	5.4	0.0054
1,2,3,4,6,7,8,9-Cl8DBD	0.61	"	5.1	0.0051
TEF		pg	0.30	
EPA Requested TEQ			< 0.80	
MAX TEF		"	< 1.3	
Units Ng/m ²			< 0.08	
ΣT4CDF	0.20	pg	1.9	3
ΣP5CDF	0.42	"	0.94	2
ΣH6CDF	0.15	"	0.49	1
ΣH7CDF	11	"	<11	0
OCDF	0.46	"	5.4	1
ΣT4CDD	0.40	"	1.8	2
ΣP5CDD	0.42	"	0.52	1
ΣH6CDD	0.24	"	<0.24	0
ΣH7CDD	0.56	"	0.79	1
OCDD	0.61	"	5.1	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			98	
2,3,7,8-T4CDD-13C12			87	
1,2,3,7,8-P5CDF-13C12			106	
1,2,3,7,8-P5CDD-13C12			102	
1,2,3,6,7,8-H6CDF-13C12			84	
1,2,3,6,7,8-H6CDD-13C12			86	
1,2,3,4,6,7,8-H7CDF-13C12			100	
1,2,3,4,6,7,8-H7CDD-13C12			79	
OCDD-13C12			79	

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	R02100401	R02100401	R02100401
Client ID:	01A	01A	01A
Lab No.:	039066 02	039066 02	039066 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
Certificate of Analysis**

	R02100401	R02100401	R02100401
Client ID:	02A	02A	02A
Lab No.:	039067 02	039067 02	039067 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	3.8	pg	12	1.2
2,3,7,8-Cl4DBD	3.1	"	<3.1	<3.1
1,2,3,7,8-Cl5DBF	4.0	"	<4.0	<0.20
2,3,4,7,8-Cl5DBF	3.8	"	<3.8	<1.9
1,2,3,7,8-Cl5DBD	3.6	"	<3.6	<1.8
1,2,3,4,7,8-Cl6DBF	2.1	"	<2.1	<0.21
1,2,3,6,7,8-Cl6DBF	2.0	"	<2.0	<0.20
2,3,4,6,7,8-Cl6DBF	2.3	"	<2.3	<0.23
1,2,3,7,8,9-Cl6DBF	2.5	"	<2.5	<0.25
1,2,3,4,7,8-Cl6DBD	3.7	"	<3.7	<0.37
1,2,3,6,7,8-Cl6DBD	4.1	"	<4.1	<0.41
1,2,3,7,8,9-Cl6DBD	3.3	"	<3.3	<0.33
1,2,3,4,6,7,8-Cl7DBF	7.2	"	<7.2	<0.072
1,2,3,4,7,8,9-Cl7DBF	5.3	"	<5.3	<0.053
1,2,3,4,6,7,8-Cl7DBD	4.6	"	10	0.10
1,2,3,4,6,7,8,9-Cl8DBF	8.7	"	33	0.033
1,2,3,4,6,7,8,9-Cl8DBD	7.8	"	59	0.059
TEF		pg	1.4	
EPA Requested TEQ			<	6.20
MAX TEF		"	<	11
Units Ng/m ²			<	0.62
ΣT4CDF	3.8	pg	12	1
ΣP5CDF	4.0	"	<4.0	0
ΣH6CDF	2.1	"	<2.1	0
ΣH7CDF	4.9	"	<4.9	0
OCDF	8.7	"	33	1
ΣT4CDD	3.1	"	<3.1	0
ΣP5CDD	3.6	"	<3.6	0
ΣH6CDD	3.4	"	<3.4	0
ΣH7CDD	4.6	"	22	2
OCDD	7.8	"	59	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			82	
2,3,7,8-T4CDD-13C12			83	
1,2,3,7,8-P5CDF-13C12			87	
1,2,3,7,8-P5CDD-13C12			88	
1,2,3,6,7,8-H6CDF-13C12			93	
1,2,3,6,7,8-H6CDD-13C12			85	
1,2,3,4,6,7,8-H7CDF-13C12			113	
1,2,3,4,6,7,8-H7CDD-13C12			105	
OCDD-13C12			76	

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	R02100401	R02100401	R02100401
Client ID:	02A	02A	02A
Lab No.:	039067 02	039067 02	039067 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
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	R02100401	R02100401	R02100401
Client ID:	03A	03A	03A
Lab No.:	039068 02	039068 02	039068 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.82	pg	4.6	0.46
2,3,7,8-Cl4DBD	1.3	"	<1.3	<1.3
1,2,3,7,8-Cl5DBF	2.0	"	<2.0	<0.10
2,3,4,7,8-Cl5DBF	1.9	"	<1.9	<0.97
1,2,3,7,8-Cl5DBD	2.7	"	<2.7	<1.3
1,2,3,4,7,8-Cl6DBF	2.5	"	<2.5	<0.25
1,2,3,6,7,8-Cl6DBF	2.3	"	<2.3	<0.23
2,3,4,6,7,8-Cl6DBF	2.7	"	<2.7	<0.27
1,2,3,7,8,9-Cl6DBF	2.9	"	<2.9	<0.29
1,2,3,4,7,8-Cl6DBD	2.1	"	<2.1	<0.21
1,2,3,6,7,8-Cl6DBD	1.9	"	<1.9	<0.19
1,2,3,7,8,9-Cl6DBD	1.9	"	<1.9	<0.19
1,2,3,4,6,7,8-Cl7DBF	2.3	"	<2.3	<0.023
1,2,3,4,7,8,9-Cl7DBF	2.7	"	<2.7	<0.027
1,2,3,4,6,7,8-Cl7DBD	3.4	"	<3.4	<0.034
1,2,3,4,6,7,8,9-Cl8DBF	3.3	"	12	0.012
1,2,3,4,6,7,8,9-Cl8DBD	2.9	"	21	0.021
TEF		pg	0.50	
EPA Requested TEQ			<	3.20
MAX TEF		"	<	5.9
Units Ng/m²			<	0.32
ΣT4CDF	0.82	pg	4.6	1
ΣP5CDF	2.0	"	<2.0	0
ΣH6CDF	2.5	"	<2.5	0
ΣH7CDF	2.5	"	<2.5	0
OCDF	3.3	"	12	1
ΣT4CDD	1.3	"	<1.3	0
ΣP5CDD	2.7	"	<2.7	0
ΣH6CDD	1.9	"	<1.9	0
ΣH7CDD	3.4	"	<3.4	0
OCDD	2.9	"	21	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			92	
2,3,7,8-T4CDD-13C12			90	
1,2,3,7,8-P5CDF-13C12			94	
1,2,3,7,8-P5CDD-13C12			88	
1,2,3,6,7,8-H6CDF-13C12			92	
1,2,3,6,7,8-H6CDD-13C12			92	
1,2,3,4,6,7,8-H7CDF-13C12			104	
1,2,3,4,6,7,8-H7CDD-13C12			109	
OCDD-13C12			82	

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	R02100401	R02100401	R02100401
Client ID:	03A	03A	03A
Lab No.:	039068 02	039068 02	039068 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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	R02100401	R02100401	R02100401
Client ID:	04A	04A	04A
Lab No.:	039069 02	039069 02	039069 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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Dioxins and furans

2,3,7,8-Cl4DBF	4.2	pg	<4.2	<0.42
2,3,7,8-Cl4DBD	3.6	"	<3.6	<3.6
1,2,3,7,8-Cl5DBF	5.4	"	<5.4	<0.27
2,3,4,7,8-Cl5DBF	5.2	"	<5.2	<2.6
1,2,3,7,8-Cl5DBD	6.2	"	<6.2	<3.1
1,2,3,4,7,8-Cl6DBF	4.8	"	<4.8	<0.48
1,2,3,6,7,8-Cl6DBF	4.5	"	<4.5	<0.45
2,3,4,6,7,8-Cl6DBF	5.2	"	<5.2	<0.52
1,2,3,7,8,9-Cl6DBF	5.6	"	<5.6	<0.56
1,2,3,4,7,8-Cl6DBD	3.1	"	<3.1	<0.31
1,2,3,6,7,8-Cl6DBD	2.8	"	<2.8	<0.28
1,2,3,7,8,9-Cl6DBD	2.8	"	<2.8	<0.28
1,2,3,4,6,7,8-Cl7DBF	130	"	<130	<1.3
1,2,3,4,7,8,9-Cl7DBF	150	"	<150	<1.5
1,2,3,4,6,7,8-Cl7DBD	2.7	"	<2.7	<0.027
1,2,3,4,6,7,8,9-Cl8DBF	8.8	"	<8.8	<0.0088
1,2,3,4,6,7,8,9-Cl8DBD	11	"	<11	<0.011

TEF	pg	0
EPA Requested TEQ		< 8.00
MAX TEF	"	< 16
Units Ng/m²		< 0.80

ΣT4CDF	4.2	pg	<4.2	0
ΣP5CDF	5.4	"	<5.4	0
ΣH6CDF	4.8	"	<4.8	0
ΣH7CDF	140	"	<140	0
OCDF	8.8	"	<8.8	0
ΣT4CDD	3.6	"	<3.6	0
ΣP5CDD	6.2	"	<6.2	0
ΣH6CDD	2.8	"	<2.8	0
ΣH7CDD	2.7	"	<2.7	0
OCDD	11	"	<11	0

Surrogate Recoveries

	%
2,3,7,8-T4CDF-13C12	99
2,3,7,8-T4CDD-13C12	92
1,2,3,7,8-P5CDF-13C12	91
1,2,3,7,8-P5CDD-13C12	83
1,2,3,6,7,8-H6CDF-13C12	94
1,2,3,6,7,8-H6CDD-13C12	93
1,2,3,4,6,7,8-H7CDF-13C12	101
1,2,3,4,6,7,8-H7CDD-13C12	99
OCDD-13C12	79

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	R02100401	R02100401	R02100401
Client ID:	04A	04A	04A
Lab No.:	039069 02	039069 02	039069 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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	R02100401	R02100401	R02100401
Client ID:	05A	05A	05A
Lab No.:	039070 02	039070 02	039070 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	2.8	pg	<2.8	<0.28
2,3,7,8-Cl4DBD	4.6	"	<4.6	<4.6
1,2,3,7,8-Cl5DBF	4.3	"	<4.3	<0.21
2,3,4,7,8-Cl5DBF	4.1	"	<4.1	<2.1
1,2,3,7,8-Cl5DBD	3.7	"	<3.7	<1.8
1,2,3,4,7,8-Cl6DBF	2.4	"	<2.4	<0.24
1,2,3,6,7,8-Cl6DBF	2.2	"	<2.2	<0.22
2,3,4,6,7,8-Cl6DBF	2.6	"	<2.6	<0.26
1,2,3,7,8,9-Cl6DBF	2.8	"	<2.8	<0.28
1,2,3,4,7,8-Cl6DBD	4.5	"	<4.5	<0.45
1,2,3,6,7,8-Cl6DBD	4.1	"	<4.1	<0.41
1,2,3,7,8,9-Cl6DBD	4.0	"	<4.0	<0.40
1,2,3,4,6,7,8-Cl7DBF	47	"	<47	<0.47
1,2,3,4,7,8,9-Cl7DBF	54	"	<54	<0.54
1,2,3,4,6,7,8-Cl7DBD	4.3	"	<4.3	<0.043
1,2,3,4,6,7,8,9-Cl8DBF	4.2	"	<4.2	<0.0042
1,2,3,4,6,7,8,9-Cl8DBD	2.1	"	<2.1	<0.0021
TEF		pg	0	
EPA Requested TEQ			< 6.00	
MAX TEF		"	< 12	
Units Ng/m²			< 0.60	
ΣT4CDF	2.7	pg	<2.7	0
ΣP5CDF	4.3	"	<4.3	0
ΣH6CDF	2.4	"	<2.4	0
ΣH7CDF	50	"	<50	0
OCDF	4.2	"	<4.2	0
ΣT4CDD	4.6	"	<4.6	0
ΣP5CDD	3.7	"	<3.7	0
ΣH6CDD	4.1	"	<4.1	0
ΣH7CDD	4.3	"	<4.3	0
OCDD	2.1	"	<2.1	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			85	
2,3,7,8-T4CDD-13C12			81	
1,2,3,7,8-P5CDF-13C12			89	
1,2,3,7,8-P5CDD-13C12			85	
1,2,3,6,7,8-H6CDF-13C12			86	
1,2,3,6,7,8-H6CDD-13C12			82	
1,2,3,4,6,7,8-H7CDF-13C12			97	
1,2,3,4,6,7,8-H7CDD-13C12			99	
OCDD-13C12			79	

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	R02100401	R02100401	R02100401
Client ID:	05A	05A	05A
Lab No.:	039070 02	039070 02	039070 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
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	R02100401	R02100401	R02100401
Client ID:	06A	06A	06A
Lab No.:	039071 02	039071 02	039071 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	3.1	pg	<3.1	<0.31
2,3,7,8-Cl4DBD	3.1	"	<3.1	<3.1
1,2,3,7,8-Cl5DBF	4.3	"	<4.3	<0.22
2,3,4,7,8-Cl5DBF	4.2	"	<4.2	<2.1
1,2,3,7,8-Cl5DBD	4.1	"	<4.1	<2.0
1,2,3,4,7,8-Cl6DBF	2.9	"	<2.9	<0.29
1,2,3,6,7,8-Cl6DBF	2.7	"	<2.7	<0.27
2,3,4,6,7,8-Cl6DBF	3.1	"	<3.1	<0.31
1,2,3,7,8,9-Cl6DBF	3.4	"	<3.4	<0.34
1,2,3,4,7,8-Cl6DBD	4.7	"	<4.7	<0.47
1,2,3,6,7,8-Cl6DBD	4.3	"	<4.3	<0.43
1,2,3,7,8,9-Cl6DBD	4.2	"	<4.2	<0.42
1,2,3,4,6,7,8-Cl7DBF	51	"	<51	<0.51
1,2,3,4,7,8,9-Cl7DBF	59	"	<59	<0.59
1,2,3,4,6,7,8-Cl7DBD	6.3	"	<6.3	<0.063
1,2,3,4,6,7,8,9-Cl8DBF	3.3	"	19	0.019
1,2,3,4,6,7,8,9-Cl8DBD	9.4	"	24	0.024
TEF		pg		0.043
EPA Requested TEQ			<	6.02
MAX TEF		"	<	12
Units Ng/m²			<	0.60
ΣT4CDF	3.1	pg	<3.1	0
ΣP5CDF	4.3	"	<4.3	0
ΣH6CDF	2.9	"	<2.9	0
ΣH7CDF	55	"	<55	0
OCDF	3.3	"	19	1
ΣT4CDD	3.1	"	<3.1	0
ΣP5CDD	4.1	"	<4.1	0
ΣH6CDD	4.3	"	<4.3	0
ΣH7CDD	6.3	"	<6.3	0
OCDD	9.4	"	24	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			89	
2,3,7,8-T4CDD-13C12			85	
1,2,3,7,8-P5CDF-13C12			91	
1,2,3,7,8-P5CDD-13C12			92	
1,2,3,6,7,8-H6CDF-13C12			91	
1,2,3,6,7,8-H6CDD-13C12			86	
1,2,3,4,6,7,8-H7CDF-13C12			101	
1,2,3,4,6,7,8-H7CDD-13C12			96	
OCDD-13C12			78	

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	R02100401	R02100401	R02100401
Client ID:	06A	06A	06A
Lab No.:	039071 02	039071 02	039071 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
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	R02100401	R02100401	R02100401
Client ID:	07A	07A	07A
Lab No.:	039072 02	039072 02	039072 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	2.5	pg	<2.5	<0.25
2,3,7,8-Cl4DBD	2.9	"	<2.9	<2.9
1,2,3,7,8-Cl5DBF	1.9	"	<1.9	<0.095
2,3,4,7,8-Cl5DBF	1.8	"	<1.8	<0.92
1,2,3,7,8-Cl5DBD	3.4	"	<3.4	<1.7
1,2,3,4,7,8-Cl6DBF	1.4	"	<1.4	<0.14
1,2,3,6,7,8-Cl6DBF	1.3	"	<1.3	<0.13
2,3,4,6,7,8-Cl6DBF	1.5	"	<1.5	<0.15
1,2,3,7,8,9-Cl6DBF	1.7	"	<1.7	<0.17
1,2,3,4,7,8-Cl6DBD	2.1	"	<2.1	<0.21
1,2,3,6,7,8-Cl6DBD	1.9	"	<1.9	<0.19
1,2,3,7,8,9-Cl6DBD	1.9	"	<1.9	<0.19
1,2,3,4,6,7,8-Cl7DBF	40	"	<40	<0.40
1,2,3,4,7,8,9-Cl7DBF	46	"	<46	<0.46
1,2,3,4,6,7,8-Cl7DBD	2.2	"	<2.2	<0.022
1,2,3,4,6,7,8,9-Cl8DBF	8.8	"	<8.8	<0.0088
1,2,3,4,6,7,8,9-Cl8DBD	7.7	"	<7.7	<0.0077
TEF		pg	0	
EPA Requested TEQ			< 3.95	
MAX TEF		"	< 7.9	
Units Ng/m ²			< 0.40	
ΣT4CDF	2.0	pg	<2.0	0
ΣP5CDF	1.9	"	<1.9	0
ΣH6CDF	1.4	"	<1.4	0
ΣH7CDF	43	"	<43	0
OCDF	8.8	"	<8.8	0
ΣT4CDD	2.9	"	<2.9	0
ΣP5CDD	3.4	"	<3.4	0
ΣH6CDD	1.9	"	<1.9	0
ΣH7CDD	2.2	"	<2.2	0
OCDD	7.7	"	<7.7	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			87	
2,3,7,8-T4CDD-13C12			92	
1,2,3,7,8-P5CDF-13C12			94	
1,2,3,7,8-P5CDD-13C12			97	
1,2,3,6,7,8-H6CDF-13C12			85	
1,2,3,6,7,8-H6CDD-13C12			83	
1,2,3,4,6,7,8-H7CDF-13C12			95	
1,2,3,4,6,7,8-H7CDD-13C12			89	
OCDD-13C12			79	

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PSC Analytical Services
Certificate of Analysis

	R02100401	R02100401	R02100401
Client ID:	07A	07A	07A
Lab No.:	039072 02	039072 02	039072 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
Certificate of Analysis**

	R02100401	R02100401	R02100401
Client ID:	08A	08A	08A
Lab No.:	039073 02	039073 02	039073 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.32	pg	3.2	0.32
2,3,7,8-Cl4DBD	1.4	"	<1.4	<1.4
1,2,3,7,8-Cl5DBF	2.0	"	<2.0	<0.10
2,3,4,7,8-Cl5DBF	2.7	"	<2.7	<1.3
1,2,3,7,8-Cl5DBD	1.7	"	<1.7	<0.84
1,2,3,4,7,8-Cl6DBF	0.47	"	2.7	0.27
1,2,3,6,7,8-Cl6DBF	2.7	"	<2.7	<0.27
2,3,4,6,7,8-Cl6DBF	0.51	"	3.7	0.37
1,2,3,7,8,9-Cl6DBF	0.55	"	4.4	0.44
1,2,3,4,7,8-Cl6DBD	2.5	"	<2.5	<0.25
1,2,3,6,7,8-Cl6DBD	3.3	"	<3.3	<0.33
1,2,3,7,8,9-Cl6DBD	0.57	"	3.3	0.33
1,2,3,4,6,7,8-Cl7DBF	0.61	"	3.7	0.037
1,2,3,4,7,8,9-Cl7DBF	4.9	"	<4.9	<0.049
1,2,3,4,6,7,8-Cl7DBD	1.3	"	5.1	0.051
1,2,3,4,6,7,8,9-Cl8DBF	14	"	<14	<0.014
1,2,3,4,6,7,8,9-Cl8DBD	1.8	"	16	0.016
TEF		pg	1.8	
EPA Requested TEQ			<	4.10
MAX TEF		"	<	6.4
Units Ng/m²			<	0.41
ΣT4CDF	0.32	pg	4.5	3
ΣP5CDF	0.46	"	<0.46	0
ΣH6CDF	0.47	"	11	3
ΣH7CDF	0.66	"	3.7	1
OCDF	14	"	<14	0
ΣT4CDD	0.52	"	<0.52	0
ΣP5CDD	0.55	"	1.8	2
ΣH6CDD	0.58	"	3.3	1
ΣH7CDD	1.3	"	5.1	1
OCDD	1.8	"	16	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			91	
2,3,7,8-T4CDD-13C12			87	
1,2,3,7,8-P5CDF-13C12			78	
1,2,3,7,8-P5CDD-13C12			75	
1,2,3,6,7,8-H6CDF-13C12			93	
1,2,3,6,7,8-H6CDD-13C12			89	
1,2,3,4,6,7,8-H7CDF-13C12			89	
1,2,3,4,6,7,8-H7CDD-13C12			84	
OCDD-13C12			65	

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PSC Analytical Services
Certificate of Analysis

	R02100401	R02100401	R02100401
Client ID:	08A	08A	08A
Lab No.:	039073 02	039073 02	039073 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
Certificate of Analysis**

	R02100401	R02100401	R02100401
Client ID:	09A	09A	09A
Lab No.:	039074 02	039074 02	039074 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.24	pg	4.2	0.42
2,3,7,8-Cl4DBD	0.37	"	<0.37	<0.37
1,2,3,7,8-Cl5DBF	0.54	"	0.89	0.044
2,3,4,7,8-Cl5DBF	0.52	"	0.92	0.46
1,2,3,7,8-Cl5DBD	0.34	"	<0.34	<0.17
1,2,3,4,7,8-Cl6DBF	0.78	"	<0.78	<0.078
1,2,3,6,7,8-Cl6DBF	0.22	"	0.45	0.045
2,3,4,6,7,8-Cl6DBF	0.44	"	<0.44	<0.044
1,2,3,7,8,9-Cl6DBF	0.28	"	<0.28	<0.028
1,2,3,4,7,8-Cl6DBD	0.32	"	<0.32	<0.032
1,2,3,6,7,8-Cl6DBD	0.24	"	0.44	0.044
1,2,3,7,8,9-Cl6DBD	0.40	"	<0.40	<0.040
1,2,3,4,6,7,8-Cl7DBF	3.0	"	<3.0	<0.030
1,2,3,4,7,8,9-Cl7DBF	0.43	"	<0.43	<0.0043
1,2,3,4,6,7,8-Cl7DBD	0.30	"	2.3	0.023
1,2,3,4,6,7,8,9-Cl8DBF	1.1	"	<1.1	<0.0011
1,2,3,4,6,7,8,9-Cl8DBD	0.31	"	17	0.017
	TEF	pg	1.1	
EPA Requested TEQ			< 1.50	
MAX TEF		"	< 1.9	
Units Ng/m²			< 0.15	
ΣT4CDF	0.24	pg	16	10
ΣP5CDF	0.54	"	4.2	5
ΣH6CDF	0.26	"	1.3	2
ΣH7CDF	0.59	"	<0.59	0
OCDF	1.1	"	<1.1	0
ΣT4CDD	0.25	"	11	5
ΣP5CDD	0.38	"	5.8	3
ΣH6CDD	0.24	"	0.44	1
ΣH7CDD	0.30	"	4.2	2
OCDD	0.31	"	17	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			96	
2,3,7,8-T4CDD-13C12			88	
1,2,3,7,8-P5CDF-13C12			92	
1,2,3,7,8-P5CDD-13C12			87	
1,2,3,6,7,8-H6CDF-13C12			91	
1,2,3,6,7,8-H6CDD-13C12			90	
1,2,3,4,6,7,8-H7CDF-13C12			99	
1,2,3,4,6,7,8-H7CDD-13C12			103	
OCDD-13C12			86	

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	R02100401	R02100401	R02100401
Client ID:	09A	09A	09A
Lab No.:	039074 02	039074 02	039074 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
Certificate of Analysis**

	R02100401	R02100401	R02100401
Client ID:	10A	10A	10A
Lab No.:	039075 02	039075 02	039075 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.27	pg	1.5	0.15
2,3,7,8-Cl4DBD	0.36	"	<0.36	<0.36
1,2,3,7,8-Cl5DBF	0.43	"	<0.43	<0.022
2,3,4,7,8-Cl5DBF	0.37	"	<0.37	<0.18
1,2,3,7,8-Cl5DBD	0.43	"	<0.43	<0.22
1,2,3,4,7,8-Cl6DBF	0.38	"	<0.38	<0.038
1,2,3,6,7,8-Cl6DBF	0.35	"	<0.35	<0.035
2,3,4,6,7,8-Cl6DBF	0.42	"	<0.42	<0.042
1,2,3,7,8,9-Cl6DBF	0.31	"	<0.31	<0.031
1,2,3,4,7,8-Cl6DBD	0.51	"	<0.51	<0.051
1,2,3,6,7,8-Cl6DBD	0.48	"	<0.48	<0.048
1,2,3,7,8,9-Cl6DBD	0.51	"	<0.51	<0.051
1,2,3,4,6,7,8-Cl7DBF	0.68	"	<0.68	<0.0068
1,2,3,4,7,8,9-Cl7DBF	0.44	"	<0.44	<0.0044
1,2,3,4,6,7,8-Cl7DBD	0.49	"	0.76	0.0076
1,2,3,4,6,7,8,9-Cl8DBF	1.1	"	<1.1	<0.0011
1,2,3,4,6,7,8,9-Cl8DBD	0.62	"	6.6	0.0066
TEF		pg	0.16	
EPA Requested TEQ			<	0.68
MAX TEF		"	<	1.2
Units Ng/m²			<	0.07
ΣT4CDF	0.27	pg	2.2	2
ΣP5CDF	0.38	"	<0.38	0
ΣH6CDF	0.26	"	<0.26	0
ΣH7CDF	0.54	"	<0.54	0
OCDF	1.1	"	<1.1	0
ΣT4CDD	0.32	"	<0.32	0
ΣP5CDD	0.43	"	<0.43	0
ΣH6CDD	0.48	"	<0.48	0
ΣH7CDD	0.49	"	0.76	1
OCDD	0.62	"	6.6	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			99	
2,3,7,8-T4CDD-13C12			97	
1,2,3,7,8-P5CDF-13C12			99	
1,2,3,7,8-P5CDD-13C12			97	
1,2,3,6,7,8-H6CDF-13C12			86	
1,2,3,6,7,8-H6CDD-13C12			90	
1,2,3,4,6,7,8-H7CDF-13C12			88	
1,2,3,4,6,7,8-H7CDD-13C12			101	
OCDD-13C12			80	

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	R02100401	R02100401	R02100401
Client ID:	10A	10A	10A
Lab No.:	039075 02	039075 02	039075 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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	R02100401	R02100401	R02100401
Client ID:	11A	11A	11A
Lab No.:	039076 02	039076 02	039076 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.25	pg	5.3	0.53
2,3,7,8-Cl4DBD	1.4	"	<1.4	<1.4
1,2,3,7,8-Cl5DBF	0.55	"	1.2	0.060
2,3,4,7,8-Cl5DBF	0.53	"	0.94	0.47
1,2,3,7,8-Cl5DBD	0.46	"	0.62	0.31
1,2,3,4,7,8-Cl6DBF	0.31	"	1.4	0.14
1,2,3,6,7,8-Cl6DBF	0.61	"	<0.61	<0.061
2,3,4,6,7,8-Cl6DBF	0.33	"	0.96	0.096
1,2,3,7,8,9-Cl6DBF	0.36	"	<0.36	<0.036
1,2,3,4,7,8-Cl6DBD	0.27	"	<0.27	<0.027
1,2,3,6,7,8-Cl6DBD	0.45	"	<0.45	<0.045
1,2,3,7,8,9-Cl6DBD	0.35	"	0.54	0.054
1,2,3,4,6,7,8-Cl7DBF	3.2	"	<3.2	<0.032
1,2,3,4,7,8,9-Cl7DBF	5.2	"	<5.2	<0.052
1,2,3,4,6,7,8-Cl7DBD	3.5	"	<3.5	<0.035
1,2,3,4,6,7,8,9-Cl8DBF	2.4	"	<2.4	<0.0024
1,2,3,4,6,7,8,9-Cl8DBD	0.7	"	29	0.029
TEF		pg	1.7	
EPA Requested TEQ			<	2.55
MAX TEF		"	<	3.4
Units Ng/m²			<	0.26
ΣT4CDF	0.25	pg	15	8
ΣP5CDF	0.55	"	3.8	3
ΣH6CDF	0.31	"	2.4	2
ΣH7CDF	4.8	"	<4.8	0
OCDF	2.4	"	<2.4	0
ΣT4CDD	0.61	"	10	4
ΣP5CDD	0.46	"	8.9	5
ΣH6CDD	0.36	"	1.7	2
ΣH7CDD	0.96	"	3.4	1
OCDD	0.7	"	29	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			99	
2,3,7,8-T4CDD-13C12			91	
1,2,3,7,8-P5CDF-13C12			96	
1,2,3,7,8-P5CDD-13C12			93	
1,2,3,6,7,8-H6CDF-13C12			78	
1,2,3,6,7,8-H6CDD-13C12			86	
1,2,3,4,6,7,8-H7CDF-13C12			76	
1,2,3,4,6,7,8-H7CDD-13C12			97	
OCDD-13C12			80	

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	R02100401	R02100401	R02100401
Client ID:	11A	11A	11A
Lab No.:	039076 02	039076 02	039076 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
Certificate of Analysis**

	R02100401	R02100401	R02100401
Client ID:	12A	12A	12A
Lab No.:	039077 02	039077 02	039077 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	1.3	pg	<1.3	<0.13
2,3,7,8-Cl4DBD	0.39	"	<0.39	<0.39
1,2,3,7,8-Cl5DBF	0.67	"	<0.67	<0.033
2,3,4,7,8-Cl5DBF	0.64	"	<0.64	<0.32
1,2,3,7,8-Cl5DBD	0.50	"	<0.50	<0.25
1,2,3,4,7,8-Cl6DBF	0.35	"	<0.35	<0.035
1,2,3,6,7,8-Cl6DBF	0.33	"	<0.33	<0.033
2,3,4,6,7,8-Cl6DBF	0.39	"	<0.39	<0.039
1,2,3,7,8,9-Cl6DBF	0.42	"	<0.42	<0.042
1,2,3,4,7,8-Cl6DBD	0.64	"	<0.64	<0.064
1,2,3,6,7,8-Cl6DBD	0.59	"	<0.59	<0.059
1,2,3,7,8,9-Cl6DBD	0.58	"	<0.58	<0.058
1,2,3,4,6,7,8-Cl7DBF	55	"	<55	<0.55
1,2,3,4,7,8,9-Cl7DBF	55	"	<55	<0.55
1,2,3,4,6,7,8-Cl7DBD	0.70	"	<0.70	<0.0070
1,2,3,4,6,7,8,9-Cl8DBF	0.87	"	<0.87	<0.00087
1,2,3,4,6,7,8,9-Cl8DBD	4.4	"	<4.4	<0.0044
TEF		pg	0	
EPA Requested TEQ			< 1.30	
MAX TEF		"	< 2.6	
Units Ng/m ²			< 0.13	
ΣT4CDF	0.42	pg	<0.42	0
ΣP5CDF	0.67	"	<0.67	0
ΣH6CDF	0.35	"	<0.35	0
ΣH7CDF	59	"	<59	0
OCDF	0.87	"	<0.87	0
ΣT4CDD	0.39	"	<0.39	0
ΣP5CDD	0.50	"	<0.50	0
ΣH6CDD	0.59	"	<0.59	0
ΣH7CDD	0.70	"	<0.70	0
OCDD	4.4	"	<4.4	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			100	
2,3,7,8-T4CDD-13C12			98	
1,2,3,7,8-P5CDF-13C12			95	
1,2,3,7,8-P5CDD-13C12			92	
1,2,3,6,7,8-H6CDF-13C12			68	
1,2,3,6,7,8-H6CDD-13C12			83	
1,2,3,4,6,7,8-H7CDF-13C12			62	
1,2,3,4,6,7,8-H7CDD-13C12			97	
OCDD-13C12			76	

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	R02100401	R02100401	R02100401
Client ID:	12A	12A	12A
Lab No.:	039077 02	039077 02	039077 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
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	R02100401	R02100401	R02100401
Client ID:	13A	13A	13A
Lab No.:	039078 02	039078 02	039078 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	1.0	pg	<1.0	<0.10
2,3,7,8-Cl4DBD	0.36	"	0.53	0.53
1,2,3,7,8-Cl5DBF	0.70	"	<0.70	<0.035
2,3,4,7,8-Cl5DBF	0.67	"	<0.67	<0.34
1,2,3,7,8-Cl5DBD	0.66	"	<0.66	<0.33
1,2,3,4,7,8-Cl6DBF	0.85	"	<0.85	<0.085
1,2,3,6,7,8-Cl6DBF	0.79	"	<0.79	<0.079
2,3,4,6,7,8-Cl6DBF	0.92	"	<0.92	<0.092
1,2,3,7,8,9-Cl6DBF	1.00	"	<1.00	<0.100
1,2,3,4,7,8-Cl6DBD	0.73	"	<0.73	<0.073
1,2,3,6,7,8-Cl6DBD	0.68	"	<0.68	<0.068
1,2,3,7,8,9-Cl6DBD	0.66	"	<0.66	<0.066
1,2,3,4,6,7,8-Cl7DBF	2.6	"	<2.6	<0.026
1,2,3,4,7,8,9-Cl7DBF	61	"	<61	<0.61
1,2,3,4,6,7,8-Cl7DBD	0.31	"	<0.31	<0.0031
1,2,3,4,6,7,8,9-Cl8DBF	0.82	"	<0.82	<0.00082
1,2,3,4,6,7,8,9-Cl8DBD	0.82	"	2.1	0.0021
TEF		pg	0.53	
EPA Requested TEQ			< 1.52	
MAX TEF		"	< 2.5	
Units Ng/m²			< 0.15	
ΣT4CDF	0.26	pg	<0.26	0
ΣP5CDF	0.70	"	<0.70	0
ΣH6CDF	0.85	"	<0.85	0
ΣH7CDF	57	"	<57	0
OCDF	0.82	"	<0.82	0
ΣT4CDD	0.36	"	0.53	1
ΣP5CDD	0.66	"	<0.66	0
ΣH6CDD	0.68	"	<0.68	0
ΣH7CDD	0.46	"	<0.46	0
OCDD	0.82	"	2.1	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			99	
2,3,7,8-T4CDD-13C12			94	
1,2,3,7,8-P5CDF-13C12			99	
1,2,3,7,8-P5CDD-13C12			95	
1,2,3,6,7,8-H6CDF-13C12			59	
1,2,3,6,7,8-H6CDD-13C12			78	
1,2,3,4,6,7,8-H7CDF-13C12			50	
1,2,3,4,6,7,8-H7CDD-13C12			96	
OCDD-13C12			79	

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Certificate of Analysis

	R02100401	R02100401	R02100401
Client ID:	13A	13A	13A
Lab No.:	039078 02	039078 02	039078 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
Certificate of Analysis**

	R02100401	R02100401	R02100401
Client ID:	14A	14A	14A
Lab No.:	039079 02	039079 02	039079 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.39	pg	2.4	0.24
2,3,7,8-Cl4DBD	0.62	"	<0.62	<0.62
1,2,3,7,8-Cl5DBF	0.57	"	<0.57	<0.029
2,3,4,7,8-Cl5DBF	0.52	"	<0.52	<0.26
1,2,3,7,8-Cl5DBD	0.91	"	<0.91	<0.46
1,2,3,4,7,8-Cl6DBF	0.46	"	<0.46	<0.046
1,2,3,6,7,8-Cl6DBF	0.63	"	<0.63	<0.063
2,3,4,6,7,8-Cl6DBF	0.74	"	<0.74	<0.074
1,2,3,7,8,9-Cl6DBF	0.80	"	<0.80	<0.080
1,2,3,4,7,8-Cl6DBD	0.96	"	<0.96	<0.096
1,2,3,6,7,8-Cl6DBD	0.89	"	<0.89	<0.089
1,2,3,7,8,9-Cl6DBD	0.87	"	<0.87	<0.087
1,2,3,4,6,7,8-Cl7DBF	0.76	"	<0.76	<0.0076
1,2,3,4,7,8,9-Cl7DBF	7.4	"	<7.4	<0.074
1,2,3,4,6,7,8-Cl7DBD	1.5	"	<1.5	<0.015
1,2,3,4,6,7,8,9-Cl8DBF	0.86	"	1.6	0.0016
1,2,3,4,6,7,8,9-Cl8DBD	1.3	"	6.6	0.0066
TEF				
		pg	0.24	
EPA Requested TEQ			< 1.22	
MAX TEF		"	< 2.2	
Units Ng/m²			< 0.12	
ΣT4CDF	0.39	pg	5.4	5
ΣP5CDF	0.54	"	<0.54	0
ΣH6CDF	0.68	"	<0.68	0
ΣH7CDF	6.9	"	<6.9	0
OCDF	0.86	"	1.6	1
ΣT4CDD	0.62	"	2.0	1
ΣP5CDD	0.91	"	1.7	1
ΣH6CDD	0.89	"	<0.89	0
ΣH7CDD	1.0	"	<1.0	0
OCDD	1.3	"	6.6	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			93	
2,3,7,8-T4CDD-13C12			85	
1,2,3,7,8-P5CDF-13C12			76	
1,2,3,7,8-P5CDD-13C12			69	
1,2,3,6,7,8-H6CDF-13C12			92	
1,2,3,6,7,8-H6CDD-13C12			89	
1,2,3,4,6,7,8-H7CDF-13C12			88	
1,2,3,4,6,7,8-H7CDD-13C12			84	
OCDD-13C12			62	

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	R02100401	R02100401	R02100401
Client ID:	14A	14A	14A
Lab No.:	039079 02	039079 02	039079 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
Certificate of Analysis**

	R02100401	R02100401	R02100401
Client ID:	15A	15A	15A
Lab No.:	039080 02	039080 02	039080 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	4.4	pg	<4.4	<0.44
2,3,7,8-Cl4DBD	0.56	"	<0.56	<0.56
1,2,3,7,8-Cl5DBF	0.54	"	<0.54	<0.027
2,3,4,7,8-Cl5DBF	0.52	"	<0.52	<0.26
1,2,3,7,8-Cl5DBD	0.73	"	<0.73	<0.36
1,2,3,4,7,8-Cl6DBF	1.6	"	<1.6	<0.16
1,2,3,6,7,8-Cl6DBF	0.25	"	<0.25	<0.025
2,3,4,6,7,8-Cl6DBF	0.94	"	<0.94	<0.094
1,2,3,7,8,9-Cl6DBF	0.60	"	<0.60	<0.060
1,2,3,4,7,8-Cl6DBD	0.96	"	<0.96	<0.096
1,2,3,6,7,8-Cl6DBD	0.89	"	<0.89	<0.089
1,2,3,7,8,9-Cl6DBD	0.87	"	<0.87	<0.087
1,2,3,4,6,7,8-Cl7DBF	3.4	"	<3.4	<0.034
1,2,3,4,7,8,9-Cl7DBF	20	"	<20	<0.20
1,2,3,4,6,7,8-Cl7DBD	2.6	"	<2.6	<0.026
1,2,3,4,6,7,8,9-Cl8DBF	2.4	"	<2.4	<0.0024
1,2,3,4,6,7,8,9-Cl8DBD	24	"	<24	<0.024
TEF		pg	0	
EPA Requested TEQ			< 1.25	
MAX TEF		"	< 2.5	
Units Ng/m²			< 0.13	
ΣT4CDF	0.38	pg	7.4	5
ΣP5CDF	0.54	"	<0.54	0
ΣH6CDF	0.55	"	<0.55	0
ΣH7CDF	19	"	<19	0
OCDF	2.4	"	<2.4	0
ΣT4CDD	0.42	"	8.5	2
ΣP5CDD	0.73	"	3.2	2
ΣH6CDD	0.89	"	5.5	1
ΣH7CDD	1.3	"	<1.3	0
OCDD	24	"	<24	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			101	
2,3,7,8-T4CDD-13C12			89	
1,2,3,7,8-P5CDF-13C12			82	
1,2,3,7,8-P5CDD-13C12			72	
1,2,3,6,7,8-H6CDF-13C12			96	
1,2,3,6,7,8-H6CDD-13C12			95	
1,2,3,4,6,7,8-H7CDF-13C12			84	
1,2,3,4,6,7,8-H7CDD-13C12			87	
OCDD-13C12			63	

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	R02100401	R02100401	R02100401
Client ID:	15A	15A	15A
Lab No.:	039080 02	039080 02	039080 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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PSC Analytical Services
Certificate of Analysis

	R02100401	R02100401	R02100401
Client ID:	16A	16A	16A
Lab No.:	039081 02	039081 02	039081 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.15	pg	1.8	0.18
2,3,7,8-Cl4DBD	0.33	"	<0.33	<0.33
1,2,3,7,8-Cl5DBF	0.37	"	<0.37	<0.18
2,3,4,7,8-Cl5DBF	0.35	"	<0.35	<0.18
1,2,3,7,8-Cl5DBD	0.81	"	<0.81	<0.41
1,2,3,4,7,8-Cl6DBF	0.28	"	<0.28	<0.028
1,2,3,6,7,8-Cl6DBF	0.22	"	<0.22	<0.022
2,3,4,6,7,8-Cl6DBF	0.17	"	<0.17	<0.017
1,2,3,7,8,9-Cl6DBF	0.32	"	<0.32	<0.032
1,2,3,4,7,8-Cl6DBD	0.32	"	<0.32	<0.032
1,2,3,6,7,8-Cl6DBD	0.32	"	<0.32	<0.032
1,2,3,7,8,9-Cl6DBD	0.29	"	<0.29	<0.029
1,2,3,4,6,7,8-Cl7DBF	1.2	"	<1.2	<0.012
1,2,3,4,7,8,9-Cl7DBF	17	"	<17	<0.17
1,2,3,4,6,7,8-Cl7DBD	0.43	"	0.58	0.0058
1,2,3,4,6,7,8,9-Cl8DBF	0.58	"	<0.58	<0.00058
1,2,3,4,6,7,8,9-Cl8DBD	0.56	"	3.1	0.0031
TEF		pg		0.19
EPA Requested TEQ			<	0.85
MAX TEF		"	<	1.5
Units Ng/m ²			<	0.08
ΣT4CDF	0.15	pg	4.2	5
ΣP5CDF	0.37	"	<0.37	0
ΣH6CDF	0.30	"	<0.30	0
ΣH7CDF	16	"	<16	0
OCDF	0.58	"	<0.58	0
ΣT4CDD	0.33	"	4.3	2
ΣP5CDD	0.81	"	1.1	1
ΣH6CDD	0.30	"	<0.30	0
ΣH7CDD	0.43	"	0.58	1
OCDD	0.56	"	3.1	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			93	
2,3,7,8-T4CDD-13C12			93	
1,2,3,7,8-P5CDF-13C12			94	
1,2,3,7,8-P5CDD-13C12			92	
1,2,3,6,7,8-H6CDF-13C12			93	
1,2,3,6,7,8-H6CDD-13C12			94	
1,2,3,4,6,7,8-H7CDF-13C12			105	
1,2,3,4,6,7,8-H7CDD-13C12			105	
OCDD-13C12			83	

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	R02100401	R02100401	R02100401
Client ID:	16A	16A	16A
Lab No.:	039081 02	039081 02	039081 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
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	R02100401	R02100401	R02100401
Client ID:	17A	17A	17A
Lab No.:	039082 02	039082 02	039082 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	1.8	pg	<1.8	<0.18
2,3,7,8-Cl4DBD	0.37	"	<0.37	<0.37
1,2,3,7,8-Cl5DBF	0.33	"	<0.33	<0.016
2,3,4,7,8-Cl5DBF	0.25	"	<0.25	<0.12
1,2,3,7,8-Cl5DBD	0.41	"	<0.41	<0.21
1,2,3,4,7,8-Cl6DBF	0.44	"	<0.44	<0.044
1,2,3,6,7,8-Cl6DBF	0.12	"	<0.12	<0.012
2,3,4,6,7,8-Cl6DBF	0.45	"	<0.45	<0.045
1,2,3,7,8,9-Cl6DBF	0.49	"	<0.49	<0.049
1,2,3,4,7,8-Cl6DBD	0.61	"	<0.61	<0.061
1,2,3,6,7,8-Cl6DBD	0.56	"	<0.56	<0.056
1,2,3,7,8,9-Cl6DBD	0.55	"	<0.55	<0.055
1,2,3,4,6,7,8-Cl7DBF	1.3	"	<1.3	<0.013
1,2,3,4,7,8,9-Cl7DBF	3.2	"	<3.2	<0.032
1,2,3,4,6,7,8-Cl7DBD	2.9	"	<2.9	<0.029
1,2,3,4,6,7,8,9-Cl8DBF	0.71	"	2.8	0.0028
1,2,3,4,6,7,8,9-Cl8DBD	0.69	"	29	0.029
TEF		pg	0.032	
EPA Requested TEQ			<	0.67
MAX TEF		"	<	1.3
Units Ng/m²			<	0.07
ΣT4CDF	0.20	pg	2.2	4
ΣP5CDF	0.41	"	<0.41	0
ΣH6CDF	0.41	"	<0.41	0
ΣH7CDF	3.0	"	<3.0	0
OCDF	0.71	"	2.8	1
ΣT4CDD	0.37	"	3.0	2
ΣP5CDD	0.41	"	1.7	2
ΣH6CDD	0.56	"	<0.56	0
ΣH7CDD	1.1	"	2.2	1
OCDD	0.69	"	29	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			90	
2,3,7,8-T4CDD-13C12			87	
1,2,3,7,8-P5CDF-13C12			76	
1,2,3,7,8-P5CDD-13C12			72	
1,2,3,6,7,8-H6CDF-13C12			91	
1,2,3,6,7,8-H6CDD-13C12			85	
1,2,3,4,6,7,8-H7CDF-13C12			88	
1,2,3,4,6,7,8-H7CDD-13C12			86	
OCDD-13C12			64	

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	R02100401	R02100401	R02100401
Client ID:	17A	17A	17A
Lab No.:	039082 02	039082 02	039082 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
Certificate of Analysis**

	R02100401	R02100401	R02100401
Client ID:	18A	18A	18A
Lab No.:	039083 02	039083 02	039083 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.18	pg	2.0	0.20
2,3,7,8-Cl4DBD	0.25	"	<0.25	<0.25
1,2,3,7,8-Cl5DBF	0.24	"	0.36	0.018
2,3,4,7,8-Cl5DBF	0.31	"	<0.31	<0.15
1,2,3,7,8-Cl5DBD	0.44	"	<0.44	<0.22
1,2,3,4,7,8-Cl6DBF	0.34	"	<0.34	<0.034
1,2,3,6,7,8-Cl6DBF	0.18	"	0.19	0.019
2,3,4,6,7,8-Cl6DBF	0.21	"	<0.21	<0.021
1,2,3,7,8,9-Cl6DBF	0.22	"	<0.22	<0.022
1,2,3,4,7,8-Cl6DBD	0.14	"	<0.14	<0.014
1,2,3,6,7,8-Cl6DBD	0.13	"	<0.13	<0.013
1,2,3,7,8,9-Cl6DBD	0.13	"	<0.13	<0.013
1,2,3,4,6,7,8-Cl7DBF	1.2	"	<1.2	<0.012
1,2,3,4,7,8,9-Cl7DBF	0.81	"	<0.81	<0.0081
1,2,3,4,6,7,8-Cl7DBD	0.15	"	1.1	0.011
1,2,3,4,6,7,8,9-Cl8DBF	0.98	"	<0.98	<0.00098
1,2,3,4,6,7,8,9-Cl8DBD	0.59	"	11	0.011
		pg	0.26	
EPA Requested TEQ			<	0.63
MAX TEF		"	<	1.0
Units Ng/m²			<	0.06
ΣT4CDF	0.18	pg	4.9	6
ΣP5CDF	0.24	"	1.7	3
ΣH6CDF	0.19	"	0.61	2
ΣH7CDF	0.75	"	<0.75	0
OCDF	0.98	"	<0.98	0
ΣT4CDD	0.27	"	4.9	3
ΣP5CDD	0.44	"	2.8	3
ΣH6CDD	0.13	"	0.37	1
ΣH7CDD	0.15	"	2.4	2
OCDD	0.59	"	11	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			84	
2,3,7,8-T4CDD-13C12			79	
1,2,3,7,8-P5CDF-13C12			85	
1,2,3,7,8-P5CDD-13C12			89	
1,2,3,6,7,8-H6CDF-13C12			79	
1,2,3,6,7,8-H6CDD-13C12			82	
1,2,3,4,6,7,8-H7CDF-13C12			92	
1,2,3,4,6,7,8-H7CDD-13C12			93	
OCDD-13C12			78	

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Client ID:	18A	18A	18A
Lab No.:	039083 02	039083 02	039083 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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	R02100401	R02100401	R02100401
Client ID:	19A	19A	19A
Lab No.:	039084 02	039084 02	039084 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	14	pg	<14	<1.4
2,3,7,8-Cl4DBD	71	"	<71	<71
1,2,3,7,8-Cl5DBF	13	"	<13	<0.67
2,3,4,7,8-Cl5DBF	13	"	<13	<6.5
1,2,3,7,8-Cl5DBD	27	"	<27	<14
1,2,3,4,7,8-Cl6DBF	10	"	<10	<1.0
1,2,3,6,7,8-Cl6DBF	9.5	"	<9.5	<0.95
2,3,4,6,7,8-Cl6DBF	11	"	<11	<1.1
1,2,3,7,8,9-Cl6DBF	12	"	<12	<1.2
1,2,3,4,7,8-Cl6DBD	17	"	<17	<1.7
1,2,3,6,7,8-Cl6DBD	15	"	<15	<1.5
1,2,3,7,8,9-Cl6DBD	15	"	<15	<1.5
1,2,3,4,6,7,8-Cl7DBF	200	"	<200	<2.0
1,2,3,4,7,8,9-Cl7DBF	200	"	<200	<2.0
1,2,3,4,6,7,8-Cl7DBD	17	"	<17	<0.17
1,2,3,4,6,7,8,9-Cl8DBF	38	"	<38	<0.038
1,2,3,4,6,7,8,9-Cl8DBD	250	"	<250	<0.25
TEF pg 0				
EPA Requested TEQ			<	55.00
MAX TEF			<	110
Units Ng/m²			<	5.50
ΣT4CDF	14	pg	<14	0
ΣP5CDF	13	"	<13	0
ΣH6CDF	10	"	<10	0
ΣH7CDF	220	"	<220	0
OCDF	38	"	<38	0
ΣT4CDD	71	"	<71	0
ΣP5CDD	27	"	<27	0
ΣH6CDD	15	"	<15	0
ΣH7CDD	17	"	<17	0
OCDD	250	"	<250	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			113	
2,3,7,8-T4CDD-13C12			102	
1,2,3,7,8-P5CDF-13C12			111	
1,2,3,7,8-P5CDD-13C12			112	
1,2,3,6,7,8-H6CDF-13C12			85	
1,2,3,6,7,8-H6CDD-13C12			85	
1,2,3,4,6,7,8-H7CDF-13C12			96	
1,2,3,4,6,7,8-H7CDD-13C12			96	
OCDD-13C12			94	

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	R02100401	R02100401	R02100401
Client ID:	19A	19A	19A
Lab No.:	039084 02	039084 02	039084 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
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	R02100401	R02100401	R02100401
Client ID:	20A	20A	20A
Lab No.:	039085 02	039085 02	039085 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.14	pg	2.4	0.24
2,3,7,8-Cl4DBD	0.42	"	<0.42	<0.42
1,2,3,7,8-Cl5DBF	0.49	"	<0.49	<0.025
2,3,4,7,8-Cl5DBF	0.41	"	<0.41	<0.21
1,2,3,7,8-Cl5DBD	0.51	"	<0.51	<0.25
1,2,3,4,7,8-Cl6DBF	0.26	"	<0.26	<0.026
1,2,3,6,7,8-Cl6DBF	0.24	"	<0.24	<0.024
2,3,4,6,7,8-Cl6DBF	0.28	"	<0.28	<0.028
1,2,3,7,8,9-Cl6DBF	0.31	"	<0.31	<0.031
1,2,3,4,7,8-Cl6DBD	0.28	"	<0.28	<0.028
1,2,3,6,7,8-Cl6DBD	0.26	"	<0.26	<0.026
1,2,3,7,8,9-Cl6DBD	0.25	"	<0.25	<0.025
1,2,3,4,6,7,8-Cl7DBF	0.81	"	<0.81	<0.0081
1,2,3,4,7,8,9-Cl7DBF	0.88	"	<0.88	<0.0088
1,2,3,4,6,7,8-Cl7DBD	0.66	"	<0.66	<0.0066
1,2,3,4,6,7,8,9-Cl8DBF	1.0	"	<1.0	<0.0010
1,2,3,4,6,7,8,9-Cl8DBD	2.8	"	<2.8	<0.0028
TEF		pg		0.24
EPA Requested TEQ			<	0.82
MAX TEF		"	<	1.4
Units Ng/m²			<	0.08
ΣT4CDF	0.14	pg	4.9	5
ΣP5CDF	0.49	"	0.51	1
ΣH6CDF	0.26	"	<0.26	0
ΣH7CDF	0.82	"	<0.82	0
OCDF	1.0	"	<1.0	0
ΣT4CDD	0.42	"	0.89	1
ΣP5CDD	0.51	"	0.84	1
ΣH6CDD	0.26	"	<0.26	0
ΣH7CDD	0.37	"	<0.37	0
OCDD	2.8	"	<2.8	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			93	
2,3,7,8-T4CDD-13C12			92	
1,2,3,7,8-P5CDF-13C12			73	
1,2,3,7,8-P5CDD-13C12			66	
1,2,3,6,7,8-H6CDF-13C12			74	
1,2,3,6,7,8-H6CDD-13C12			83	
1,2,3,4,6,7,8-H7CDF-13C12			55	
1,2,3,4,6,7,8-H7CDD-13C12			78	
OCDD-13C12			54	

PSC Analytical Services
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	R02100401	R02100401	R02100401
Client ID:	20A	20A	20A
Lab No.:	039085 02	039085 02	039085 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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**PSC Analytical Services
Certificate of Analysis**

	R02100402	R02100402	R02100402
Client ID:	01A	01A	01A
Lab No.:	039086 02	039086 02	039086 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.34	pg	2.1	0.21
2,3,7,8-Cl4DBD	0.24	"	<0.24	<0.24
1,2,3,7,8-Cl5DBF	0.53	"	<0.53	<0.026
2,3,4,7,8-Cl5DBF	0.46	"	<0.46	<0.23
1,2,3,7,8-Cl5DBD	0.49	"	<0.49	<0.24
1,2,3,4,7,8-Cl6DBF	0.54	"	<0.54	<0.054
1,2,3,6,7,8-Cl6DBF	0.51	"	<0.51	<0.051
2,3,4,6,7,8-Cl6DBF	0.59	"	<0.59	<0.059
1,2,3,7,8,9-Cl6DBF	0.64	"	<0.64	<0.064
1,2,3,4,7,8-Cl6DBD	0.59	"	<0.59	<0.059
1,2,3,6,7,8-Cl6DBD	0.55	"	<0.55	<0.055
1,2,3,7,8,9-Cl6DBD	0.53	"	<0.53	<0.053
1,2,3,4,6,7,8-Cl7DBF	2.0	"	<2.0	<0.020
1,2,3,4,7,8,9-Cl7DBF	3.7	"	<3.7	<0.037
1,2,3,4,6,7,8-Cl7DBD	0.81	"	<0.81	<0.0081
1,2,3,4,6,7,8,9-Cl8DBF	0.84	"	<0.84	<0.00084
1,2,3,4,6,7,8,9-Cl8DBD	5.6	"	<5.6	<0.0056
TEF		pg	0.21	
EPA Requested TEQ			< 0.81	
MAX TEF		"	< 1.4	
Units Ng/m²			< 0.08	
ΣT4CDF	0.34	pg	4.3	4
ΣP5CDF	0.30	"	<0.30	0
ΣH6CDF	0.54	"	<0.54	0
ΣH7CDF	3.5	"	<3.5	0
OCDF	0.84	"	<0.84	0
ΣT4CDD	0.21	"	1.9	2
ΣP5CDD	0.49	"	2.2	3
ΣH6CDD	0.55	"	<0.55	0
ΣH7CDD	0.40	"	<0.40	0
OCDD	5.6	"	<5.6	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			98	
2,3,7,8-T4CDD-13C12			90	
1,2,3,7,8-P5CDF-13C12			79	
1,2,3,7,8-P5CDD-13C12			72	
1,2,3,6,7,8-H6CDF-13C12			56	
1,2,3,6,7,8-H6CDD-13C12			71	
1,2,3,4,6,7,8-H7CDF-13C12			39	
1,2,3,4,6,7,8-H7CDD-13C12			75	
OCDD-13C12			54	

**PSC Analytical Services
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	R02100402	R02100402	R02100402
Client ID:	02A	02A	02A
Lab No.:	039087 02	039087 02	039087 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.25	pg	3.3	0.33
2,3,7,8-Cl4DBD	0.27	"	<0.27	<0.27
1,2,3,7,8-Cl5DBF	0.30	"	<0.30	<0.015
2,3,4,7,8-Cl5DBF	0.29	"	0.71	0.35
1,2,3,7,8-Cl5DBD	0.57	"	<0.57	<0.29
1,2,3,4,7,8-Cl6DBF	0.55	"	<0.55	<0.055
1,2,3,6,7,8-Cl6DBF	0.24	"	<0.24	<0.024
2,3,4,6,7,8-Cl6DBF	0.92	"	<0.92	<0.092
1,2,3,7,8,9-Cl6DBF	0.45	"	<0.45	<0.045
1,2,3,4,7,8-Cl6DBD	0.47	"	<0.47	<0.047
1,2,3,6,7,8-Cl6DBD	0.19	"	<0.19	<0.019
1,2,3,7,8,9-Cl6DBD	0.43	"	<0.43	<0.043
1,2,3,4,6,7,8-Cl7DBF	3.1	"	<3.1	<0.031
1,2,3,4,7,8,9-Cl7DBF	7.8	"	<7.8	<0.078
1,2,3,4,6,7,8-Cl7DBD	0.78	"	1.7	0.017
1,2,3,4,6,7,8,9-Cl8DBF	1.2	"	<1.2	<0.0012
1,2,3,4,6,7,8,9-Cl8DBD	7.9	"	<7.9	<0.0079
TEF		pg	0.70	
EPA Requested TEQ			<	1.20
MAX TEF		"	<	1.7
Units Ng/m²			<	0.12
ΣT4CDF	0.25	pg	11	8
ΣP5CDF	0.30	"	2.0	2
ΣH6CDF	0.38	"	<0.38	0
ΣH7CDF	7.3	"	<7.3	0
OCDF	1.2	"	<1.2	0
ΣT4CDD	0.52	"	9.5	2
ΣP5CDD	0.81	"	3.2	2
ΣH6CDD	0.44	"	<0.44	0
ΣH7CDD	0.78	"	3.2	2
OCDD	7.9	"	<7.9	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			88	
2,3,7,8-T4CDD-13C12			81	
1,2,3,7,8-P5CDF-13C12			75	
1,2,3,7,8-P5CDD-13C12			69	
1,2,3,6,7,8-H6CDF-13C12			97	
1,2,3,6,7,8-H6CDD-13C12			89	
1,2,3,4,6,7,8-H7CDF-13C12			90	
1,2,3,4,6,7,8-H7CDD-13C12			82	
OCDD-13C12			58	

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	R02100402	R02100402	R02100402
Client ID:	03A	03A	03A
Lab No.:	039088 02	039088 02	039088 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.13	pg	2.2	0.22
2,3,7,8-Cl4DBD	0.37	"	<0.37	<0.37
1,2,3,7,8-Cl5DBF	0.33	"	<0.33	<0.016
2,3,4,7,8-Cl5DBF	0.25	"	0.48	0.24
1,2,3,7,8-Cl5DBD	0.65	"	<0.65	<0.33
1,2,3,4,7,8-Cl6DBF	0.19	"	<0.19	<0.019
1,2,3,6,7,8-Cl6DBF	0.18	"	<0.18	<0.018
2,3,4,6,7,8-Cl6DBF	0.21	"	<0.21	<0.021
1,2,3,7,8,9-Cl6DBF	0.23	"	<0.23	<0.023
1,2,3,4,7,8-Cl6DBD	0.23	"	<0.23	<0.023
1,2,3,6,7,8-Cl6DBD	0.21	"	<0.21	<0.021
1,2,3,7,8,9-Cl6DBD	0.21	"	<0.21	<0.021
1,2,3,4,6,7,8-Cl7DBF	0.68	"	<0.68	<0.0068
1,2,3,4,7,8,9-Cl7DBF	1.5	"	<1.5	<0.015
1,2,3,4,6,7,8-Cl7DBD	0.21	"	0.44	0.0044
1,2,3,4,6,7,8,9-Cl8DBF	0.38	"	<0.38	<0.00038
1,2,3,4,6,7,8,9-Cl8DBD	0.27	"	3.0	0.0030
		TEF	pg	0.46
EPA Requested TEQ			<	0.88
MAX TEF		"	<	1.3
Units Ng/m²			<	0.09
ΣT4CDF	0.13	pg	5.5	6
ΣP5CDF	0.26	"	1.6	3
ΣH6CDF	0.19	"	<0.19	0
ΣH7CDF	1.4	"	<1.4	0
OCDF	0.38	"	<0.38	0
ΣT4CDD	0.37	"	3.9	2
ΣP5CDD	0.65	"	1.9	2
ΣH6CDD	0.21	"	<0.21	0
ΣH7CDD	0.21	"	0.44	1
OCDD	0.27	"	3.0	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			85	
2,3,7,8-T4CDD-13C12			84	
1,2,3,7,8-P5CDF-13C12			87	
1,2,3,7,8-P5CDD-13C12			92	
1,2,3,6,7,8-H6CDF-13C12			87	
1,2,3,6,7,8-H6CDD-13C12			88	
1,2,3,4,6,7,8-H7CDF-13C12			99	
1,2,3,4,6,7,8-H7CDD-13C12			98	
OCDD-13C12			78	

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	R02100402	R02100402	R02100402
Client ID:	04A	04A	04A
Lab No.:	039089 02	039089 02	039089 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.085	pg	3.6	0.36
2,3,7,8-Cl4DBD	0.26	"	0.33	0.33
1,2,3,7,8-Cl5DBF	0.49	"	0.64	0.032
2,3,4,7,8-Cl5DBF	0.47	"	<0.47	<0.24
1,2,3,7,8-Cl5DBD	0.38	"	<0.38	<0.19
1,2,3,4,7,8-Cl6DBF	0.42	"	<0.42	<0.042
1,2,3,6,7,8-Cl6DBF	0.39	"	<0.39	<0.039
2,3,4,6,7,8-Cl6DBF	0.46	"	<0.46	<0.046
1,2,3,7,8,9-Cl6DBF	0.49	"	<0.49	<0.049
1,2,3,4,7,8-Cl6DBD	0.30	"	<0.30	<0.030
1,2,3,6,7,8-Cl6DBD	0.44	"	0.66	0.066
1,2,3,7,8,9-Cl6DBD	0.42	"	0.71	0.071
1,2,3,4,6,7,8-Cl7DBF	7.8	"	<7.8	<0.078
1,2,3,4,7,8,9-Cl7DBF	6.3	"	<6.3	<0.063
1,2,3,4,6,7,8-Cl7DBD	1.1	"	6.1	0.061
1,2,3,4,6,7,8,9-Cl8DBF	1.1	"	<1.1	<0.0011
1,2,3,4,6,7,8,9-Cl8DBD	1.4	"	37	0.037
TEF		pg	0.96	
EPA Requested TEQ			< 1.33	
MAX TEF		"	< 1.7	
Units Ng/m²			< 0.13	
ΣT4CDF	0.085	pg	6.9	5
ΣP5CDF	0.49	"	2.3	3
ΣH6CDF	0.42	"	<0.42	0
ΣH7CDF	5.8	"	<5.8	0
OCDF	1.1	"	<1.1	0
ΣT4CDD	0.26	"	11	7
ΣP5CDD	0.29	"	0.81	1
ΣH6CDD	0.44	"	2.9	3
ΣH7CDD	1.1	"	14	2
OCDD	1.4	"	37	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			89	
2,3,7,8-T4CDD-13C12			85	
1,2,3,7,8-P5CDF-13C12			72	
1,2,3,7,8-P5CDD-13C12			67	
1,2,3,6,7,8-H6CDF-13C12			76	
1,2,3,6,7,8-H6CDD-13C12			82	
1,2,3,4,6,7,8-H7CDF-13C12			59	
1,2,3,4,6,7,8-H7CDD-13C12			79	
OCDD-13C12			58	

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**PSC Analytical Services
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	R02100402	R02100402	R02100402
Client ID:	05A	05A	05A
Lab No.:	039090 02	039090 02	039090 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	3.1	pg	<3.1	<0.31
2,3,7,8-Cl4DBD	0.47	"	<0.47	<0.47
1,2,3,7,8-Cl5DBF	0.49	"	<0.49	<0.025
2,3,4,7,8-Cl5DBF	0.13	"	0.53	0.27
1,2,3,7,8-Cl5DBD	0.37	"	<0.37	<0.18
1,2,3,4,7,8-Cl6DBF	0.64	"	<0.64	<0.064
1,2,3,6,7,8-Cl6DBF	0.42	"	<0.42	<0.042
2,3,4,6,7,8-Cl6DBF	0.49	"	<0.49	<0.049
1,2,3,7,8,9-Cl6DBF	0.53	"	<0.53	<0.053
1,2,3,4,7,8-Cl6DBD	0.27	"	<0.27	<0.027
1,2,3,6,7,8-Cl6DBD	0.25	"	<0.25	<0.025
1,2,3,7,8,9-Cl6DBD	0.25	"	<0.25	<0.025
1,2,3,4,6,7,8-Cl7DBF	3.7	"	<3.7	<0.037
1,2,3,4,7,8,9-Cl7DBF	4.3	"	<4.3	<0.043
1,2,3,4,6,7,8-Cl7DBD	3.8	"	<3.8	<0.038
1,2,3,4,6,7,8,9-Cl8DBF	1.9	"	<1.9	<0.0019
1,2,3,4,6,7,8,9-Cl8DBD	1.9	"	34	0.034
		pg	0.30	
EPA Requested TEQ			<	1.00
MAX TEF		"	<	1.7
Units Ng/m²			<	0.10
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12	0.14	pg	5.1	5
ΣP5CDF	0.13	"	0.53	1
ΣH6CDF	0.45	"	<0.45	0
ΣH7CDF	4.0	"	<4.0	0
OCDF	1.9	"	<1.9	0
ΣT4CDD	0.47	"	10	4
ΣP5CDD	0.37	"	2.6	1
ΣH6CDD	0.25	"	1.3	1
ΣH7CDD	0.64	"	4.7	1
OCDD	1.9	"	34	1
2,3,7,8-T4CDD-13C12			91	
2,3,7,8-T4CDD-13C12			88	
1,2,3,7,8-P5CDF-13C12			75	
1,2,3,7,8-P5CDD-13C12			70	
1,2,3,6,7,8-H6CDF-13C12			96	
1,2,3,6,7,8-H6CDD-13C12			89	
1,2,3,4,6,7,8-H7CDF-13C12			85	
1,2,3,4,6,7,8-H7CDD-13C12			77	
OCDD-13C12			50	

**PSC Analytical Services
Certificate of Analysis**

	R02100402	R02100402	R02100402
Client ID:	06A	06A	06A
Lab No.:	039091 02	039091 02	039091 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.22	pg	1.2	0.12
2,3,7,8-Cl4DBD	0.37	"	<0.37	<0.37
1,2,3,7,8-Cl5DBF	0.29	"	<0.29	<0.015
2,3,4,7,8-Cl5DBF	0.27	"	<0.27	<0.14
1,2,3,7,8-Cl5DBD	0.37	"	<0.37	<0.19
1,2,3,4,7,8-Cl6DBF	0.36	"	<0.36	<0.036
1,2,3,6,7,8-Cl6DBF	0.34	"	<0.34	<0.034
2,3,4,6,7,8-Cl6DBF	0.40	"	<0.40	<0.040
1,2,3,7,8,9-Cl6DBF	0.43	"	<0.43	<0.043
1,2,3,4,7,8-Cl6DBD	0.25	"	<0.25	<0.025
1,2,3,6,7,8-Cl6DBD	0.23	"	<0.23	<0.023
1,2,3,7,8,9-Cl6DBD	0.22	"	<0.22	<0.022
1,2,3,4,6,7,8-Cl7DBF	28	"	<28	<0.28
1,2,3,4,7,8,9-Cl7DBF	32	"	<32	<0.32
1,2,3,4,6,7,8-Cl7DBD	0.48	"	<0.48	<0.0048
1,2,3,4,6,7,8,9-Cl8DBF	0.44	"	<0.44	<0.00044
1,2,3,4,6,7,8,9-Cl8DBD	0.46	"	2.8	0.0028
TEF		pg		0.12
EPA Requested TEQ			<	0.91
MAX TEF		"	<	1.7
Units Ng/m ²			<	0.09
ΣT4CDF	0.22	pg	2.1	3
ΣP5CDF	0.29	"	<0.29	0
ΣH6CDF	0.36	"	<0.36	0
ΣH7CDF	30	"	<30	0
OCDF	0.44	"	<0.44	0
ΣT4CDD	0.37	"	<0.37	0
ΣP5CDD	0.37	"	0.49	1
ΣH6CDD	0.23	"	<0.23	0
ΣH7CDD	0.34	"	<0.34	0
OCDD	0.46	"	2.8	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			98	
2,3,7,8-T4CDD-13C12			94	
1,2,3,7,8-P5CDF-13C12			92	
1,2,3,7,8-P5CDD-13C12			91	
1,2,3,6,7,8-H6CDF-13C12			77	
1,2,3,6,7,8-H6CDD-13C12			87	
1,2,3,4,6,7,8-H7CDF-13C12			68	
1,2,3,4,6,7,8-H7CDD-13C12			98	
OCDD-13C12			76	

**PSC Analytical Services
Certificate of Analysis**

	R02100402	R02100402	R02100402
Client ID:	07A	07A	07A
Lab No.:	039092 02	039092 02	039092 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl ₄ DBF	0.31	pg	34	3.4
2,3,7,8-Cl ₄ DBD	8.8	"	<8.8	<8.8
1,2,3,7,8-Cl ₅ DBF	0.46	"	6.6	0.33
2,3,4,7,8-Cl ₅ DBF	0.45	"	6.6	3.3
1,2,3,7,8-Cl ₅ DBD	3.6	"	<3.6	<1.8
1,2,3,4,7,8-Cl ₆ DBF	0.74	"	7.0	0.70
1,2,3,6,7,8-Cl ₆ DBF	5.0	"	<5.0	<0.50
2,3,4,6,7,8-Cl ₆ DBF	0.81	"	7.8	0.78
1,2,3,7,8,9-Cl ₆ DBF	0.87	"	6.2	0.62
1,2,3,4,7,8-Cl ₆ DBD	1.5	"	3.2	0.32
1,2,3,6,7,8-Cl ₆ DBD	4.6	"	<4.6	<0.46
1,2,3,7,8,9-Cl ₆ DBD	1.3	"	6.8	0.68
1,2,3,4,6,7,8-Cl ₇ DBF	51	"	<51	<0.51
1,2,3,4,7,8,9-Cl ₇ DBF	8.5	"	<8.5	<0.085
1,2,3,4,6,7,8-Cl ₇ DBD	1.9	"	20	0.20
1,2,3,4,6,7,8,9-Cl ₈ DBF	1.8	"	12	0.012
1,2,3,4,6,7,8,9-Cl ₈ DBD	2.5	"	100	0.10
TEF		pg	10	
EPA Requested TEQ			<	16.50
MAX TEF		"	<	23
Units Ng/m²			<	1.65
ΣT ₄ CDF	0.31	pg	150	13
ΣP ₅ CDF	0.46	"	56	8
ΣH ₆ CDF	0.74	"	28	4
ΣH ₇ CDF	11	"	<11	0
OCDF	1.8	"	12	1
ΣT ₄ CDD	0.55	"	170	10
ΣP ₅ CDD	0.96	"	84	5
ΣH ₆ CDD	1.4	"	54	5
ΣH ₇ CDD	1.9	"	38	2
OCDD	2.5	"	100	1
Surrogate Recoveries		%		
2,3,7,8-T ₄ CDF-13C ₁₂			91	
2,3,7,8-T ₄ CDD-13C ₁₂			88	
1,2,3,7,8-P ₅ CDF-13C ₁₂			69	
1,2,3,7,8-P ₅ CDD-13C ₁₂			62	
1,2,3,6,7,8-H ₆ CDF-13C ₁₂			88	
1,2,3,6,7,8-H ₆ CDD-13C ₁₂			83	
1,2,3,4,6,7,8-H ₇ CDF-13C ₁₂			65	
1,2,3,4,6,7,8-H ₇ CDD-13C ₁₂			67	
OCDD-13C ₁₂			41	

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**PSC Analytical Services
Certificate of Analysis**

	R02100402	R02100402	R02100402
Client ID:	08A	08A	08A
Lab No.:	039093 02	039093 02	039093 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.18	pg	2.7	0.27
2,3,7,8-Cl4DBD	0.42	"	<0.42	<0.42
1,2,3,7,8-Cl5DBF	0.55	"	<0.55	<0.027
2,3,4,7,8-Cl5DBF	0.61	"	<0.61	<0.30
1,2,3,7,8-Cl5DBD	6.3	"	<6.3	<3.2
1,2,3,4,7,8-Cl6DBF	0.21	"	0.43	0.043
1,2,3,6,7,8-Cl6DBF	0.19	"	0.28	0.028
2,3,4,6,7,8-Cl6DBF	0.66	"	<0.66	<0.066
1,2,3,7,8,9-Cl6DBF	0.66	"	<0.66	<0.066
1,2,3,4,7,8-Cl6DBD	1.1	"	<1.1	<0.11
1,2,3,6,7,8-Cl6DBD	0.98	"	<0.98	<0.098
1,2,3,7,8,9-Cl6DBD	1.2	"	<1.2	<0.12
1,2,3,4,6,7,8-Cl7DBF	490	"	<490	<4.9
1,2,3,4,7,8,9-Cl7DBF	28	"	<28	<0.28
1,2,3,4,6,7,8-Cl7DBD	0.41	"	42	0.42
1,2,3,4,6,7,8,9-Cl8DBF	0.21	"	2.4	0.0024
1,2,3,4,6,7,8,9-Cl8DBD	0.48	"	430	0.43
	TEF	pg	1.2	
EPA Requested TEQ			<	6.10
MAX TEF		"	<	11
Units Ng/m²			<	0.61
ΣT4CDF	0.18	pg	5.8	7
ΣP5CDF	0.50	"	0.70	1
ΣH6CDF	0.21	"	1.8	3
ΣH7CDF	26	"	<26	0
OCDF	0.21	"	2.4	1
ΣT4CDD	0.27	"	0.43	1
ΣP5CDD	6.3	"	6.4	1
ΣH6CDD	0.57	"	3.3	2
ΣH7CDD	0.41	"	75	2
OCDD	0.48	"	430	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			92	
2,3,7,8-T4CDD-13C12			92	
1,2,3,7,8-P5CDF-13C12			93	
1,2,3,7,8-P5CDD-13C12			97	
1,2,3,6,7,8-H6CDF-13C12			86	
1,2,3,6,7,8-H6CDD-13C12			88	
1,2,3,4,6,7,8-H7CDF-13C12			99	
1,2,3,4,6,7,8-H7CDD-13C12			100	
OCDD-13C12			72	

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	R02100402	R02100402	R02100402
Client ID:	09A	09A	09A
Lab No.:	039094 02	039094 02	039094 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.25	pg	1.8	0.18
2,3,7,8-Cl4DBD	0.44	"	<0.44	<0.44
1,2,3,7,8-Cl5DBF	0.59	"	<0.59	<0.030
2,3,4,7,8-Cl5DBF	0.48	"	<0.48	<0.24
1,2,3,7,8-Cl5DBD	0.64	"	<0.64	<0.32
1,2,3,4,7,8-Cl6DBF	0.67	"	<0.67	<0.067
1,2,3,6,7,8-Cl6DBF	0.30	"	<0.30	<0.030
2,3,4,6,7,8-Cl6DBF	0.25	"	0.35	0.035
1,2,3,7,8,9-Cl6DBF	0.28	"	<0.28	<0.028
1,2,3,4,7,8-Cl6DBD	0.63	"	<0.63	<0.063
1,2,3,6,7,8-Cl6DBD	0.43	"	<0.43	<0.043
1,2,3,7,8,9-Cl6DBD	0.42	"	<0.42	<0.042
1,2,3,4,6,7,8-Cl7DBF	1.5	"	<1.5	<0.015
1,2,3,4,7,8,9-Cl7DBF	1.1	"	<1.1	<0.011
1,2,3,4,6,7,8-Cl7DBD	0.45	"	<0.45	<0.0045
1,2,3,4,6,7,8,9-Cl8DBF	0.48	"	5.8	0.0058
1,2,3,4,6,7,8,9-Cl8DBD	3.0	"	<3.0	<0.0030
TEF		pg	0.22	
EPA Requested TEQ			< 0.91	
MAX TEF		"	< 1.6	
Units Ng/m²			< 0.09	
ΣT4CDF	0.25	pg	3.9	5
ΣP5CDF	0.36	"	<0.36	0
ΣH6CDF	0.23	"	0.35	1
ΣH7CDF	1.1	"	<1.1	0
OCDF	0.48	"	5.8	1
ΣT4CDD	0.19	"	1.5	2
ΣP5CDD	0.64	"	<0.64	0
ΣH6CDD	0.43	"	<0.43	0
ΣH7CDD	0.28	"	<0.28	0
OCDD	3.0	"	<3.0	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			100	
2,3,7,8-T4CDD-13C12			98	
1,2,3,7,8-P5CDF-13C12			102	
1,2,3,7,8-P5CDD-13C12			101	
1,2,3,6,7,8-H6CDF-13C12			71	
1,2,3,6,7,8-H6CDD-13C12			84	
1,2,3,4,6,7,8-H7CDF-13C12			60	
1,2,3,4,6,7,8-H7CDD-13C12			96	
OCDD-13C12			67	

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	R02100402	R02100402	R02100402
Client ID:	10A	10A	10A
Lab No.:	039095 02	039095 02	039095 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.36	pg	3.4	0.34
2,3,7,8-Cl4DBD	1.0	"	<1.0	<1.0
1,2,3,7,8-Cl5DBF	0.23	"	0.63	0.031
2,3,4,7,8-Cl5DBF	0.22	"	0.84	0.42
1,2,3,7,8-Cl5DBD	0.23	"	<0.23	<0.12
1,2,3,4,7,8-Cl6DBF	0.21	"	0.89	0.089
1,2,3,6,7,8-Cl6DBF	0.19	"	0.60	0.060
2,3,4,6,7,8-Cl6DBF	0.75	"	<0.75	<0.075
1,2,3,7,8,9-Cl6DBF	0.24	"	<0.24	<0.024
1,2,3,4,7,8-Cl6DBD	0.25	"	<0.25	<0.025
1,2,3,6,7,8-Cl6DBD	0.24	"	<0.24	<0.024
1,2,3,7,8,9-Cl6DBD	0.23	"	0.38	0.038
1,2,3,4,6,7,8-Cl7DBF	3.3	"	<3.3	<0.033
1,2,3,4,7,8,9-Cl7DBF	0.81	"	<0.81	<0.0081
1,2,3,4,6,7,8-Cl7DBD	0.32	"	3.1	0.031
1,2,3,4,6,7,8,9-Cl8DBF	1.9	"	<1.9	<0.0019
1,2,3,4,6,7,8,9-Cl8DBD	0.97	"	23	0.023
TEF		pg	1.0	
EPA Requested TEQ			<	1.70
MAX TEF		"	<	2.4
Units Ng/m²			<	0.17
ΣT4CDF	0.36	pg	12	11
ΣP5CDF	0.23	"	5.1	6
ΣH6CDF	0.21	"	2.5	3
ΣH7CDF	1.7	"	<1.7	0
OCDF	1.9	"	<1.9	0
ΣT4CDD	0.21	"	15	6
ΣP5CDD	0.23	"	3.3	3
ΣH6CDD	0.24	"	1.2	2
ΣH7CDD	0.32	"	5.7	2
OCDD	0.97	"	23	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			90	
2,3,7,8-T4CDD-13C12			87	
1,2,3,7,8-P5CDF-13C12			94	
1,2,3,7,8-P5CDD-13C12			96	
1,2,3,6,7,8-H6CDF-13C12			85	
1,2,3,6,7,8-H6CDD-13C12			85	
1,2,3,4,6,7,8-H7CDF-13C12			91	
1,2,3,4,6,7,8-H7CDD-13C12			88	
OCDD-13C12			73	

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	R02100402	R02100402	R02100402
Client ID:	11A	11A	11A
Lab No.:	039096 02	039096 02	039096 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.41	pg	7.5	0.75
2,3,7,8-Cl4DBD	0.24	"	2.8	2.8
1,2,3,7,8-Cl5DBF	0.41	"	1.1	0.054
2,3,4,7,8-Cl5DBF	0.40	"	1.0	0.51
1,2,3,7,8-Cl5DBD	0.56	"	<0.56	<0.28
1,2,3,4,7,8-Cl6DBF	1.4	"	<1.4	<0.14
1,2,3,6,7,8-Cl6DBF	0.17	"	0.64	0.064
2,3,4,6,7,8-Cl6DBF	0.89	"	<0.89	<0.089
1,2,3,7,8,9-Cl6DBF	0.22	"	<0.22	<0.022
1,2,3,4,7,8-Cl6DBD	0.70	"	<0.70	<0.070
1,2,3,6,7,8-Cl6DBD	0.65	"	0.99	0.099
1,2,3,7,8,9-Cl6DBD	0.69	"	<0.69	<0.069
1,2,3,4,6,7,8-Cl7DBF	6.8	"	<6.8	<0.068
1,2,3,4,7,8,9-Cl7DBF	3.0	"	<3.0	<0.030
1,2,3,4,6,7,8-Cl7DBD	0.83	"	6.6	0.066
1,2,3,4,6,7,8,9-Cl8DBF	3.4	"	<3.4	<0.0034
1,2,3,4,6,7,8,9-Cl8DBD	1.3	"	59	0.059
		pg	4.3	
EPA Requested TEQ			< 4.70	
MAX TEF		"	< 5.1	
Units Ng/m²			< 0.47	
ΣT4CDF	0.41	pg	50	13
ΣP5CDF	0.41	"	11	7
ΣH6CDF	0.19	"	2.3	2
ΣH7CDF	2.8	"	<2.8	0
OCDF	3.4	"	<3.4	0
ΣT4CDD	0.24	"	23	6
ΣP5CDD	0.56	"	11	3
ΣH6CDD	0.65	"	0.99	1
ΣH7CDD	0.83	"	13	2
OCDD	1.3	"	59	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			50	
2,3,7,8-T4CDD-13C12			88	
1,2,3,7,8-P5CDF-13C12			51	
1,2,3,7,8-P5CDD-13C12			52	
1,2,3,6,7,8-H6CDF-13C12			43	
1,2,3,6,7,8-H6CDD-13C12			44	
1,2,3,4,6,7,8-H7CDF-13C12			46	
1,2,3,4,6,7,8-H7CDD-13C12			45	
OCDD-13C12			35	

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	R02100402	R02100402	R02100402
Client ID:	12A	12A	12A
Lab No.:	039097 02	039097 02	039097 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.17	pg	1.0	0.10
2,3,7,8-Cl4DBD	0.25	"	<0.25	<0.25
1,2,3,7,8-Cl5DBF	0.28	"	0.40	0.020
2,3,4,7,8-Cl5DBF	0.27	"	<0.27	<0.14
1,2,3,7,8-Cl5DBD	0.43	"	<0.43	<0.22
1,2,3,4,7,8-Cl6DBF	0.29	"	<0.29	<0.029
1,2,3,6,7,8-Cl6DBF	0.27	"	<0.27	<0.027
2,3,4,6,7,8-Cl6DBF	0.19	"	<0.19	<0.019
1,2,3,7,8,9-Cl6DBF	0.25	"	<0.25	<0.025
1,2,3,4,7,8-Cl6DBD	0.24	"	<0.24	<0.024
1,2,3,6,7,8-Cl6DBD	0.22	"	<0.22	<0.022
1,2,3,7,8,9-Cl6DBD	0.22	"	<0.22	<0.022
1,2,3,4,6,7,8-Cl7DBF	0.69	"	<0.69	<0.0069
1,2,3,4,7,8,9-Cl7DBF	1.3	"	<1.3	<0.013
1,2,3,4,6,7,8-Cl7DBD	1.1	"	<1.1	<0.011
1,2,3,4,6,7,8,9-Cl8DBF	0.41	"	<0.41	<0.00041
1,2,3,4,6,7,8,9-Cl8DBD	1.3	"	8.1	0.0081
TEF		pg		0.13
EPA Requested TEQ			<	0.53
MAX TEF		"	<	0.93
Units Ng/m²			<	0.05
ΣT4CDF	0.17	pg	1.9	4
ΣP5CDF	0.28	"	0.40	1
ΣH6CDF	0.18	"	0.29	1
ΣH7CDF	1.2	"	0.31	1
OCDF	0.41	"	<0.41	0
ΣT4CDD	0.25	"	<0.25	0
ΣP5CDD	0.43	"	<0.43	0
ΣH6CDD	0.22	"	<0.22	0
ΣH7CDD	0.42	"	<0.42	0
OCDD	1.3	"	8.1	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			94	
2,3,7,8-T4CDD-13C12			93	
1,2,3,7,8-P5CDF-13C12			95	
1,2,3,7,8-P5CDD-13C12			96	
1,2,3,6,7,8-H6CDF-13C12			85	
1,2,3,6,7,8-H6CDD-13C12			87	
1,2,3,4,6,7,8-H7CDF-13C12			89	
1,2,3,4,6,7,8-H7CDD-13C12			92	
OCDD-13C12			72	

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	R02100402	R02100402	R02100402
Client ID:	13A	13A	13A
Lab No.:	039098 02	039098 02	039098 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	1.2	pg	<1.2	<0.12
2,3,7,8-Cl4DBD	0.31	"	<0.31	<0.31
1,2,3,7,8-Cl5DBF	0.50	"	<0.50	<0.025
2,3,4,7,8-Cl5DBF	0.45	"	<0.45	<0.23
1,2,3,7,8-Cl5DBD	0.42	"	<0.42	<0.21
1,2,3,4,7,8-Cl6DBF	0.27	"	0.46	0.046
1,2,3,6,7,8-Cl6DBF	0.25	"	<0.25	<0.025
2,3,4,6,7,8-Cl6DBF	0.29	"	<0.29	<0.029
1,2,3,7,8,9-Cl6DBF	0.32	"	<0.32	<0.032
1,2,3,4,7,8-Cl6DBD	0.51	"	<0.51	<0.051
1,2,3,6,7,8-Cl6DBD	0.47	"	<0.47	<0.047
1,2,3,7,8,9-Cl6DBD	0.46	"	<0.46	<0.046
1,2,3,4,6,7,8-Cl7DBF	0.80	"	<0.80	<0.0080
1,2,3,4,7,8,9-Cl7DBF	0.32	"	<0.32	<0.0032
1,2,3,4,6,7,8-Cl7DBD	0.28	"	0.41	0.0041
1,2,3,4,6,7,8,9-Cl8DBF	0.55	"	11	0.011
1,2,3,4,6,7,8,9-Cl8DBD	0.84	"	2.6	0.0026
TEF		pg		0.064
EPA Requested TEQ			<	0.63
MAX TEF		"	<	1.2
Units Ng/m²			<	0.06
ΣT4CDF	0.17	pg	1.1	3
ΣP5CDF	0.50	"	<0.50	0
ΣH6CDF	0.27	"	0.86	2
ΣH7CDF	0.30	"	<0.30	0
OCDF	0.55	"	11	1
ΣT4CDD	0.31	"	<0.31	0
ΣP5CDD	0.42	"	<0.42	0
ΣH6CDD	0.47	"	<0.47	0
ΣH7CDD	0.28	"	0.41	1
OCDD	0.84	"	2.6	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			92	
2,3,7,8-T4CDD-13C12			93	
1,2,3,7,8-P5CDF-13C12			95	
1,2,3,7,8-P5CDD-13C12			96	
1,2,3,6,7,8-H6CDF-13C12			90	
1,2,3,6,7,8-H6CDD-13C12			89	
1,2,3,4,6,7,8-H7CDF-13C12			103	
1,2,3,4,6,7,8-H7CDD-13C12			98	
OCDD-13C12			78	

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	R02100402	R02100402	R02100402
Client ID:	14A	14A	14A
Lab No.:	039099 02	039099 02	039099 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.27	pg	<0.27	<0.027
2,3,7,8-Cl4DBD	0.68	"	<0.68	<0.68
1,2,3,7,8-Cl5DBF	0.65	"	0.85	0.042
2,3,4,7,8-Cl5DBF	0.77	"	<0.77	<0.39
1,2,3,7,8-Cl5DBD	0.74	"	<0.74	<0.37
1,2,3,4,7,8-Cl6DBF	1.1	"	<1.1	<0.11
1,2,3,6,7,8-Cl6DBF	0.24	"	0.88	0.088
2,3,4,6,7,8-Cl6DBF	1.1	"	<1.1	<0.11
1,2,3,7,8,9-Cl6DBF	0.31	"	0.63	0.063
1,2,3,4,7,8-Cl6DBD	0.78	"	0.99	0.099
1,2,3,6,7,8-Cl6DBD	0.69	"	<0.69	<0.069
1,2,3,7,8,9-Cl6DBD	0.99	"	<0.99	<0.099
1,2,3,4,6,7,8-Cl7DBF	1.9	"	<1.9	<0.019
1,2,3,4,7,8,9-Cl7DBF	1.4	"	<1.4	<0.014
1,2,3,4,6,7,8-Cl7DBD	2.5	"	<2.5	<0.025
1,2,3,4,6,7,8,9-Cl8DBF	0.74	"	3.6	0.0037
1,2,3,4,6,7,8,9-Cl8DBD	1.4	"	23	0.023
		pg	0.32	
EPA Requested TEQ			<	1.26
MAX TEF		"	<	2.2
Units Ng/m²			<	0.13
ΣT4CDF	0.27	pg	7.5	6
ΣP5CDF	0.65	"	0.85	1
ΣH6CDF	0.26	"	1.5	2
ΣH7CDF	1.3	"	<1.3	0
OCDF	0.74	"	3.6	1
ΣT4CDD	0.4	"	4.6	2
ΣP5CDD	0.74	"	<0.74	0
ΣH6CDD	0.72	"	0.99	1
ΣH7CDD	0.75	"	1.5	1
OCDD	1.4	"	23	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			88	
2,3,7,8-T4CDD-13C12			87	
1,2,3,7,8-P5CDF-13C12			76	
1,2,3,7,8-P5CDD-13C12			72	
1,2,3,6,7,8-H6CDF-13C12			91	
1,2,3,6,7,8-H6CDD-13C12			89	
1,2,3,4,6,7,8-H7CDF-13C12			92	
1,2,3,4,6,7,8-H7CDD-13C12			84	
OCDD-13C12			60	

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	R02100402	R02100402	R02100402
Client ID:	15A	15A	15A
Lab No.:	039100 02	039100 02	039100 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
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Dioxins and furans

2,3,7,8-Cl4DBF	0.22	pg	5.3	0.53
2,3,7,8-Cl4DBD	0.20	"	0.62	0.62
1,2,3,7,8-Cl5DBF	0.35	"	1.3	0.066
2,3,4,7,8-Cl5DBF	0.34	"	1.4	0.71
1,2,3,7,8-Cl5DBD	0.28	"	0.57	0.29
1,2,3,4,7,8-Cl6DBF	0.27	"	1.3	0.13
1,2,3,6,7,8-Cl6DBF	0.88	"	<0.88	<0.088
2,3,4,6,7,8-Cl6DBF	0.3	"	1.6	0.16
1,2,3,7,8,9-Cl6DBF	0.32	"	0.88	0.088
1,2,3,4,7,8-Cl6DBD	0.45	"	<0.45	<0.045
1,2,3,6,7,8-Cl6DBD	0.31	"	0.89	0.089
1,2,3,7,8,9-Cl6DBD	0.3	"	1.1	0.11
1,2,3,4,6,7,8-Cl7DBF	8.8	"	<8.8	<0.088
1,2,3,4,7,8,9-Cl7DBF	1.3	"	<1.3	<0.013
1,2,3,4,6,7,8-Cl7DBD	0.61	"	17	0.17
1,2,3,4,6,7,8,9-Cl8DBF	0.87	"	16	0.016
1,2,3,4,6,7,8,9-Cl8DBD	0.38	"	330	0.33

TEF	pg	3.3
EPA Requested TEQ		< 3.40
MAX TEF	"	< 3.5
Units Ng/m²		< 0.34

ΣT4CDF	0.22	pg	14	9
ΣP5CDF	0.35	"	7.8	7
ΣH6CDF	0.27	"	5.5	5
ΣH7CDF	4.7	"	8.3	1
OCDF	0.87	"	16	1
ΣT4CDD	0.20	"	7.1	7
ΣP5CDD	0.28	"	7.7	4
ΣH6CDD	0.31	"	4.1	3
ΣH7CDD	0.61	"	34	2
OCDD	0.38	"	330	1

Surrogate Recoveries

	%
2,3,7,8-T4CDF-13C12	97
2,3,7,8-T4CDD-13C12	91
1,2,3,7,8-P5CDF-13C12	97
1,2,3,7,8-P5CDD-13C12	91
1,2,3,6,7,8-H6CDF-13C12	68
1,2,3,6,7,8-H6CDD-13C12	80
1,2,3,4,6,7,8-H7CDF-13C12	72
1,2,3,4,6,7,8-H7CDD-13C12	75
OCDD-13C12	76

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	R02100402	R02100402	R02100402
Client ID:	16A	16A	16A
Lab No.:	039101 02	039101 02	039101 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.15	pg	1.5	0.15
2,3,7,8-Cl4DBD	0.35	"	<0.35	<0.35
1,2,3,7,8-Cl5DBF	0.51	"	<0.51	<0.026
2,3,4,7,8-Cl5DBF	0.43	"	<0.43	<0.21
1,2,3,7,8-Cl5DBD	0.55	"	<0.55	<0.28
1,2,3,4,7,8-Cl6DBF	0.34	"	<0.34	<0.034
1,2,3,6,7,8-Cl6DBF	0.32	"	<0.32	<0.032
2,3,4,6,7,8-Cl6DBF	0.37	"	<0.37	<0.037
1,2,3,7,8,9-Cl6DBF	0.41	"	<0.41	<0.041
1,2,3,4,7,8-Cl6DBD	0.30	"	<0.30	<0.030
1,2,3,6,7,8-Cl6DBD	0.28	"	<0.28	<0.028
1,2,3,7,8,9-Cl6DBD	0.27	"	<0.27	<0.027
1,2,3,4,6,7,8-Cl7DBF	54	"	<54	<0.54
1,2,3,4,7,8,9-Cl7DBF	62	"	<62	<0.62
1,2,3,4,6,7,8-Cl7DBD	0.73	"	<0.73	<0.0073
1,2,3,4,6,7,8,9-Cl8DBF	0.57	"	<0.57	<0.00057
1,2,3,4,6,7,8,9-Cl8DBD	0.43	"	3.5	0.0035
TEF		pg		0.16
EPA Requested TEQ			<	1.28
MAX TEF		"	<	2.4
Units Ng/m²			<	0.13
ΣT4CDF	0.15	pg	3.4	6
ΣP5CDF	0.44	"	0.22	1
ΣH6CDF	0.34	"	<0.34	0
ΣH7CDF	58	"	<58	0
OCDF	0.57	"	<0.57	0
ΣT4CDD	0.22	"	1.3	3
ΣP5CDD	0.55	"	0.71	1
ΣH6CDD	0.28	"	<0.28	0
ΣH7CDD	0.73	"	<0.73	0
OCDD	0.43	"	3.5	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			101	
2,3,7,8-T4CDD-13C12			94	
1,2,3,7,8-P5CDF-13C12			99	
1,2,3,7,8-P5CDD-13C12			93	
1,2,3,6,7,8-H6CDF-13C12			64	
1,2,3,6,7,8-H6CDD-13C12			77	
1,2,3,4,6,7,8-H7CDF-13C12			65	
1,2,3,4,6,7,8-H7CDD-13C12			84	
OCDD-13C12			73	

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Client ID:	17A	17A	17A
Lab No.:	039102 02	039102 02	039102 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.16	pg	2.6	0.26
2,3,7,8-Cl4DBD	0.68	"	<0.68	<0.68
1,2,3,7,8-Cl5DBF	0.67	"	<0.67	<0.033
2,3,4,7,8-Cl5DBF	0.50	"	<0.50	<0.25
1,2,3,7,8-Cl5DBD	0.22	"	<0.22	<0.11
1,2,3,4,7,8-Cl6DBF	0.33	"	<0.33	<0.033
1,2,3,6,7,8-Cl6DBF	0.28	"	<0.28	<0.028
2,3,4,6,7,8-Cl6DBF	0.38	"	<0.38	<0.038
1,2,3,7,8,9-Cl6DBF	0.26	"	<0.26	<0.026
1,2,3,4,7,8-Cl6DBD	0.099	"	<0.099	<0.0099
1,2,3,6,7,8-Cl6DBD	0.33	"	<0.33	<0.033
1,2,3,7,8,9-Cl6DBD	0.23	"	0.33	0.033
1,2,3,4,6,7,8-Cl7DBF	2.1	"	<2.1	<0.021
1,2,3,4,7,8,9-Cl7DBF	29	"	<29	<0.29
1,2,3,4,6,7,8-Cl7DBD	0.28	"	1.1	0.011
1,2,3,4,6,7,8,9-Cl8DBF	0.62	"	<0.62	<0.00062
1,2,3,4,6,7,8,9-Cl8DBD	0.58	"	9.4	0.0094
TEF		pg	0.32	
EPA Requested TEQ			<	1.11
MAX TEF		"	<	1.9
Units Ng/m ²			<	0.11
ΣT4CDF	0.16	pg	11	12
ΣP5CDF	0.44	"	2.8	4
ΣH6CDF	0.22	"	0.56	1
ΣH7CDF	27	"	<27	0
OCDF	0.62	"	<0.62	0
ΣT4CDD	0.32	"	8.5	5
ΣP5CDD	0.55	"	3.5	2
ΣH6CDD	0.24	"	0.97	2
ΣH7CDD	0.28	"	2.6	2
OCDD	0.58	"	9.4	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			84	
2,3,7,8-T4CDD-13C12			77	
1,2,3,7,8-P5CDF-13C12			89	
1,2,3,7,8-P5CDD-13C12			86	
1,2,3,6,7,8-H6CDF-13C12			86	
1,2,3,6,7,8-H6CDD-13C12			81	
1,2,3,4,6,7,8-H7CDF-13C12			96	
1,2,3,4,6,7,8-H7CDD-13C12			86	
OCDD-13C12			78	

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	R02100402	R02100402	R02100402
Client ID:	18A	18A	18A
Lab No.:	039103 02	039103 02	039103 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.23	pg	2.8	0.28
2,3,7,8-Cl4DBD	0.32	"	<0.32	<0.32
1,2,3,7,8-Cl5DBF	0.26	"	0.61	0.031
2,3,4,7,8-Cl5DBF	0.25	"	0.59	0.29
1,2,3,7,8-Cl5DBD	0.49	"	<0.49	<0.25
1,2,3,4,7,8-Cl6DBF	0.68	"	<0.68	<0.068
1,2,3,6,7,8-Cl6DBF	0.46	"	<0.46	<0.046
2,3,4,6,7,8-Cl6DBF	0.54	"	<0.54	<0.054
1,2,3,7,8,9-Cl6DBF	0.58	"	<0.58	<0.058
1,2,3,4,7,8-Cl6DBD	0.25	"	<0.25	<0.025
1,2,3,6,7,8-Cl6DBD	0.23	"	0.27	0.027
1,2,3,7,8,9-Cl6DBD	0.36	"	<0.36	<0.036
1,2,3,4,6,7,8-Cl7DBF	4.2	"	<4.2	<0.042
1,2,3,4,7,8,9-Cl7DBF	46	"	<46	<0.46
1,2,3,4,6,7,8-Cl7DBD	0.46	"	4.1	0.041
1,2,3,4,6,7,8,9-Cl8DBF	0.71	"	2.6	0.0026
1,2,3,4,6,7,8,9-Cl8DBD	0.50	"	39	0.039
		TEF	pg	
EPA Requested TEQ				0.71
MAX TEF			<	1.41
Units Ng/m²			<	2.1
			<	0.14
ΣT4CDF	0.23	pg	9.1	10
ΣP5CDF	0.26	"	3.2	5
ΣH6CDF	0.50	"	<0.50	0
ΣH7CDF	43	"	<43	0
OCDF	0.71	"	2.6	1
ΣT4CDD	0.32	"	3.0	2
ΣP5CDD	0.49	"	0.91	1
ΣH6CDD	0.23	"	0.79	2
ΣH7CDD	0.46	"	7.9	2
OCDD	0.50	"	39	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			82	
2,3,7,8-T4CDD-13C12			78	
1,2,3,7,8-P5CDF-13C12			85	
1,2,3,7,8-P5CDD-13C12			84	
1,2,3,6,7,8-H6CDF-13C12			72	
1,2,3,6,7,8-H6CDD-13C12			78	
1,2,3,4,6,7,8-H7CDF-13C12			79	
1,2,3,4,6,7,8-H7CDD-13C12			87	
OCDD-13C12			77	

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	R02100402	R02100402	R02100402
Client ID:	19A	19A	19A
Lab No.:	039104 02	039104 02	039104 02
Date Sampled:	02/09/10	02/09/10	02/09/10
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.51	pg	2.9	0.29
2,3,7,8-Cl4DBD	0.72	"	1.4	1.4
1,2,3,7,8-Cl5DBF	0.65	"	2.1	0.10
2,3,4,7,8-Cl5DBF	2.5	"	<2.5	<1.3
1,2,3,7,8-Cl5DBD	0.79	"	1.7	0.85
1,2,3,4,7,8-Cl6DBF	2.6	"	<2.6	<0.26
1,2,3,6,7,8-Cl6DBF	0.56	"	2.4	0.24
2,3,4,6,7,8-Cl6DBF	0.65	"	5.3	0.53
1,2,3,7,8,9-Cl6DBF	0.71	"	3.8	0.38
1,2,3,4,7,8-Cl6DBD	2.3	"	<2.3	<0.23
1,2,3,6,7,8-Cl6DBD	0.68	"	2.6	0.26
1,2,3,7,8,9-Cl6DBD	3.8	"	<3.8	<0.38
1,2,3,4,6,7,8-Cl7DBF	4.6	"	<4.6	<0.046
1,2,3,4,7,8,9-Cl7DBF	2.4	"	4.3	0.043
1,2,3,4,6,7,8-Cl7DBD	1.1	"	4.0	0.040
1,2,3,4,6,7,8,9-Cl8DBF	0.68	"	7.0	0.0070
1,2,3,4,6,7,8,9-Cl8DBD	1.5	"	12	0.012
TEF		pg	4.2	
EPA Requested TEQ			< 5.30	
MAX TEF		"	< 6.4	
Units Ng/m²			< 0.53	
ΣT4CDF	0.51	pg	2.9	1
ΣP5CDF	0.65	"	2.1	1
ΣH6CDF	0.60	"	12	3
ΣH7CDF	2.2	"	4.3	1
OCDF	0.68	"	7.0	1
ΣT4CDD	0.72	"	2.9	2
ΣP5CDD	0.79	"	1.7	1
ΣH6CDD	0.68	"	2.6	1
ΣH7CDD	1.1	"	4.0	1
OCDD	1.5	"	12	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			89	
2,3,7,8-T4CDD-13C12			81	
1,2,3,7,8-P5CDF-13C12			75	
1,2,3,7,8-P5CDD-13C12			70	
1,2,3,6,7,8-H6CDF-13C12			68	
1,2,3,6,7,8-H6CDD-13C12			80	
1,2,3,4,6,7,8-H7CDF-13C12			58	
1,2,3,4,6,7,8-H7CDD-13C12			83	
OCDD-13C12			64	

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	R02100402	R02100402	R02100402
Client ID:	20A	20A	20A
Lab No.:	039105 02	039105 02	039105 02
Date Sampled:	02/09/10	02/09/10	02/09/10
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.33	pg	0.94	0.094
2,3,7,8-Cl4DBD	0.38	"	<0.38	<0.38
1,2,3,7,8-Cl5DBF	0.45	"	<0.45	<0.022
2,3,4,7,8-Cl5DBF	0.43	"	<0.43	<0.21
1,2,3,7,8-Cl5DBD	1.1	"	<1.1	<0.53
1,2,3,4,7,8-Cl6DBF	1.3	"	<1.3	<0.13
1,2,3,6,7,8-Cl6DBF	1.2	"	<1.2	<0.12
2,3,4,6,7,8-Cl6DBF	1.4	"	<1.4	<0.14
1,2,3,7,8,9-Cl6DBF	1.5	"	<1.5	<0.15
1,2,3,4,7,8-Cl6DBD	1.2	"	<1.2	<0.12
1,2,3,6,7,8-Cl6DBD	1.1	"	<1.1	<0.11
1,2,3,7,8,9-Cl6DBD	1.1	"	<1.1	<0.11
1,2,3,4,6,7,8-Cl7DBF	3.0	"	<3.0	<0.030
1,2,3,4,7,8,9-Cl7DBF	1.2	"	<1.2	<0.012
1,2,3,4,6,7,8-Cl7DBD	0.90	"	<0.90	<0.0090
1,2,3,4,6,7,8,9-Cl8DBF	1.1	"	<1.1	<0.0011
1,2,3,4,6,7,8,9-Cl8DBD	3.1	"	<3.1	<0.0031
TEF		pg	0.094	
EPA Requested TEQ			< 1.15	
MAX TEF		"	< 2.2	
Units Ng/m²			< 0.11	
ΣT4CDF	0.33	pg	0.94	1
ΣP5CDF	0.45	"	<0.45	0
ΣH6CDF	1.3	"	<1.3	0
ΣH7CDF	1.2	"	<1.2	0
OCDF	1.1	"	<1.1	0
ΣT4CDD	0.34	"	<0.34	0
ΣP5CDD	1.1	"	<1.1	0
ΣH6CDD	1.1	"	<1.1	0
ΣH7CDD	0.90	"	<0.90	0
OCDD	3.1	"	<3.1	0
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			91	
2,3,7,8-T4CDD-13C12			82	
1,2,3,7,8-P5CDF-13C12			76	
1,2,3,7,8-P5CDD-13C12			73	
1,2,3,6,7,8-H6CDF-13C12			48	
1,2,3,6,7,8-H6CDD-13C12			69	
1,2,3,4,6,7,8-H7CDF-13C12			37	
1,2,3,4,6,7,8-H7CDD-13C12			80	
OCDD-13C12			60	

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