AXYS METHOD MLA-010 Rev 04
PCB-TEQ-DL_14

CLIENT ID:
AN-D14TB-030515

Form 1C
PCB CONGENER TEQ ANALYSIS REPORT

Lab Name: AXYS ANALYTICAL SERVICES		Sample Collection:	N/A
Contract No.:	9952		
Matrix:	AQUEOUS	Lab Sample ID:	L5850-1
Sample Size:	0.931 L	GC Column ID(s):	SPB-OCTYL
Concentration Units :	pg/L	Sample Datafile(s):	PB3C_357 S:5

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	WHO 1998 TEF	TEQ U=1/2 DL	TEQ U=0
3,3',4,4'-TetraCB	77		U		0.706	0.0001	3.53E-05	0.00E+00
3,4,4',5-TetraCB	81		U		0.698	0.0001	3.49E-05	0.00E+00
2,3,3',4,4'-PentaCB	105		U		0.240	0.0001	1.20E-05	0.00E+00
2,3,4,4',5-PentaCB	114		U		0.220	0.0005	5.50E-05	0.00E+00
2,3',4,4',5-PentaCB	118			1.22	0.211	0.0001	1.22E-04	1.22E-04
2',3,4,4',5-PentaCB	123		U		0.220	0.0001	1.10E-05	0.00E+00
3,3',4,4',5-PentaCB	126		U		0.273	0.1	1.36E-02	0.00E+00
2,3,3',4,4',5-HexaCB	156	156 + 157	C U		0.196	0.0005	4.89E-05	0.00E+00
2,3,3',4,4',5'-HexaCB	157	156 + 157	C156					
2,3',4,4',5,5'-HexaCB	167		U		0.138	0.00001	6.91E-07	0.00E+00
3,3',4,4',5,5'-HexaCB	169		U		0.689	0.01	3.45E-03	0.00E+00
2,2',3,3',4,4',5-HeptaCB	170		Z					
2,2',3,4,4',5,5'-HeptaCB	180	180 + 193	Z					
2,3,3',4,4',5,5'-HeptaCB	189		U		0.0134	0.0001	6.70E-07	0.00E+00
2,3,3',4',5,5',6-HeptaCB	193	180 + 193	Z					
						TOTAL TEQ	0.0174	0.000122

(1) C = co-eluting congener; U = not detected; Z = compound not requested
(2) Concentrations that do not meet quantification criteria are not included in the TEQ calculations.

9139PCBTEQ1_1.xls, S3 (TEQ)

Approved by: Shawn Thorne QA/QC Chemist

26-08-2003
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AXYS METHOD MLA-010 Rev 04
1668A-S1_ARO-D1

CLIENT ID:
AN-D14TB-030515

Form 1A
PCB AROCLOR EQUIVALENT ANALYSIS REPORT

		Sample Collection:	N/A
Lab Name: AXYS ANALYTICAL SERVICES			
Contract No.:	9952	Lab Sample ID:	L5850-1
Matrix:	AQUEOUS	Sample Size:	0.931 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003	Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003 Time: 1:09:55	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Datafile:	PB3C_357 S: 5
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_357 S:4
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_357 S:1
Concentration Units:	pg/L		

COMPOUND	CAS NO.	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT
Aroclor 1016	12674-11-2	Z		
Aroclor 1221	11104-28-2	U		1.11
Aroclor 1232	11141-16-5	U		1.50
Aroclor 1242	53469-21-9		10.3	2.38
Aroclor 1248	12672-29-6	U		3.60
Aroclor 1254	11097-69-1		7.09	1.76
Aroclor 1260	11096-82-5		2.74	0.165

(1) U = not detected; E = exceeds calibrated linear range, see dilution data; D = dilution data; Z = compound not requested; X = results reported separately
(2) PCB Aroclor equivalents were calculated from individual PCB congener concentrations using empirically determined conversion factors.

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Approved by: QA/QC Chemist

24-08-2003
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SAMPLE NO. AN-D16TB-030515

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AXYS METHOD MLA-010 Rev 04
1668A-S1_209

Form 1A
PCB CONGENER ANALYSIS REPORT

CLIENT ID:
AN-D16TB-030515

		Sample Collection:	N/A
Lab Name: AXYS ANALYTICAL SERVICES			
Contract No.:	9952	Lab Sample ID:	L5850-2
Matrix:	AQUEOUS	Sample Size:	0.924 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003	Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003 Time: 2:14:12	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Data Filename:	PB3C_357 S:6
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_357 S:4
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_357 S:1
Concentration Units :	pg/L		

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2 - MoCB	1		K	1.75 UR	0.221	2.50	1.000
3 - MoCB	2			2.02	0.297	3.25	0.988
4 - MoCB	3		K	3.09 UR	0.335	3.86	1.000
2,2' - DiCB	4		U		0.998		
2,3 - DICB	5		U		0.842		
2,3' - DICB	6		U		0.756		
2,4 - DICB	7		U		0.731		
2,4' - DICB	8			2.12	0.689	1.47	1.208
2,5 - DICB	9		U		0.757		
2,6 - DICB	10		U		0.748		
3,3' - DICB	11		K	4.27 UR	0.841	4.47	0.970
3,4 - DICB	12	12 + 13	C U		0.832		
3,4' - DICB	13	12 + 13	C12				
3,5 - DICB	14		U		0.806		
4,4' - DICB	15		U		1.15		
2,2',3 - TriCB	16		K	0.893 UR	0.486	0.69	1.166
2,2',4 - TriCB	17		K	0.891 UR	0.443	0.86	1.138
2,2',5 - TriCB	18	18 + 30	C	1.93	0.361	1.05	1.113
2,2',6 - TriCB	19		K	0.518 UR	0.465	1.74	1.001
2,3,3' - TriCB	20	20 + 28	C	2.15	0.495	0.99	0.849

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Approved by: Paul Stone QA/QC Chemist

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CLIENT ID: AN-D16TB-030515

Lab Sample ID: L5850-2

Sample Data Filename: PB3C_357 S:6

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,4 - TriCB	21	21 + 33	C K	1.07 UR	0.477	1.52	0.857
2,3,4' - TriCB	22		K	0.749 UR	0.549	0.66	0.873
2,3,5 - TriCB	23		U		0.502		
2,3,6 - TriCB	24		U		0.311		
2,3',4 - TriCB	25		U		0.440		
2,3',5 - TriCB	26	26 + 29	C U		0.502		
2,3',6 - TriCB	27		U		0.307		
2,4,4' - TriCB	28	20 + 28	C20				
2,4,5 - TriCB	29	26 + 29	C26				
2,4,6 - TriCB	30	18 + 30	C18				
2,4',5 - TriCB	31		K	1.77 UR	0.487	0.86	0.837
2,4',6 - TriCB	32		U		0.481		
2',3,4 - TriCB	33	21 + 33	C21				
2',3,5 - TriCB	34		U		0.508		
3,3',4 - TriCB	35		U		0.574		
3,3',5 - TriCB	36		U		0.520		
3,4,4' - TriCB	37			0.716	0.599	0.88	1.000
3,4,5 - TriCB	38		U		0.528		
3,4',5 - TriCB	39		U		0.508		
2,2',3,3' - TeCB	40	40 + 41 + 71	C K	0.708 UR	0.166	1.25	1.336
2,2',3,4 - TeCB	41	40 + 41 + 71	C40				
2,2',3,4' - TeCB	42		U		0.173		
2,2',3,5 - TeCB	43		U		0.190		
2,2',3,5' - TeCB	44	44 + 47 + 65	C K	2.09 UR	0.151	1.03	1.285
2,2',3,6 - TeCB	45	45 + 51	C K	0.660 UR	0.164	0.51	1.149
2,2',3,6' - TeCB	46		U		0.194		
2,2',4,4' - TeCB	47	44 + 47 + 65	C44				
2,2',4,5 - TeCB	48		U		0.163		
2,2',4,5' - TeCB	49	49 + 69	C K	0.840 UR	0.142	0.64	1.259
2,2',4,6 - TeCB	50	50 + 53	C K	0.274 UR	0.158	0.35	1.112
2,2',4,6' - TeCB	51	45 + 51	C45				
2,2',5,5' - TeCB	52		K	1.63 UR	0.158	0.56	1.234
2,2',5,6' - TeCB	53	50 + 53	C50				
2,2',6,6' - TeCB	54		K	0.174 UR	0.140	0.46	1.002
2,3,3',4 - TeCB	55		U		0.544		
2,3,3',4' - TeCB	56		U		0.554		
2,3,3',5 - TeCB	57		U		0.531		
2,3,3',5' - TeCB	58		U		0.531		
2,3,3',6 - TeCB	59	59 + 62 + 75	C K	0.243 UR	0.124	0.54	1.300
2,3,4,4' - TeCB	60		U		0.552		
2,3,4,5 - TeCB	61	61 + 70 + 74 + 76	C K	2.15 UR	0.511	0.65	0.875
2,3,4,6 - TeCB	62	59 + 62 + 75	C59				
2,3,4',5 - TeCB	63		U		0.516		

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Lab Sample ID: L5850-2

CLIENT ID: AN-D16TB-030515

Sample Data Filename: PB3C_357 S:6

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,4',6 - TeCB	64		K	0.434 UR	0.121	1.19	1.348
2,3,5,6 - TeCB	65	44 + 47 + 65	C44				
2,3',4,4' - TeCB	66			1.04	0.521	0.86	0.884
2,3',4,5 - TeCB	67		U		0.472		
2,3',4,5' - TeCB	68		U		0.480		
2,3',4,6 - TeCB	69	49 + 69	C49				
2,3',4',5 - TeCB	70	61 + 70 + 74 + 76	C61				
2,3',4',6 - TeCB	71	40 + 41 + 71	C40				
2,3',5,5' - TeCB	72		U		0.494		
2,3',5',6 - TeCB	73		U		0.124		
2,4,4',5 - TeCB	74	61 + 70 + 74 + 76	C61				
2,4,4',6 - TeCB	75	59 + 62 + 75	C59				
2',3,4,5 - TeCB	76	61 + 70 + 74 + 76	C61				
3,3',4,4' - TeCB	77		U		0.606		
3,3',4,5 - TeCB	78		U		0.569		
3,3',4,5' - TeCB	79		U		0.462		
3,3',5,5' - TeCB	80		U		0.528		
3,4,4',5 - TeCB	81		U		0.601		
2,2',3,3',4 - PeCB	82		U		0.360		
2,2',3,3',5 - PeCB	83	83 + 99	C	0.977	0.317	1.47	1.259
2,2',3,3',6 - PeCB	84			0.397	0.354	1.61	1.162
2,2',3,4,4' - PeCB	85	85 + 116 + 117	C U		0.268		
2,2',3,4,5 - PeCB	86	86 + 87 + 97 + 108 + 119 + 125	C	2.05	0.269	1.62	1.282
2,2',3,4,5' - PeCB	87	86 + 87 + 97 + 108 + 119 + 125	C86				
2,2',3,4,6 - PeCB	88	88 + 91	C U		0.304		
2,2',3,4,6' - PeCB	89		U		0.330		
2,2',3,4',5 - PeCB	90	90 + 101 + 113	C	2.38	0.275	1.33	1.238
2,2',3,4',6 - PeCB	91	88 + 91	C88				
2,2',3,5,5' - PeCB	92			0.374	0.317	1.44	0.854
2,2',3,5,6 - PeCB	93	93 + 95 + 98 + 100 + 102	C K	2.57 UR	0.293	1.96	1.120
2,2',3,5,6' - PeCB	94		U		0.320		
2,2',3,5',6 - PeCB	95	93 + 95 + 98 + 100 + 102	C93				
2,2',3,6,6' - PeCB	96		U		0.0120		
2,2',3',4,5 - PeCB	97	86 + 87 + 97 + 108 + 119 + 125	C86				
2,2',3',4,6 - PeCB	98	93 + 95 + 98 + 100 + 102	C93				
2,2',4,4',5 - PeCB	99	83 + 99	C83				
2,2',4,4',6 - PeCB	100	93 + 95 + 98 + 100 + 102	C93				
2,2',4,5,5' - PeCB	101	90 + 101 + 113	C90				
2,2',4,5,6' - PeCB	102	93 + 95 + 98 + 100 + 102	C93				
2,2',4,5',6 - PeCB	103		U		0.274		
2,2',4,6,6' - PeCB	104		U		0.0148		
2,3,3',4,4' - PeCB	105		K	0.772 UR	0.248	1.30	1.000
2,3,3',4,5 - PeCB	106		U		0.230		

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Approved by: _____ QA/QC Chemist

24-08-2003
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Lab Sample ID: L5850-2

CLIENT ID: AN-D16TB-030515

Sample Data Filename: PB3C_357 S:6

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,3',4',5 - PeCB	107	107 + 124	C K	0.249 UR	0.249	2.80	1.409
2,3,3',4,5' - PeCB	108	86 + 87 + 97 + 108 + 119 + 125	C86				
2,3,3',4,6 - PeCB	109		U		0.241		
2,3,3',4',6 - PeCB	110	110 + 115	C	2.09	0.233	1.50	1.315
2,3,3',5,5' - PeCB	111		U		0.237		
2,3,3',5,6 - PeCB	112		U		0.234		
2,3,3',5',6 - PeCB	113	90 + 101 + 113	C90				
2,3,4,4',5 - PeCB	114		K	0.346 UR	0.241	1.12	1.000
2,3,4,4',6 - PeCB	115	110 + 115	C110				
2,3,4,5,6 - PeCB	116	85 + 116 + 117	C85				
2,3,4',5,6 - PeCB	117	85 + 116 + 117	C85				
2,3',4,4',5 - PeCB	118			1.14	0.246	1.68	1.000
2,3',4,4',6 - PeCB	119	86 + 87 + 97 + 108 + 119 + 125	C86				
2,3',4,5,5' - PeCB	120		U		0.234		
2,3',4,5',6 - PeCB	121		U		0.231		
2',3,3',4,5 - PeCB	122		U		0.265		
2',3,4,4',5 - PeCB	123		K	0.368 UR	0.245	2.10	1.001
2',3,4,5,5' - PeCB	124	107 + 124	C107				
2',3,4,5,6' - PeCB	125	86 + 87 + 97 + 108 + 119 + 125	C86				
3,3',4,4',5 - PeCB	126		U		0.283		
3,3',4,5,5' - PeCB	127		U		0.258		
2,2',3,3',4,4' - HxCB	128	128 + 166	C	0.645	0.0124	1.23	0.959
2,2',3,3',4,5 - HxCB	129	129 + 138 + 160 + 163	C	4.24	0.0120	1.21	0.929
2,2',3,3',4,5' - HxCB	130			0.220	0.0155	1.23	0.913
2,2',3,3',4,6 - HxCB	131		K	0.131 UR	0.0142	0.45	1.160
2,2',3,3',4,6' - HxCB	132			1.55	0.0141	1.13	1.174
2,2',3,3',5,5' - HxCB	133		K	0.122 UR	0.0139	0.59	1.189
2,2',3,3',5,6 - HxCB	134	134 + 143	C K	0.025 UR	0.0142	0.27	1.145
2,2',3,3',5,6' - HxCB	135	135 + 151 + 154	C	1.74	0.0210	1.12	1.104
2,2',3,3',6,6' - HxCB	136		K	0.478 UR	0.0158	1.01	1.024
2,2',3,4,4',5 - HxCB	137		K	0.139 UR	0.0138	2.60	0.919
2,2',3,4,4',5' - HxCB	138	129 + 138 + 160 + 163	C129				
2,2',3,4,4',6 - HxCB	139	139 + 140	C K	0.138 UR	0.0128	3.23	1.154
2,2',3,4,4',6' - HxCB	140	139 + 140	C139				
2,2',3,4,5,5' - HxCB	141		K	1.15 UR	0.0136	1.58	0.904
2,2',3,4,5,6 - HxCB	142		K	0.121 UR	0.0144	20.72	1.163
2,2',3,4,5,6' - HxCB	143	134 + 143	C134				
2,2',3,4,5',6 - HxCB	144		K	0.299 UR	0.0221	0.90	1.121
2,2',3,4,6,6' - HxCB	145		U		0.0161		
2,2',3,4',5,5' - HxCB	146			0.651	0.0123	1.36	0.885
2,2',3,4',5,6 - HxCB	147	147 + 149	C	3.94	0.0127	1.22	1.133
2,2',3,4',5,6' - HxCB	148		U		0.0219		
2,2',3,4',5',6 - HxCB	149	147 + 149	C147				

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Approved by: _____ QA/QC Chemist

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CLIENT ID: AN-D16TB-030515

Lab Sample ID: L5850-2

Sample Data Filename: PB3C_357 S:6

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,2',3,4',6,6' - HxCB	150		K	0.041 UR	0.0154	0.66	1.013
2,2',3,5,5',6 - HxCB	151	135 + 151 + 154	C135				
2,2',3,5,6,6' - HxCB	152		U		0.0151		
2,2',4,4',5,5' - HxCB	153	153 + 168	C	4.27	0.0108	1.24	0.899
2,2',4,4',5,6' - HxCB	154	135 + 151 + 154	C135				
2,2',4,4',6,6' - HxCB	155		K	0.259 UR	0.0154	2.40	1.000
2,3,3',4,4',5 - HxCB	156	156 + 157	C	0.662	0.0130	1.32	1.001
2,3,3',4,4',5' - HxCB	157	156 + 157	C156				
2,3,3',4,4',6 - HxCB	158		K	0.397 UR	0.0097	2.07	0.939
2,3,3',4,5,5' - HxCB	159		K	0.205 UR	0.0107	0.95	0.982
2,3,3',4,5,6 - HxCB	160	129 + 138 + 160 + 163	C129				
2,3,3',4,5',6 - HxCB	161		U		0.0101		
2,3,3',4',5,5' - HxCB	162		K	0.148 UR	0.0105	1.86	0.989
2,3,3',4',5,6 - HxCB	163	129 + 138 + 160 + 163	C129				
2,3,3',4',5',6 - HxCB	164		K	0.513 UR	0.0105	0.88	0.922
2,3,3',5,5',6 - HxCB	165		U		0.0108		
2,3,4,4',5,6 - HxCB	166	128 + 166	C128				
2,3',4,4',5,5' - HxCB	167			0.329	0.0098	1.37	1.000
2,3',4,4',5',6 - HxCB	168	153 + 168	C153				
3,3',4,4',5,5' - HxCB	169		U		0.0116		
2,2',3,3',4,4',5 - HpCB	170		K	1.69 UR	0.0268	1.34	0.936
2,2',3,3',4,4',6 - HpCB	171	171 + 173	C K	0.376	0.0258	1.62	1.162
2,2',3,3',4,5,5' - HpCB	172		K	0.469 UR	0.0267	4.99	0.898
2,2',3,3',4,5,6 - HpCB	173	171 + 173	C171				
2,2',3,3',4,5,6' - HpCB	174			1.98	0.0237	1.10	1.132
2,2',3,3',4,5',6 - HpCB	175		K	0.122 UR	0.0233	0.29	1.102
2,2',3,3',4,6,6' - HpCB	176		K	0.340 UR	0.0176	2.70	1.034
2,2',3,3',4',5,6 - HpCB	177		K	1.22 UR	0.0263	1.39	1.145
2,2',3,3',5,5',6 - HpCB	178			0.326	0.0238	1.00	1.085
2,2',3,3',5,6,6' - HpCB	179		K	0.962 UR	0.0165	2.21	1.010
2,2',3,4,4',5,5' - HpCB	180	180 + 193	C	3.99	0.0209	1.12	0.910
2,2',3,4,4',5,6 - HpCB	181		U		0.0235		
2,2',3,4,4',5,6' - HpCB	182		K	0.181 UR	0.0231	0.57	1.116
2,2',3,4,4',5',6 - HpCB	183	183 + 185	C K	1.76 UR	0.0231	1.48	1.126
2,2',3,4,4',6,6' - HpCB	184		U		0.0159		
2,2',3,4,5,5',6 - HpCB	185	183 + 185	C183				
2,2',3,4,5,6,6' - HpCB	186		K	0.044 UR	0.0174	1.79	1.046
2,2',3,4',5,5',6 - HpCB	187		K	2.33 UR	0.0213	1.85	1.110
2,2',3,4',5,6,6' - HpCB	188		K	0.055 UR	0.0168	0.56	1.001
2,3,3',4,4',5,5' - HpCB	189		K	0.127 UR	0.0125	0.63	1.001
2,3,3',4,4',5,6 - HpCB	190			0.321	0.0193	0.98	0.947
2,3,3',4,4',5',6 - HpCB	191		K	0.137 UR	0.0191	3.33	0.918
2,3,3',4,5,5',6 - HpCB	192		K	0.130 UR	0.0208	1.64	0.902

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9139AD2_1.xls, S4

Approved by: _____ QA/QC Chemist

24-08-2003
dd-mm-yyyy

CLIENT ID: AN-D16TB-030515

Lab Sample ID: L5850-2

Sample Data Filename: PB3C_357 S:6

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,3',4',5,5',6 - HpCB	193	180 + 193	C180				
2,2',3,3',4,4',5,5' - OcCB	194		K	1.23 UR	0.0169	1.40	0.991
2,2',3,3',4,4',5,6 - OcCB	195		K	0.325 UR	0.0180	0.66	0.945
2,2',3,3',4,4',5,6' - OcCB	196			0.494	0.0211	0.93	0.917
2,2',3,3',4,4',6,6' - OcCB	197	197 + 200	C K	0.224 UR	0.0147	0.53	1.046
2,2',3,3',4,5,5',6 - OcCB	198	198 + 199	C K	0.814 UR	0.0201	1.79	1.114
2,2',3,3',4,5,5',6' - OcCB	199	198 + 199	C198				
2,2',3,3',4,5,6,6' - OcCB	200	197 + 200	C197				
2,2',3,3',4,5',6,6' - OcCB	201		K	0.077 UR	0.0153	1.50	1.023
2,2',3,3',5,5',6,6' - OcCB	202		K	0.318 UR	0.0162	0.59	1.000
2,2',3,4,4',5,5',6 - OcCB	203			0.555	0.0194	0.89	0.919
2,2',3,4,4',5,6,6' - OcCB	204		U		0.0149		
2,3,3',4,4',5,5',6 - OcCB	205		K	0.096 UR	0.0143	0.35	1.001
2,2',3,3',4,4',5,5',6 - NoCB	206		U		1.17		
2,2',3,3',4,4',5,6,6' - NoCB	207		U		0.900		
2,2',3,3',4,5,5',6,6' - NoCB	208		U		0.986		
2,2',3,3',4,4',5,5',6,6' - DeCB	209			0.785	0.0161	0.67	1.000

(1) C = co-eluting congener; U = not detected; K = peak detected, but did not meet quantification criteria; E = exceeds calibrated linear range, see dilution data; D = dilution data; Z = compound not requested; X = results reported separately

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11/19/03

9139AD2_1.xls, S4

Approved by: _____ QA/QC Chemist

24-08-2003
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AXYS METHOD MLA-010 Rev 04

1668A-S1_209

CLIENT ID:
AN-D16TB-030515

Form 2

PCB CONGENER ANALYSIS REPORT

Lab Name: AXYS ANALYTICAL SERVICES		Sample Collection:	N/A
Contract No.:	9952	Lab Sample ID:	L5850-2
Matrix:	AQUEOUS	Sample Size:	0.924 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003	Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003 Time: 2:14:12	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Datafile:	PB3C_357 S:6
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_357 S:4
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_357 S:1
Concentration Units :	pg absolute		

LABELED COMPOUND	IUPAC NO. [1]	CO-ELUTIONS	LAB FLAG[2]	SPIKE CONC.	CONC. FOUND	R(%)[3]	ION ABUND. RATIO	RRT
13C12-2 - MoCB	1L			2000	1120	56.2	3.29	0.720
13C12-4 - MoCB	3L			2000	1010	50.3	3.07	0.859
13C12-2,2' - DiCB	4L			2000	1020	50.8	1.56	0.873
13C12-4,4' - DiCB	15L			2000	878	43.9	1.54	1.253
13C12-2,2',6 - TriCB	19L			2000	1060	53.0	1.05	1.072
13C12-3,4,4' - TriCB	37L			2000	1260	63.0	1.02	1.092
13C12-2,2',6,6' - TeCB	54L			2000	1040	52.2	0.82	0.812
13C12-3,3',4,4' - TeCB	77L			2000	1520	75.8	0.76	1.395
13C12-3,4,4',5 - TeCB	81L			2000	1500	75.1	0.76	1.372
13C12-2,2',4,6,6' - PeCB	104L			2000	1000	50.2	1.58	0.809
13C12-2,3,3',4,4' - PeCB	105L			2000	1710	85.6	1.59	1.199
13C12-2,3,4,4',5 - PeCB	114L			2000	1640	81.8	1.58	1.178
13C12-2,3',4,4',5 - PeCB	118L			2000	1660	83.2	1.57	1.161
13C12-2',3,4,4',5 - PeCB	123L			2000	1680	84.0	1.57	1.150
13C12-3,3',4,4',5 - PeCB	126L			2000	1740	86.8	1.58	1.300
13C12-2,2',4,4',6,6' - HxCB	155L			2000	1270	63.4	1.29	0.786
13C12-2,3,3',4,4',5 - HxCB	156L	156L + 157L	C	4000	3280	81.9	1.31	1.107
13C12-2,3,3',4,4',5' - HxCB	157L	156L + 157L	C156L					
13C12-2,3',4,4',5,5' - HxCB	167L			2000	1690	84.4	1.31	1.077
13C12-3,3',4,4',5,5' - HxCB	169L			2000	1600	79.8	1.31	1.190
13C12-2,2',3,3',4,4',5 - HpCB	170L			2000	1660	82.8	1.06	0.898
13C12-2,2',3,4,4',5,5' - HpCB	180L			2000	1650	82.7	1.07	0.873
13C12-2,2',3,4',5,6,6' - HpCB	188L			2000	1480	73.8	1.09	0.713
13C12-2,3,3',4,4',5,5' - HpCB	189L			2000	1760	87.8	1.06	0.959
13C12-2,2',3,3',5,5',6,6' - OcCB	202L			2000	1610	80.3	0.94	0.819
13C12-2,3,3',4,4',5,5',6 - OcCB	205L			2000	1640	82.2	0.92	1.009
13C12-2,2',3,3',4,4',5,5',6 - NoCB	206L			2000	1600	80.2	0.81	1.043
13C12-2,2',3,3',4,5,5',6,6' - NoCB	208L			2000	1650	82.5	0.82	0.950
13C12-2,2',3,3',4,4',5,5',6,6' - DeCB	209L			2000	1680	84.1	1.20	1.075

9139AD2_1.xls, S4

Approved by: _____ QA/QC Chemist

24-08-2003
dd-mm-yyyy

AXYS METHOD MLA-010 Rev 04

1668A-S1_209

CLIENT ID:
AN-D16TB-030515

Form 2 (Continued)
PCB CONGENER ANALYSIS REPORT

Lab Name: AXYS ANALYTICAL SERVICES		Sample Collection:	N/A
Contract No.:	9952	Lab Sample ID:	L5850-2
Matrix:	AQUEOUS	Sample Size:	0.924 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003	Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003 Time: 2:14:12	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Datafile:	PB3C_357 S:6
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_357 S:4
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_357 S:1
Concentration Units :	pg absolute		

CLEAN-UP STANDARD	IUPAC NO. [1]	LAB FLAG[2]	SPIKE CONC.	CONC. FOUND	R(%)[3]	ION ABUND. RATIO	RRT
13C12- 2,4,4' - TrICB	28L		2000	1380	69.2	1.02	0.925
13C12-2,3,3',5,5' - PeCB	111L		2000	1670	83.3	1.62	1.087
13C12-2,2',3,3',5,5',6 - HpCB	178L		2000	1820	90.8	1.10	1.012

(1) Suffix "L" indicates labeled compound

(2) C = co-eluting congener; E = exceeds calibrated linear range, see dilution data; D = dilution data; Z = compound not requested; X = results reported separately
(3) R% = percent recovery of labeled compounds

9139AD2_1.xls, S4

Approved by: _____ QA/QC Chemist

24-08-2003
dd-mm-yyyy

AXYS METHOD MLA-010 Rev 04
PCB-TOTAL_209

CLIENT ID:
AN-D16TB-030515

Form 1A
HOMOLOGUE TOTAL POLYCHLORINATED BIPHENYLS (PCB) ANALYSIS REPORT

			Sample Collection:	N/A
Lab Name: AXYS ANALYTICAL SERVICES				
Contract No.:	9952		Lab Sample ID:	L5850-2
Matrix:	AQUEOUS		Sample Size:	0.924 L
Sample Receipt Date:	16-May-2003		Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003		Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003	Time: 2:14:12	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22		Blank Data Filename:	PB3C_357 S:4
Injection Volume (µL):	1.0		Cal. Ver. Data Filename:	PB3C_357 S:1
Dilution Factor:	N/A		Sample Datafile(s):	PB3C_357 S:6
Concentration Units :	pg/L			

PCB HOMOLOGUE GROUP	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT
Total Monochloro Biphenyls		2.02	0.335
Total Dichloro Biphenyls		2.12	1.15
Total Trichloro Biphenyls		4.80	0.599
Total Tetrachloro Biphenyls		1.04	0.606
Total Pentachloro Biphenyls		9.42	0.360
Total Hexachloro Biphenyls		18.3	0.0221
Total Heptachloro Biphenyls		6.62	0.0268
Total Octachloro Biphenyls		1.05	0.0211
Total Nonachloro Biphenyls	U		1.17
Decachloro Biphenyl		0.785	0.0161
TOTAL PCBs		46.1	

(1) U = Not detected
(2) All header information pertains to the initial instrumental analysis of the sample extract.
Additional sample datafiles listed refer to secondary analysis of the sample extract.

9139PCBTOTAL1_1.xls, S5 (TOTAL)

Approved by: QA/QC Chemist

28-08-2003
dd-mm-yyyy

AXYS METHOD MLA-010 Rev 04
PCB-TEQ-DL_14

CLIENT ID:
AN-D16TB-030515

Form 1C
PCB CONGENER TEQ ANALYSIS REPORT

Lab Name: AXYS ANALYTICAL SERVICES		Sample Collection:	N/A
Contract No.:	9952		
Matrix:	AQUEOUS	Lab Sample ID:	L5850-2
Sample Size:	0.924 L	GC Column ID(s):	SPB-OCTYL
Concentration Units :	pg/L	Sample Datafile(s):	PB3C_357 S:6

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	WHO 1998 TEF	TEQ U=1/2 DL	TEQ U=0
3,3',4,4'-TetraCB	77		U		0.606	0.0001	3.03E-05	0.00E+00
3,4,4',5-TetraCB	81		U		0.601	0.0001	3.00E-05	0.00E+00
2,3,3',4,4'-PentaCB	105		U		0.248	0.0001	1.24E-05	0.00E+00
2,3,4,4',5-PentaCB	114		U		0.241	0.0005	6.02E-05	0.00E+00
2,3',4,4',5-PentaCB	118			1.14	0.246	0.0001	1.14E-04	1.14E-04
2',3,4,4',5-PentaCB	123		U		0.245	0.0001	1.23E-05	0.00E+00
3,3',4,4',5-PentaCB	126		U		0.283	0.1	1.41E-02	0.00E+00
2,3,3',4,4',5-HexaCB	156	156 + 157	C	0.662	0.0130	0.0005	3.31E-04	3.31E-04
2,3,3',4,4',5'-HexaCB	157	156 + 157	C156					
2,3',4,4',5,5'-HexaCB	167			0.329	0.0098	0.00001	3.29E-06	3.29E-06
3,3',4,4',5,5'-HexaCB	169		U		0.0116	0.01	5.80E-05	0.00E+00
2,2',3,3',4,4',5-HeptaCB	170		Z					
2,2',3,4,4',5,5'-HeptaCB	180	180 + 193	Z					
2,3,3',4,4',5,5'-HeptaCB	189		U		0.0125	0.0001	6.25E-07	0.00E+00
2,3,3',4',5,5',6-HeptaCB	193	180 + 193	Z					
						TOTAL TEQ	0.0148	0.000449

(1) C = co-eluting congener; U = not detected; Z = compound not requested
(2) Concentrations that do not meet quantification criteria are not included in the TEQ calculations.

9139PCBTEQ1_1.xls, S4 (TEQ)

Approved by: _____ QA/QC Chemist

28-08-2003
dd-mm-yyyy

AXYS METHOD MLA-010 Rev 04
1668A-S1_ARO-D1

CLIENT ID:
AN-D16TB-030515

Form 1A
PCB AROCLOR EQUIVALENT ANALYSIS REPORT

		Sample Collection:	N/A
Lab Name: AXYS ANALYTICAL SERVICES			
Contract No.:	9952	Lab Sample ID:	L5850-2
Matrix:	AQUEOUS	Sample Size:	0.924 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003	Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003 Time: 2:14:12	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Datafile:	PB3C_357 S: 6
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_357 S:4
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_357 S:1
Concentration Units:	pg/L		

COMPOUND	CAS NO.	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT
Aroclor 1016	12674-11-2	Z		
Aroclor 1221	11104-28-2	U		0.965
Aroclor 1232	11141-16-5	U		1.23
Aroclor 1242	53469-21-9		18.6	2.07
Aroclor 1248	12672-29-6	U		3.18
Aroclor 1254	11097-69-1		24.2	2.54
Aroclor 1260	11096-82-5		20.0	0.134

(1) U = not detected; E = exceeds calibrated linear range, see dilution data; D = dilution data; Z = compound not requested; X = results reported separately
(2) PCB Aroclor equivalents were calculated from individual PCB congener concentrations using empirically determined conversion factors.

9139ARD1_1.xls, S4

Approved by: QA/QC Chemist

24-08-2003
dd-mm-yyyy

SAMPLE NO. AN-D14GW-030515

AXYS METHOD MLA-010 Rev 04
1668A-S1_209

Form 1A
PCB CONGENER ANALYSIS REPORT

CLIENT ID:
AN-D14GW-030515

		Sample Collection:	15-May-2003
Lab Name: AXYS ANALYTICAL SERVICES			
Contract No.:	9952	Lab Sample ID:	L5850-3
Matrix:	AQUEOUS	Sample Size:	0.912 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003	Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003 Time: 3:18:32	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Data Filename:	PB3C_357 S:7
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_357 S:4
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_357 S:1
Concentration Units :	pg/L		

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2 - MoCB	1			1.66 UB	0.180	2.72	1.001
3 - MoCB	2			2.77 UB	0.242	2.86	0.988
4 - MoCB	3			3.90 UB	0.276	3.36	1.000
2,2' - DiCB	4		K	2.33 UR	0.664	1.89	1.000
2,3 - DiCB	5		U		0.571		
2,3' - DiCB	6		U		0.513		
2,4 - DiCB	7		K	1.04 UR	0.496	2.07	1.156
2,4' - DiCB	8			3.06 UB1	0.468	1.80	1.207
2,5 - DiCB	9		U		0.514		
2,6 - DiCB	10		U		0.507		
3,3' - DiCB	11		K	7.29 UR	0.571	2.31	0.969
3,4 - DiCB	12	12 + 13	C U		0.564		
3,4' - DiCB	13	12 + 13	C12				
3,5 - DiCB	14		U		0.547		
4,4' - DiCB	15		K	1.60 UR	0.793	0.88	1.000
2,2',3 - TriCB	16		K	1.49 UBR	0.306	0.83	1.166
2,2',4 - TriCB	17			2.18 UB	0.279	0.88	1.138
2,2',5 - TriCB	18	18 + 30	C K	3.50 UR	0.227	0.83	1.113
2,2',6 - TriCB	19		K	0.877 UR	0.268	1.61	1.001
2,3,3' - TriCB	20	20 + 28	C	3.42 UB	0.224	1.05	0.849

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Approved by: _____ QA/QC Chemist

24-08-2003
dd-mm-yyyy

CLIENT ID: AN-D14GW-030515

Lab Sample ID: L5850-3

Sample Data Filename: PB3C_357 S:7

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,4 - TriCB	21	21 + 33	C	3.42 UB	0.217	0.95	0.856
2,3,4' - TriCB	22		K	1.12 UR	0.249	0.84	0.872
2,3,5 - TriCB	23		U		0.228		
2,3,6 - TriCB	24		U		0.196		
2,3',4 - TriCB	25		K	0.323 UR	0.200	0.77	0.826
2,3',5 - TriCB	26	26 + 29	C	0.651 UB	0.228	0.93	1.300
2,3',6 - TriCB	27		K	0.293 UR	0.193	0.62	1.152
2,4,4' - TriCB	28	20 + 28	C20				
2,4,5 - TriCB	29	26 + 29	C26				
2,4,6 - TriCB	30	18 + 30	C18				
2,4',5 - TriCB	31		K	2.65 UBR	0.221	1.27	0.837
2,4',6 - TriCB	32		K	1.27 UBR	0.218	1.34	1.197
2',3,4 - TriCB	33	21 + 33	C21				
2',3,5 - TriCB	34		U		0.230		
3,3',4 - TriCB	35		U		0.260		
3,3',5 - TriCB	36		U		0.236		
3,4,4' - TriCB	37		K	0.902 UR	0.287	0.84	1.001
3,4,5 - TriCB	38		U		0.239		
3,4',5 - TriCB	39		U		0.230		
2,2',3,3' - TeCB	40	40 + 41 + 71	C	1.32 UB	0.148	0.77	1.335
2,2',3,4 - TeCB	41	40 + 41 + 71	C40				
2,2',3,4' - TeCB	42			0.536	0.155	0.87	1.312
2,2',3,5 - TeCB	43		U		0.170		
2,2',3,5' - TeCB	44	44 + 47 + 65	C	31.8 UBL	0.135	0.78	1.286
2,2',3,6 - TeCB	45	45 + 51	C	44.5 UBL	0.147	0.79	1.149
2,2',3,6' - TeCB	46			0.305 UB	0.173	0.66	1.160
2,2',4,4' - TeCB	47	44 + 47 + 65	C44				
2,2',4,5 - TeCB	48		K	0.564 UBR	0.146	1.01	1.273
2,2',4,5' - TeCB	49	49 + 69	C	2.65 UB	0.127	0.84	1.259
2,2',4,6 - TeCB	50	50 + 53	C K	0.954 UR	0.141	0.55	1.111
2,2',4,6' - TeCB	51	45 + 51	C45				
2,2',5,5' - TeCB	52			6.03 UB	0.141	0.85	1.234
2,2',5,6' - TeCB	53	50 + 53	C50				
2,2',6,6' - TeCB	54		K	0.214 UR	0.108	1.52	1.001
2,3,3',4 - TeCB	55		U		0.532		
2,3,3',4' - TeCB	56			1.08	0.541	0.77	0.905
2,3,3',5 - TeCB	57		U		0.519		
2,3,3',5' - TeCB	58		U		0.520		
2,3,3',6 - TeCB	59	59 + 62 + 75	C K	0.260 UBR	0.111	1.12	1.300
2,3,4,4' - TeCB	60		U		0.540		
2,3,4,5 - TeCB	61	61 + 70 + 74 + 76	C	4.63 UB	0.499	0.80	0.875
2,3,4,6 - TeCB	62	59 + 62 + 75	C59				
2,3,4',5 - TeCB	63		U		0.505		

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9139AD2_1.xls, S5

Approved by: _____ QA/QC Chemist

24-08-2003
dd-mm-yyyy

Lab Sample ID: L5850-3

CLIENT ID: AN-D14GW-030515

Sample Data Filename: PB3C_357 S:7

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,4',6 - TeCB	64			2.62	0.108	0.77	1.348
2,3,5,6 - TeCB	65	44 + 47 + 65	C44				
2,3',4,4' - TeCB	66			3.00 UB	0.509	0.88	0.884
2,3',4,5 - TeCB	67		U		0.462		
2,3',4,5' - TeCB	68			20.6 UB1	0.469	0.80	0.832
2,3',4,6 - TeCB	69	49 + 69	C49				
2,3',4',5 - TeCB	70	61 + 70 + 74 + 76	C61				
2,3',4',6 - TeCB	71	40 + 41 + 71	C40				
2,3',5,5' - TeCB	72		U		0.483		
2,3',5',6 - TeCB	73		U		0.111		
2,4,4',5 - TeCB	74	61 + 70 + 74 + 76	C61				
2,4,4',6 - TeCB	75	59 + 62 + 75	C59				
2',3,4,5 - TeCB	76	61 + 70 + 74 + 76	C61				
3,3',4,4' - TeCB	77		U		0.645		
3,3',4,5 - TeCB	78		U		0.556		
3,3',4,5' - TeCB	79		U		0.452		
3,3',5,5' - TeCB	80		U		0.516		
3,4,4',5 - TeCB	81		U		0.609		
2,2',3,3',4 - PeCB	82			0.823 UB	0.231	1.63	1.328
2,2',3,3',5 - PeCB	83	83 + 99	C	3.63 UB	0.204	1.34	1.260
2,2',3,3',6 - PeCB	84		K	2.11 UB	0.228	1.88	1.162
2,2',3,4,4' - PeCB	85	85 + 116 + 117	C	1.86	0.172	1.57	1.309
2,2',3,4,5 - PeCB	86	86 + 87 + 97 + 108 + 119 + 125	C	4.74 UB1	0.173	1.69	1.282
2,2',3,4,5' - PeCB	87	86 + 87 + 97 + 108 + 119 + 125	C86				
2,2',3,4,6 - PeCB	88	88 + 91	C K	1.18 UBR	0.196	1.20	1.154
2,2',3,4,6' - PeCB	89		U		0.212		
2,2',3,4',5 - PeCB	90	90 + 101 + 113	C	6.42 UB	0.177	1.46	1.237
2,2',3,4',6 - PeCB	91	88 + 91	C88				
2,2',3,5,5' - PeCB	92			1.18 UB1	0.204	1.47	0.853
2,2',3,5,6 - PeCB	93	93 + 95 + 98 + 100 + 102	C	5.92 UB	0.189	1.51	1.120
2,2',3,5,6' - PeCB	94		U		0.206		
2,2',3,5',6 - PeCB	95	93 + 95 + 98 + 100 + 102	C93				
2,2',3,6,6' - PeCB	96		K	0.061 UB	0.0099	1.03	1.016
2,2',3',4,5 - PeCB	97	86 + 87 + 97 + 108 + 119 + 125	C86				
2,2',3',4,6 - PeCB	98	93 + 95 + 98 + 100 + 102	C93				
2,2',4,4',5 - PeCB	99	83 + 99	C83				
2,2',4,4',6 - PeCB	100	93 + 95 + 98 + 100 + 102	C93				
2,2',4,5,5' - PeCB	101	90 + 101 + 113	C90				
2,2',4,5,6' - PeCB	102	93 + 95 + 98 + 100 + 102	C93				
2,2',4,5',6 - PeCB	103		U		0.176		
2,2',4,6,6' - PeCB	104		K	0.117 UR	0.0113	0.78	1.001
2,3,3',4,4' - PeCB	105			3.38 UB1	0.227	1.39	1.000
2,3,3',4,5 - PeCB	106		U		0.207		

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Approved by: _____ QA/QC Chemist

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CLIENT ID: AN-D14GW-030515

Lab Sample ID: L5850-3

Sample Data Filename: PB3C_357 S:7

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,3',4',5 - PeCB	107	107 + 124	C	0.460 UB	0.224	1.74	1.409
2,3,3',4,5' - PeCB	108	86 + 87 + 97 + 108 + 119 + 125	C86				
2,3,3',4,6 - PeCB	109		K	0.406 UR	0.218	2.07	1.418
2,3,3',4',6 - PeCB	110	110 + 115	C	7.43 UB	0.150	1.71	1.315
2,3,3',5,5' - PeCB	111		U		0.153		
2,3,3',5,6 - PeCB	112		U		0.150		
2,3,3',5',6 - PeCB	113	90 + 101 + 113	C90				
2,3,4,4',5 - PeCB	114		K	0.518 UBR	0.219	0.91	1.000
2,3,4,4',6 - PeCB	115	110 + 115	C110				
2,3,4,5,6 - PeCB	116	85 + 116 + 117	C85				
2,3,4',5,6 - PeCB	117	85 + 116 + 117	C85				
2,3',4,4',5 - PeCB	118			6.31 UB1	0.218	1.73	1.000
2,3',4,4',6 - PeCB	119	86 + 87 + 97 + 108 + 119 + 125	C86				
2,3',4,5,5' - PeCB	120		U		0.150		
2,3',4,5',6 - PeCB	121		U		0.149		
2',3,3',4,5 - PeCB	122		K	0.441 UR	0.239	0.41	1.010
2',3,4,4',5 - PeCB	123			0.318	0.230	1.38	1.000
2',3,4,5,5' - PeCB	124	107 + 124	C107				
2',3,4,5,6' - PeCB	125	86 + 87 + 97 + 108 + 119 + 125	C86				
3,3',4,4',5 - PeCB	126		U		0.253		
3,3',4,5,5' - PeCB	127		U		0.233		
2,2',3,3',4,4' - HxCB	128	128 + 166	CK	2.93 UR	0.182	1.03	0.959
2,2',3,3',4,5 - HxCB	129	129 + 138 + 160 + 163	C	12.7 UB1	0.176	1.30	0.929
2,2',3,3',4,5' - HxCB	130		K	0.689 UBR	0.226	2.64	0.913
2,2',3,3',4,6 - HxCB	131		U		0.208		
2,2',3,3',4,6' - HxCB	132			2.35	0.206	1.11	1.173
2,2',3,3',5,5' - HxCB	133		U		0.203		
2,2',3,3',5,6 - HxCB	134	134 + 143	C	0.402	0.208	1.15	1.140
2,2',3,3',5,6' - HxCB	135	135 + 151 + 154	C	2.22 UB1	0.0171	1.37	1.104
2,2',3,3',6,6' - HxCB	136			0.652 UB	0.0129	1.20	1.024
2,2',3,4,4',5 - HxCB	137			1.05	0.202	1.38	0.919
2,2',3,4,4',5' - HxCB	138	129 + 138 + 160 + 163	C129				
2,2',3,4,4',6 - HxCB	139	139 + 140	C	0.360 UB	0.188	1.18	1.153
2,2',3,4,4',6' - HxCB	140	139 + 140	C139				
2,2',3,4,5,5' - HxCB	141			1.48 UB1	0.199	1.08	0.904
2,2',3,4,5,6 - HxCB	142		U		0.211		
2,2',3,4,5,6' - HxCB	143	134 + 143	C134				
2,2',3,4,5',6 - HxCB	144		K	0.300 UR	0.0180	1.79	1.121
2,2',3,4,6,6' - HxCB	145		U		0.0131		
2,2',3,4',5,5' - HxCB	146		K	1.14 UBR	0.180	1.86	0.885
2,2',3,4',5,6 - HxCB	147	147 + 149	C	5.38 UB	0.187	1.39	1.133
2,2',3,4',5,6' - HxCB	148		U		0.0178		
2,2',3,4',5',6 - HxCB	149	147 + 149	C147				

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9139AD2_1.xls, S5

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AXYS METHOD MLA-010 Rev 04
Form 1A

CLIENT ID: AN-D14GW-030515

Lab Sample ID: L5850-3

Sample Data Filename: PB3C_357 S:7

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,2',3,4',6,6' - HxCB	150		K	0.016 UR	0.0125	0.73	1.012
2,2',3,5,5',6 - HxCB	151	135 + 151 + 154	C135				
2,2',3,5,6,6' - HxCB	152			0.040	0.0123	1.10	1.007
2,2',4,4',5,5' - HxCB	153	153 + 168	C K	6.20 UR	0.158	1.49	0.899
2,2',4,4',5,6' - HxCB	154	135 + 151 + 154	C135				
2,2',4,4',6,6' - HxCB	155		K	0.124 UBR	0.0119	0.37	1.001
2,3,3',4,4',5 - HxCB	156	156 + 157	C	1.56 UB	0.193	1.43	1.000
2,3,3',4,4',5' - HxCB	157	156 + 157	C156				
2,3,3',4,4',6 - HxCB	158		K	1.08 UBR	0.142	0.95	0.938
2,3,3',4,5,5' - HxCB	159		K	0.189 UR	0.156	1.01	0.983
2,3,3',4,5,6 - HxCB	160	129 + 138 + 160 + 163	C129				
2,3,3',4,5',6 - HxCB	161		U		0.148		
2,3,3',4',5,5' - HxCB	162		U		0.155		
2,3,3',4',5,6 - HxCB	163	129 + 138 + 160 + 163	C129				
2,3,3',4',5',6 - HxCB	164			0.901 UBL	0.153	1.40	0.922
2,3,3',5,5',6 - HxCB	165		U		0.158		
2,3,4,4',5,6 - HxCB	166	128 + 166	C128				
2,3',4,4',5,5' - HxCB	167		K	0.536 UR	0.145	2.97	1.001
2,3',4,4',5',6 - HxCB	168	153 + 168	C153				
3,3',4,4',5,5' - HxCB	169		U		0.169		
2,2',3,3',4,4',5 - HpCB	170			1.47 UBR	0.0219	1.01	0.937
2,2',3,3',4,4',6 - HpCB	171	171 + 173	C K	0.444 UR	0.0211	1.24	1.162
2,2',3,3',4,5,5' - HpCB	172		K	0.396 UR	0.0218	1.78	0.897
2,2',3,3',4,5,6 - HpCB	173	171 + 173	C171				
2,2',3,3',4,5,6' - HpCB	174			1.50 UBL	0.0193	0.99	1.132
2,2',3,3',4,5',6 - HpCB	175			0.102	0.0190	0.93	1.103
2,2',3,3',4,6,6' - HpCB	176		K	0.149 UR	0.0144	0.79	1.035
2,2',3,3',4',5,6 - HpCB	177		K	1.20 UR	0.0214	1.27	1.144
2,2',3,3',5,5',6 - HpCB	178			0.529	0.0194	0.89	1.085
2,2',3,3',5,6,6' - HpCB	179		K	0.772 UR	0.0135	0.76	1.010
2,2',3,4,4',5,5' - HpCB	180	180 + 193	C	4.54 UBL	0.0170	1.01	0.910
2,2',3,4,4',5,6 - HpCB	181			0.047	0.0192	1.20	1.157
2,2',3,4,4',5,6' - HpCB	182		U		0.0189		
2,2',3,4,4',5',6 - HpCB	183	183 + 185	C K	1.22 UR	0.0189	0.84	1.127
2,2',3,4,4',6,6' - HpCB	184		U		0.0129		
2,2',3,4,5,5',6 - HpCB	185	183 + 185	C183				
2,2',3,4,5,6,6' - HpCB	186		U		0.0142		
2,2',3,4',5,5',6 - HpCB	187		K	2.87 UR	0.0174	1.22	1.109
2,2',3,4',5,6,6' - HpCB	188		K	0.070 UR	0.0133	0.36	1.000
2,3,3',4,4',5,5' - HpCB	189		K	0.272 UBR	0.0126	0.64	1.000
2,3,3',4,4',5,6 - HpCB	190			0.459	0.0158	0.98	0.947
2,3,3',4,4',5',6 - HpCB	191		K	0.141 UR	0.0155	0.70	0.918
2,3,3',4,5,5',6 - HpCB	192		K	0.030 UR	0.0170	1.89	0.902

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Approved by: _____ QA/QC Chemist

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Lab Sample ID: L5850-3

CLIENT ID: AN-D14GW-030515

Sample Data Filename: PB3C_357 S:7

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,3',4',5,5',6 - HpCB	193	180 + 193	C180				
2,2',3,3',4,4',5,5' - OcCB	194			0.748 UB	0.0165	0.80	0.991
2,2',3,3',4,4',5,6 - OcCB	195			0.432	0.0176	0.76	0.945
2,2',3,3',4,4',5,6' - OcCB	196		K	0.562 UR	0.0258	0.63	0.916
2,2',3,3',4,4',6,6' - OcCB	197	197 + 200	C K	0.475 UR	0.0180	0.47	1.045
2,2',3,3',4,5,5',6 - OcCB	198	198 + 199	C K	1.58 UR	0.0246	1.29	1.114
2,2',3,3',4,5,5',6' - OcCB	199	198 + 199	C198				
2,2',3,3',4,5,6,6' - OcCB	200	197 + 200	C197				
2,2',3,3',4,5',6,6' - OcCB	201		K	0.339 UBR	0.0187	2.27	1.023
2,2',3,3',5,5',6,6' - OcCB	202			0.769	0.0192	0.92	1.000
2,2',3,4,4',5,5',6 - OcCB	203			1.19	0.0238	0.84	0.920
2,2',3,4,4',5,6,6' - OcCB	204		U		0.0182		
2,3,3',4,4',5,5',6 - OcCB	205		K	0.165 UR	0.0143	0.70	1.000
2,2',3,3',4,4',5,5',6 - NoCB	206		U		0.936		
2,2',3,3',4,4',5,6,6' - NoCB	207		U		0.714		
2,2',3,3',4,5,5',6,6' - NoCB	208		U		0.778		
2,2',3,3',4,4',5,5',6,6' - DeCB	209			0.800 UB1	0.0177	0.68	1.000

(1) C = co-eluting congener; U = not detected; K = peak detected, but did not meet quantification criteria; E = exceeds calibrated linear range, see dilution data; D = dilution data; Z = compound not requested; X = results reported separately

11/19/03

9139AD2_1.xls, S5

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AXYS METHOD MLA-010 Rev 04

1668A-S1_209

CLIENT ID:
AN-D14GW-030515

Form 2

PCB CONGENER ANALYSIS REPORT

Lab Name: AXYS ANALYTICAL SERVICES		Sample Collection:	15-May-2003
Contract No.:	9952	Lab Sample ID:	L5850-3
Matrix:	AQUEOUS	Sample Size:	0.912 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003	Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003 Time: 3:18:32	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Datafile:	PB3C_357 S:7
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_357 S:4
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_357 S:1
Concentration Units :	pg absolute		

LABELED COMPOUND	IUPAC NO. [1]	CO-ELUTIONS	LAB FLAG[2]	SPIKE CONC.	CONC. FOUND	R(%)[3]	ION ABUND. RATIO	RRT
13C12-2 - MoCB	1L			2000	1380	69.1	3.23	0.720
13C12-4 - MoCB	3L			2000	1170	58.7	3.10	0.859
13C12-2,2' - DiCB	4L			2000	1190	59.7	1.57	0.874
13C12-4,4' - DiCB	15L			2000	990	49.5	1.54	1.253
13C12-2,2',6 - TriCB	19L			2000	1190	59.4	1.06	1.072
13C12-3,4,4' - TriCB	37L			2000	1200	59.8	1.04	1.091
13C12-2,2',6,6' - TeCB	54L			2000	1130	56.4	0.81	0.812
13C12-3,3',4,4' - TeCB	77L			2000	1340	67.2	0.77	1.395
13C12-3,4,4',5 - TeCB	81L			2000	1400	69.9	0.76	1.372
13C12-2,2',4,6,6' - PeCB	104L			2000	1050	52.3	1.57	0.809
13C12-2,3,3',4,4' - PeCB	105L			2000	1590	79.6	1.58	1.199
13C12-2,3,4,4',5 - PeCB	114L			2000	1550	77.7	1.58	1.178
13C12-2,3',4,4',5 - PeCB	118L			2000	1570	78.7	1.57	1.161
13C12-2',3,4,4',5 - PeCB	123L			2000	1520	76.1	1.57	1.150
13C12-3,3',4,4',5 - PeCB	126L			2000	1650	82.7	1.60	1.300
13C12-2,2',4,4',6,6' - HxCB	155L			2000	1230	61.3	1.27	0.786
13C12-2,3,3',4,4',5 - HxCB	156L	156L + 157L	C	4000	2940	73.4	1.32	1.107
13C12-2,3,3',4,4',5' - HxCB	157L	156L + 157L	C156L					
13C12-2,3',4,4',5,5' - HxCB	167L			2000	1530	76.7	1.30	1.077
13C12-3,3',4,4',5,5' - HxCB	169L			2000	1460	73.1	1.31	1.190
13C12-2,2',3,3',4,4',5 - HpCB	170L			2000	1540	77.2	1.10	0.897
13C12-2,2',3,4,4',5,5' - HpCB	180L			2000	1500	74.9	1.08	0.873
13C12-2,2',3,4',5,6,6' - HpCB	188L			2000	1420	70.9	1.09	0.713
13C12-2,3,3',4,4',5,5' - HpCB	189L			2000	1600	80.2	1.07	0.959
13C12-2,2',3,3',5,5',6,6' - OcCB	202L			2000	1570	78.7	0.92	0.818
13C12-2,3,3',4,4',5,5',6 - OcCB	205L			2000	1510	75.6	0.91	1.009
13C12-2,2',3,3',4,4',5,5',6 - NoCB	206L			2000	1460	72.9	0.82	1.043
13C12-2,2',3,3',4,5,5',6,6' - NoCB	208L			2000	1530	76.7	0.83	0.949
13C12-2,2',3,3',4,4',5,5',6,6' - DeCB	209L			2000	1480	74.0	1.18	1.075

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Approved by: _____ QA/QC Chemist

24-08-2003
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AXYS METHOD MLA-010 Rev 04

1668A-S1_209

Form 2 (Continued)

PCB CONGENER ANALYSIS REPORT

CLIENT ID:
AN-D14GW-030515

Lab Name: AXYS ANALYTICAL SERVICES		Sample Collection:	15-May-2003
Contract No.:	9952	Lab Sample ID:	L5850-3
Matrix:	AQUEOUS	Sample Size:	0.912 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003	Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003 Time: 3:18:32	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Datafile:	PB3C_357 S:7
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_357 S:4
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_357 S:1
Concentration Units :	pg absolute		

CLEAN-UP STANDARD	IUPAC NO. [1]	LAB FLAG[2]	SPIKE CONC.	CONC. FOUND	R(%)[3]	ION ABUND. RATIO	RRT
13C12- 2,4,4' - TriCB	28L		2000	1590	79.7	1.02	0.925
13C12-2,3,3',5,5' - PeCB	111L		2000	1650	82.6	1.61	1.087
13C12-2,2',3,3',5,5',6 - HpCB	178L		2000	1740	87.0	1.07	1.012

(1) Suffix "L" indicates labeled compound

(2) C = co-eluting congener; E = exceeds calibrated linear range, see dilution data; D = dilution data; Z = compound not requested; X = results reported separately

(3) R% = percent recovery of labeled compounds

9139AD2_1.xls, S5

Approved by: _____ QA/QC Chemist

24-08-2003
dd-mm-yyyy

AXYS METHOD MLA-010 Rev 04
PCB-TOTAL_209

CLIENT ID:
AN-D14GW-030515

Form 1A
HOMOLOGUE TOTAL POLYCHLORINATED BIPHENYLS (PCB) ANALYSIS REPORT

			Sample Collection:	15-May-2003
Lab Name: AXYS ANALYTICAL SERVICES				
Contract No.:	9952		Lab Sample ID:	L5850-3
Matrix:	AQUEOUS		Sample Size:	0.912 L
Sample Receipt Date:	16-May-2003		Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003		Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003	Time: 3:18:32	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22		Blank Data Filename:	PB3C_357 S:4
Injection Volume (µL):	1.0		Cal. Ver. Data Filename:	PB3C_357 S:1
Dilution Factor:	N/A		Sample Datafile(s):	PB3C_357 S:7
Concentration Units :	pg/L			

PCB HOMOLOGUE GROUP	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT
Total Monochloro Biphenyls		~~8.33~~ U	0.276
Total Dichloro Biphenyls		~~3.06~~ U	0.793
Total Trichloro Biphenyls		~~9.67~~ U	0.306
Total Tetrachloro Biphenyls		4.24 ~~119~~	0.645
Total Pentachloro Biphenyls		2.18 ~~42.5~~	0.253
Total Hexachloro Biphenyls		3.84 ~~28.1~~	0.226
Total Heptachloro Biphenyls		1.14 ~~8.65~~	0.0219
Total Octachloro Biphenyls		2.39 ~~3.14~~	0.0258
Total Nonachloro Biphenyls	U		0.936
Decachloro Biphenyl		0.800	0.0177
TOTAL PCBs		13.8 ~~224~~	

(1) U = Not detected
(2) All header information pertains to the initial instrumental analysis of the sample extract.
Additional sample datafiles listed refer to secondary analysis of the sample extract.

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11/19/03

9139PCBTOTAL1_1.xls, S6 (TOTAL)

Approved by: Hawthorne QA/QC Chemist

28-08-2003
dd-mm-yyyy

AXYS METHOD MLA-010 Rev 04
PCB-TEQ-DL_14

CLIENT ID:
AN-D14GW-030515

Form 1C
PCB CONGENER TEQ ANALYSIS REPORT

Lab Name: AXYS ANALYTICAL SERVICES		Sample Collection:	15-May-2003
Contract No.:	9952		
Matrix:	AQUEOUS	Lab Sample ID:	L5850-3
Sample Size:	0.912 L	GC Column ID(s):	SPB-OCTYL
Concentration Units :	pg/L	Sample Datafile(s):	PB3C_357 S:7

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	WHO 1998 TEF	TEQ U=1/2 DL	TEQ U=0
3,3',4,4'-TetraCB	77		U		0.645	0.0001	3.23E-05	0.00E+00
3,4,4',5-TetraCB	81		U		0.609	0.0001	3.04E-05	0.00E+00
2,3,3',4,4'-PentaCB	105			~~3.38~~ UB2	0.227	0.0001	~~3.38E-04~~ 1.135E-5	~~3.38E-04~~ 0
2,3,4,4',5-PentaCB	114		U		0.219	0.0005	5.48E-05	0.00E+00
2,3',4,4',5-PentaCB	118			~~6.31~~ UB2	0.218	0.0001	~~6.31E-04~~ 1.09E-5	~~6.31E-04~~ 0
2',3,4,4',5-PentaCB	123			0.318	0.230	0.0001	3.18E-05	3.18E-05
3,3',4,4',5-PentaCB	126		U		0.253	0.1	1.26E-02	0.00E+00
2,3,3',4,4',5-HexaCB	156	156 + 157	C	~~1.56~~ UB	0.193	0.0005 4.8	~~7.82E-04~~ 4.82E-5	~~7.82E-04~~ 0
2,3,3',4,4',5'-HexaCB	157	156 + 157	C156					
2,3',4,4',5,5'-HexaCB	167		U		0.145	0.00001	7.27E-07	0.00E+00
3,3',4,4',5,5'-HexaCB	169		U		0.169	0.01	8.43E-04	0.00E+00
2,2',3,3',4,4',5-HeptaCB	170		Z					
2,2',3,4,4',5,5'-HeptaCB	180	180 + 193	Z					
2,3,3',4,4',5,5'-HeptaCB	189		U		0.0126	0.0001	6.30E-07	0.00E+00
2,3,3',4',5,5',6-HeptaCB	193	180 + 193	Z					
						TOTAL TEQ	~~0.0154~~ 0.0137	~~0.00178~~ 0.000029

(1) C = co-eluting congener; U = not detected; Z = compound not requested
(2) Concentrations that do not meet quantification criteria are not included in the TEQ calculations.

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9139PCBTEQ1_1.xls, S5 (TEQ)

Approved by: KRawsthorne QA/QC Chemist

28-08-2003
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AXYS METHOD MLA-010 Rev 04
1668A-S1_ARO-01

CLIENT ID:
AN-D14GW-030515

Form 1A
PCB AROCLOR EQUIVALENT ANALYSIS REPORT

		Sample Collection:	15-May-2003
Lab Name: AXYS ANALYTICAL SERVICES			
Contract No.:	9952	Lab Sample ID:	L5850-3
Matrix:	AQUEOUS	Sample Size:	0.912 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003	Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003 Time: 3:18:32	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Datafile:	PB3C_357 S: 7
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_357 S:4
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_357 S:1
Concentration Units:	pg/L		

COMPOUND	CAS NO.	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT
Aroclor 1016	12674-11-2	Z		
Aroclor 1221	11104-28-2	U		0.655
Aroclor 1232	11141-16-5	U		0.937
Aroclor 1242	53469-21-9 8/18/20/31 x3		~~18.4~~ U	1.40
Aroclor 1248	12672-29-6	U		3.10
Aroclor 1254	11097-69-1 85/86 x 8		~~67.0~~ U	1.63
Aroclor 1260	11096-82-5 170/180/183 x 5		~~30.0~~ U	0.110

(1) U = not detected; E = exceeds calibrated linear range, see dilution data; D = dilution data; Z = compound not requested; X = results reported separately
(2) PCB Aroclor equivalents were calculated from individual PCB congener concentrations using empirically determined conversion factors.

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Approved by: [signature] QA/QC Chemist

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SAMPLE NO. AN-D16GW-030515

AXYS METHOD MLA-010 Rev 04
1668A-S1_209

Form 1A
PCB CONGENER ANALYSIS REPORT

CLIENT ID:
AN-D16GW-030515

		Sample Collection:	15-May-2003
Lab Name: AXYS ANALYTICAL SERVICES			
Contract No.:	9952	Lab Sample ID:	L5850-4
Matrix:	AQUEOUS	Sample Size:	0.925 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003	Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003 Time: 4:22:53	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Data Filename:	PB3C_357 S:8
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_357 S:4
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_357 S:1
Concentration Units :	pg/L		

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2 - MoCB	1			1.79 UB	0.184	3.45	1.001
3 - MoCB	2			1.60 UB	0.256	2.75	0.988
4 - MoCB	3		K	2.97 UBR	0.302	4.16	1.001
2,2' - DiCB	4		U		0.872		
2,3 - DiCB	5		U		0.755		
2,3' - DiCB	6		U		0.678		
2,4 - DiCB	7		U		0.655		
2,4' - DiCB	8		K	2.14 UR	0.618	2.16	1.207
2,5 - DiCB	9		U		0.679		
2,6 - DiCB	10		U		0.671		
3,3' - DiCB	11			5.48 UB1	0.755	1.70	0.970
3,4 - DiCB	12	12 + 13	C U		0.746		
3,4' - DiCB	13	12 + 13	C12				
3,5 - DiCB	14		U		0.723		
4,4' - DiCB	15		U		1.05		
2,2',3 - TriCB	16		K	1.06 UBR	0.353	1.25	1.166
2,2',4 - TriCB	17			1.13 UB	0.321	0.92	1.139
2,2',5 - TriCB	18	18 + 30	C K	1.97 UR	0.262	1.37	1.113
2,2',6 - TriCB	19		K	0.502 UR	0.338	0.78	1.000
2,3,3' - TriCB	20	20 + 28	C	3.33 UB	0.345	1.12	0.848

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CLIENT ID: AN-D16GW-030515

Lab Sample ID: L5850-4

Sample Data Filename: PB3C_357 S:8

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,4 - TriCB	21	21 + 33	C	1.99 UB	0.333	0.91	0.855
2,3,4' - TriCB	22			1.01 U B1	0.383	0.90	0.872
2,3,5 - TriCB	23		U		0.350		
2,3,6 - TriCB	24		U		0.226		
2,3',4 - TriCB	25		K	0.308 UR	0.307	0.79	0.825
2,3',5 - TriCB	26	26 + 29	C U		0.350		
2,3',6 - TriCB	27		U		0.223		
2,4,4' - TriCB	28	20 + 28	C20				
2,4,5 - TriCB	29	26 + 29	C26				
2,4,6 - TriCB	30	18 + 30	C18				
2,4',5 - TriCB	31			3.00 UB	0.339	1.10	0.837
2,4',6 - TriCB	32		K	0.570 UBR	0.335	1.31	1.197
2',3,4 - TriCB	33	21 + 33	C21				
2',3,5 - TriCB	34		U		0.354		
3,3',4 - TriCB	35		U		0.400		
3,3',5 - TriCB	36		U		0.363		
3,4,4' - TriCB	37			1.69 U B1	0.416	0.96	1.000
3,4,5 - TriCB	38		U		0.368		
3,4',5 - TriCB	39		U		0.354		
2,2',3,3' - TeCB	40	40 + 41 + 71	C	1.38 UB	0.206	0.67	1.336
2,2',3,4 - TeCB	41	40 + 41 + 71	C40				
2,2',3,4' - TeCB	42		K	0.596 UR	0.215	1.02	1.311
2,2',3,5 - TeCB	43		U		0.237		
2,2',3,5' - TeCB	44	44 + 47 + 65	C	23.7 UB	0.188	0.78	1.286
2,2',3,6 - TeCB	45	45 + 51	C	25.8 U B1	0.204	0.79	1.148
2,2',3,6' - TeCB	46		U		0.241		
2,2',4,4' - TeCB	47	44 + 47 + 65	C44				
2,2',4,5 - TeCB	48			0.303 UB	0.203	0.80	1.271
2,2',4,5' - TeCB	49	49 + 69	C K	2.21 UBR	0.176	1.00	1.258
2,2',4,6 - TeCB	50	50 + 53	C K	0.419 UR	0.196	0.97	1.110
2,2',4,6' - TeCB	51	45 + 51	C45				
2,2',5,5' - TeCB	52			3.12 UB	0.196	0.75	1.233
2,2',5,6' - TeCB	53	50 + 53	C50				
2,2',6,6' - TeCB	54		U		0.172		
2,3,3',4 - TeCB	55		U		0.642		
2,3,3',4' - TeCB	56			1.12	0.653	0.70	0.905
2,3,3',5 - TeCB	57		U		0.627		
2,3,3',5' - TeCB	58		U		0.627		
2,3,3',6 - TeCB	59	59 + 62 + 75	C U		0.154		
2,3,4,4' - TeCB	60			1.26	0.651	0.74	0.911
2,3,4,5 - TeCB	61	61 + 70 + 74 + 76	C	5.83 UB	0.602	0.71	0.876
2,3,4,6 - TeCB	62	59 + 62 + 75	C59				
2,3,4',5 - TeCB	63		U		0.609		

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Approved by: JR QA/QC Chemist

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Lab Sample ID: L5850-4

CLIENT ID: AN-D16GW-030515

Sample Data Filename: PB3C_357 S:8

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,4',6 - TeCB	64			4.50	0.151	0.81	1.348
2,3,5,6 - TeCB	65	44 + 47 + 65	C44				
2,3',4,4' - TeCB	66			7.73	0.614	0.79	0.885
2,3',4,5 - TeCB	67		U		0.557		
2,3',4,5' - TeCB	68			16.8 UB1	0.565	0.73	0.832
2,3',4,6 - TeCB	69	49 + 69	C49				
2,3',4',5 - TeCB	70	61 + 70 + 74 + 76	C61				
2,3',4',6 - TeCB	71	40 + 41 + 71	C40				
2,3',5,5' - TeCB	72		U		0.582		
2,3',5',6 - TeCB	73		U		0.154		
2,4,4',5 - TeCB	74	61 + 70 + 74 + 76	C61				
2,4,4',6 - TeCB	75	59 + 62 + 75	C59				
2',3,4,5 - TeCB	76	61 + 70 + 74 + 76	C61				
3,3',4,4' - TeCB	77			1.26	0.761	0.71	1.000
3,3',4,5 - TeCB	78		U		0.671		
3,3',4,5' - TeCB	79		U		0.545		
3,3',5,5' - TeCB	80		U		0.622		
3,4,4',5 - TeCB	81		U		0.672		
2,2',3,3',4 - PeCB	82			0.609 UB	0.183	1.51	1.329
2,2',3,3',5 - PeCB	83	83 + 99	C	2.50 UB	0.161	1.40	1.260
2,2',3,3',6 - PeCB	84		K	1.55 UBR	0.180	1.22	1.164
2,2',3,4,4' - PeCB	85	85 + 116 + 117	C K	2.24 UR	0.136	1.86	1.310
2,2',3,4,5 - PeCB	86	86 + 87 + 97 + 108 + 119 + 125	C K	3.32 UR	0.137	1.88	1.283
2,2',3,4,5' - PeCB	87	86 + 87 + 97 + 108 + 119 + 125	C86				
2,2',3,4,6 - PeCB	88	88 + 91	C K	1.11 UBR	0.155	1.21	1.154
2,2',3,4,6' - PeCB	89		U		0.168		
2,2',3,4',5 - PeCB	90	90 + 101 + 113	C	4.58 UB	0.140	1.50	1.238
2,2',3,4',6 - PeCB	91	88 + 91	C88				
2,2',3,5,5' - PeCB	92		K	1.02 UR	0.161	1.29	0.854
2,2',3,5,6 - PeCB	93	93 + 95 + 98 + 100 + 102	C	4.27 UB	0.149	1.67	1.121
2,2',3,5,6' - PeCB	94		U		0.163		
2,2',3,5',6 - PeCB	95	93 + 95 + 98 + 100 + 102	C93				
2,2',3,6,6' - PeCB	96		U		0.0098		
2,2',3',4,5 - PeCB	97	86 + 87 + 97 + 108 + 119 + 125	C86				
2,2',3',4,6 - PeCB	98	93 + 95 + 98 + 100 + 102	C93				
2,2',4,4',5 - PeCB	99	83 + 99	C83				
2,2',4,4',6 - PeCB	100	93 + 95 + 98 + 100 + 102	C93				
2,2',4,5,5' - PeCB	101	90 + 101 + 113	C90				
2,2',4,5,6' - PeCB	102	93 + 95 + 98 + 100 + 102	C93				
2,2',4,5',6 - PeCB	103		U		0.139		
2,2',4,6,6' - PeCB	104		K	0.126 UR	0.0125	1.03	1.002
2,3,3',4,4' - PeCB	105			3.95 UB1	0.216	1.36	1.000
2,3,3',4,5 - PeCB	106		U		0.199		

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Lab Sample ID: L5850-4

CLIENT ID: AN-D16GW-030515

Sample Data Filename: PB3C_357 S:8

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,3',4',5 - PeCB	107	107 + 124	C K	0.520 UBR	0.216	1.21	1.410
2,3,3',4,5' - PeCB	108	86 + 87 + 97 + 108 + 119 + 125	C86				
2,3,3',4,6 - PeCB	109		K	1.05 UR	0.209	1.12	1.419
2,3,3',4',6 - PeCB	110	110 + 115	C	8.90 UB2	0.119	1.50	1.317
2,3,3',5,5' - PeCB	111		U		0.121		
2,3,3',5,6 - PeCB	112		U		0.119		
2,3,3',5',6 - PeCB	113	90 + 101 + 113	C90				
2,3,4,4',5 - PeCB	114			0.469	0.207	1.42	1.000
2,3,4,4',6 - PeCB	115	110 + 115	C110				
2,3,4,5,6 - PeCB	116	85 + 116 + 117	C85				
2,3,4',5,6 - PeCB	117	85 + 116 + 117	C85				
2,3',4,4',5 - PeCB	118		K	7.30 UR	0.207	2.08	1.000
2,3',4,4',6 - PeCB	119	86 + 87 + 97 + 108 + 119 + 125	C86				
2,3',4,5,5' - PeCB	120		U		0.119		
2,3',4,5',6 - PeCB	121		U		0.118		
2',3,3',4,5 - PeCB	122		K	0.241 UR	0.230	3.41	1.010
2',3,4,4',5 - PeCB	123		K	0.491 UR	0.216	1.29	1.000
2',3,4,5,5' - PeCB	124	107 + 124	C107				
2',3,4,5,6' - PeCB	125	86 + 87 + 97 + 108 + 119 + 125	C86				
3,3',4,4',5 - PeCB	126		U		0.243		
3,3',4,5,5' - PeCB	127		U		0.224		
2,2',3,3',4,4' - HxCB	128	128 + 166	C	2.02 UB	0.194	1.27	0.959
2,2',3,3',4,5 - HxCB	129	129 + 138 + 160 + 163	C K	9.33 UR	0.187	1.50	0.929
2,2',3,3',4,5' - HxCB	130		K	0.718 UBR	0.241	0.54	0.913
2,2',3,3',4,6 - HxCB	131		U		0.221		
2,2',3,3',4,6' - HxCB	132		K	1.75 UR	0.220	1.53	1.174
2,2',3,3',5,5' - HxCB	133		K	0.221 UR	0.216	1.48	1.191
2,2',3,3',5,6 - HxCB	134	134 + 143	C U		0.222		
2,2',3,3',5,6' - HxCB	135	135 + 151 + 154	C	1.87 UB2	0.0142	1.13	1.103
2,2',3,3',6,6' - HxCB	136		K	0.668 UBR	0.0107	2.04	1.024
2,2',3,4,4',5 - HxCB	137		K	0.774 UR	0.216	1.03	0.919
2,2',3,4,4',5' - HxCB	138	129 + 138 + 160 + 163	C129				
2,2',3,4,4',6 - HxCB	139	139 + 140	C U		0.200		
2,2',3,4,4',6' - HxCB	140	139 + 140	C139				
2,2',3,4,5,5' - HxCB	141		K	1.26 UR	0.212	1.57	0.904
2,2',3,4,5,6 - HxCB	142		U		0.225		
2,2',3,4,5,6' - HxCB	143	134 + 143	C134				
2,2',3,4,5',6 - HxCB	144		K	0.153 UR	0.0150	0.64	1.121
2,2',3,4,6,6' - HxCB	145		U		0.0109		
2,2',3,4',5,5' - HxCB	146		K	1.38 UR	0.192	1.73	0.885
2,2',3,4',5,6 - HxCB	147	147 + 149	C	3.87 UB	0.199	1.33	1.133
2,2',3,4',5,6' - HxCB	148		U		0.0148		
2,2',3,4',5',6 - HxCB	149	147 + 149	C147				

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Approved by: _____ QA/QC Chemist

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CLIENT ID: AN-D16GW-030515

Lab Sample ID: L5850-4

Sample Data Filename: PB3C_357 S:8

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,2',3,4',6,6' - HxCB	150		K	0.018 UR	0.0104	0.48	1.011
2,2',3,5,5',6 - HxCB	151	135 + 151 + 154	C135				
2,2',3,5,6,6' - HxCB	152		U		0.0102		
2,2',4,4',5,5' - HxCB	153	153 + 168	C	5.70 UB1	0.168	1.14	0.899
2,2',4,4',5,6' - HxCB	154	135 + 151 + 154	C135				
2,2',4,4',6,6' - HxCB	155			0.108 UB	0.0104	1.09	1.001
2,3,3',4,4',5 - HxCB	156	156 + 157	C	0.853 UB	0.200	1.22	1.000
2,3,3',4,4',5' - HxCB	157	156 + 157	C156				
2,3,3',4,4',6 - HxCB	158		K	0.812 UBR	0.152	1.80	0.938
2,3,3',4,5,5' - HxCB	159		U		0.167		
2,3,3',4,5,6 - HxCB	160	129 + 138 + 160 + 163	C129				
2,3,3',4,5',6 - HxCB	161		U		0.158		
2,3,3',4',5,5' - HxCB	162		U		0.165		
2,3,3',4',5,6 - HxCB	163	129 + 138 + 160 + 163	C129				
2,3,3',4',5',6 - HxCB	164			0.884	0.163	1.41	0.922
2,3,3',5,5',6 - HxCB	165		U		0.168		
2,3,4,4',5,6 - HxCB	166	128 + 166	C128				
2,3',4,4',5,5' - HxCB	167			0.391UB2	0.160	1.26	1.001
2,3',4,4',5',6 - HxCB	168	153 + 168	C153				
3,3',4,4',5,5' - HxCB	169		U		0.176		
2,2',3,3',4,4',5 - HpCB	170		K	2.14 UBR	0.0182	1.49	0.936
2,2',3,3',4,4',6 - HpCB	171	171 + 173	C	0.610	0.0175	0.98	1.162
2,2',3,3',4,5,5' - HpCB	172		K	0.453 UR	0.0181	1.24	0.898
2,2',3,3',4,5,6 - HpCB	173	171 + 173	C171				
2,2',3,3',4,5,6' - HpCB	174		K	1.29 UR	0.0160	0.78	1.132
2,2',3,3',4,5',6 - HpCB	175		U		0.0158		
2,2',3,3',4,6,6' - HpCB	176		K	0.152UR	0.0119	1.94	1.035
2,2',3,3',4',5,6 - HpCB	177			0.558	0.0178	1.03	1.144
2,2',3,3',5,5',6 - HpCB	178			0.659 UB2	0.0162	0.97	1.084
2,2',3,3',5,6,6' - HpCB	179		K	0.704 UR	0.0112	0.85	1.010
2,2',3,4,4',5,5' - HpCB	180	180 + 193	C	4.01 UB1	0.0142	0.95	0.911
2,2',3,4,4',5,6 - HpCB	181		U		0.0160		
2,2',3,4,4',5,6' - HpCB	182		U		0.0157		
2,2',3,4,4',5',6 - HpCB	183	183 + 185	C	1.37UB1	0.0157	1.15	1.126
2,2',3,4,4',6,6' - HpCB	184		U		0.0108		
2,2',3,4,5,5',6 - HpCB	185	183 + 185	C183				
2,2',3,4,5,6,6' - HpCB	186		U		0.0118		
2,2',3,4',5,5',6 - HpCB	187			2.24 UB1	0.0144	1.13	1.109
2,2',3,4',5,6,6' - HpCB	188		K	0.090 UR	0.0112	2.55	1.001
2,3,3',4,4',5,5' - HpCB	189		K	0.106 UBR	0.0104	0.44	1.000
2,3,3',4,4',5,6 - HpCB	190		K	0.432 UR	0.0131	1.74	0.947
2,3,3',4,4',5',6 - HpCB	191		K	0.128 UR	0.0129	2.06	0.918
2,3,3',4,5,5',6 - HpCB	192		U		0.0141		

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9139AD2_1.xls, S6

Approved by: _____ QA/QC Chemist

24-08-2003
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Lab Sample ID: L5850-4

CLIENT ID: AN-D16GW-030515

Sample Data Filename: PB3C_357 S:8

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,3',4',5,5',6 - HpCB	193	180 + 193	C180				
2,2',3,3',4,4',5,5' - OcCB	194			0.850 UB	0.0167	0.75	0.992
2,2',3,3',4,4',5,6 - OcCB	195		K	0.359 UR	0.0178	0.36	0.946
2,2',3,3',4,4',5,6' - OcCB	196		K	0.268 UR	0.0261	1.66	0.916
2,2',3,3',4,4',6,6' - OcCB	197	197 + 200	C K	0.220 UR	0.0182	0.57	1.046
2,2',3,3',4,5,5',6 - OcCB	198	198 + 199	C	1.19	0.0249	0.98	1.114
2,2',3,3',4,5,5',6' - OcCB	199	198 + 199	C198				
2,2',3,3',4,5,6,6' - OcCB	200	197 + 200	C197				
2,2',3,3',4,5',6,6' - OcCB	201		K	0.138 UBR	0.0189	0.36	1.024
2,2',3,3',5,5',6,6' - OcCB	202		K	0.279 UR	0.0196	2.21	1.001
2,2',3,4,4',5,5',6 - OcCB	203			0.801 UBZ	0.0241	0.86	0.920
2,2',3,4,4',5,6,6' - OcCB	204		U		0.0184		
2,3,3',4,4',5,5',6 - OcCB	205		K	0.131 UR	0.0145	0.24	1.000
2,2',3,3',4,4',5,5',6 - NoCB	206		U		1.03		
2,2',3,3',4,4',5,6,6' - NoCB	207		U		0.797		
2,2',3,3',4,5,5',6,6' - NoCB	208		U		0.877		
2,2',3,3',4,4',5,5',6,6' - DeCB	209		K	0.788 UR	0.0138	0.38	1.001

(1) C = co-eluting congener; U = not detected; K = peak detected, but did not meet quantification criteria; E = exceeds calibrated linear range, see dilution data; D = dilution data; Z = compound not requested; X = results reported separately

TRW
11/19/03

9139AD2_1.xls, S6

Approved by: _____ QA/QC Chemist

24-08-2003
dd-mm-yyyy

AXYS METHOD MLA-010 Rev 04

1668A-S1_209

CLIENT ID:
AN-D16GW-030515

Form 2

PCB CONGENER ANALYSIS REPORT

Lab Name: AXYS ANALYTICAL SERVICES		Sample Collection:	15-May-2003
Contract No.:	9952	Lab Sample ID:	L5850-4
Matrix:	AQUEOUS	Sample Size:	0.925 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003	Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003 Time: 4:22:53	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Datafile:	PB3C_357 S:8
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_357 S:4
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_357 S:1
Concentration Units :	pg absolute		

LABELED COMPOUND	IUPAC NO. [1]	CO-ELUTIONS	LAB FLAG[2]	SPIKE CONC.	CONC. FOUND	R(%)[3]	ION ABUND. RATIO	RRT
13C12-2 - MoCB	1L			2000	1100	54.8	3.24	0.719
13C12-4 - MoCB	3L			2000	903	45.1	3.08	0.858
13C12-2,2' - DiCB	4L			2000	964	48.2	1.55	0.873
13C12-4,4' - DiCB	15L			2000	812	40.6	1.56	1.252
13C12-2,2',6 - TriCB	19L			2000	957	47.8	1.07	1.072
13C12-3,4,4' - TriCB	37L			2000	1110	55.7	1.03	1.092
13C12-2,2',6,6' - TeCB	54L			2000	940	47.0	0.82	0.812
13C12-3,3',4,4' - TeCB	77L			2000	1350	67.6	0.76	1.395
13C12-3,4,4',5 - TeCB	81L			2000	1460	72.8	0.76	1.372
13C12-2,2',4,6,6' - PeCB	104L			2000	977	48.8	1.55	0.808
13C12-2,3,3',4,4' - PeCB	105L			2000	1700	84.8	1.57	1.199
13C12-2,3,4,4',5 - PeCB	114L			2000	1630	81.6	1.59	1.178
13C12-2,3',4,4',5 - PeCB	118L			2000	1680	83.8	1.58	1.161
13C12-2',3,4,4',5 - PeCB	123L			2000	1650	82.6	1.58	1.150
13C12-3,3',4,4',5 - PeCB	126L			2000	1730	86.4	1.56	1.299
13C12-2,2',4,4',6,6' - HxCB	155L			2000	1270	63.6	1.27	0.787
13C12-2,3,3',4,4',5 - HxCB	156L	156L + 157L	C	4000	3230	80.8	1.30	1.107
13C12-2,3,3',4,4',5' - HxCB	157L	156L + 157L	C156L					
13C12-2,3',4,4',5,5' - HxCB	167L			2000	1610	80.4	1.31	1.077
13C12-3,3',4,4',5,5' - HxCB	169L			2000	1590	79.4	1.33	1.190
13C12-2,2',3,3',4,4',5 - HpCB	170L			2000	1660	82.8	1.07	0.897
13C12-2,2',3,4,4',5,5' - HpCB	180L			2000	1620	80.9	1.07	0.873
13C12-2,2',3,4',5,6,6' - HpCB	188L			2000	1530	76.5	1.08	0.713
13C12-2,3,3',4,4',5,5' - HpCB	189L			2000	1730	86.5	1.05	0.959
13C12-2,2',3,3',5,5',6,6' - OcCB	202L			2000	1640	81.9	0.92	0.818
13C12-2,3,3',4,4',5,5',6 - OcCB	205L			2000	1620	80.8	0.91	1.009
13C12-2,2',3,3',4,4',5,5',6 - NoCB	206L			2000	1560	77.9	0.80	1.043
13C12-2,2',3,3',4,5,5',6,6' - NoCB	208L			2000	1590	79.6	0.83	0.950
13C12-2,2',3,3',4,4',5,5',6,6' - DeCB	209L			2000	1630	81.7	1.22	1.075

9139AD2_1.xls, S6

Approved by: _____ QA/QC Chemist

24-08-2003
dd-mm-yyyy

AXYS METHOD MLA-010 Rev 04

1668A-S1_209

CLIENT ID:
AN-D16GW-030515

Form 2 (Continued)
PCB CONGENER ANALYSIS REPORT

Lab Name: AXYS ANALYTICAL SERVICES		Sample Collection:	15-May-2003
Contract No.:	9952	Lab Sample ID:	L5850-4
Matrix:	AQUEOUS	Sample Size:	0.925 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003	Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003 Time: 4:22:53	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Datafile:	PB3C_357 S:8
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_357 S:4
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_357 S:1
Concentration Units :	pg absolute		

CLEAN-UP STANDARD	IUPAC NO. [1]	LAB FLAG[2]	SPIKE CONC.	CONC. FOUND	R(%)[3]	ION ABUND. RATIO	RRT
13C12- 2,4,4' - TriCB	28L		2000	1310	65.7	1.03	0.925
13C12-2,3,3',5,5' - PeCB	111L		2000	1610	80.4	1.61	1.087
13C12-2,2',3,3',5,5',6 - HpCB	178L		2000	1760	87.9	1.08	1.012

(1) Suffix "L" indicates labeled compound

(2) C = co-eluting congener; E = exceeds calibrated linear range, see dilution data; D = dilution data; Z = compound not requested; X = results reported separately
(3) R% = percent recovery of labeled compounds

9139AD2_1.xls, S6

Approved by: _____ QA/QC Chemist

24-08-2003
dd-mm-yyyy

AXYS METHOD MLA-010 Rev 04
PCB-TOTAL_209

CLIENT ID:
AN-D16GW-030515

Form 1A
HOMOLOGUE TOTAL POLYCHLORINATED BIPHENYLS (PCB) ANALYSIS REPORT

			Sample Collection:	15-May-2003
Lab Name: AXYS ANALYTICAL SERVICES				
Contract No.:	9952		Lab Sample ID:	L5850-4
Matrix:	AQUEOUS		Sample Size:	0.925 L
Sample Receipt Date:	16-May-2003		Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003		Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003	Time: 4:22:53	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22		Blank Data Filename:	PB3C_357 S:4
Injection Volume (µL):	1.0		Cal. Ver. Data Filename:	PB3C_357 S:1
Dilution Factor:	N/A		Sample Datafile(s):	PB3C_357 S:8
Concentration Units :	pg/L			

PCB HOMOLOGUE GROUP	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT
Total Monochloro Biphenyls		~~3.38~~ U	0.302
Total Dichloro Biphenyls		~~5.46~~ U	1.05
Total Trichloro Biphenyls		~~12.2~~ U	0.416
Total Tetrachloro Biphenyls		15.9 ~~92.8~~	0.761
Total Pentachloro Biphenyls		0.469 ~~25.3~~	0.243
Total Hexachloro Biphenyls		0.884 ~~15.7~~	0.241
Total Heptachloro Biphenyls	RM	1.17 ~~1.19~~ ~~9.44~~	0.0182
Total Octachloro Biphenyls		1.19 ~~2.84~~	0.0261
Total Nonachloro Biphenyls	U		1.03
Decachloro Biphenyl	U		0.0138
TOTAL PCBs		19.6 ~~167~~	

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(1) U = Not detected
(2) All header information pertains to the initial instrumental analysis of the sample extract.
Additional sample datafiles listed refer to secondary analysis of the sample extract.

9139PCBTOTAL1_1.xls, S7 (TOTAL)

Approved by: _____ QA/QC Chemist

28-08-2003
dd-mm-yyyy

AXYS METHOD MLA-010 Rev 04
PCB-TEQ-DL_14

CLIENT ID:
AN-D16GW-030515

Form 1C
PCB CONGENER TEQ ANALYSIS REPORT

Lab Name: AXYS ANALYTICAL SERVICES		Sample Collection:	15-May-2003
Contract No.:	9952		
Matrix:	AQUEOUS	Lab Sample ID:	L5850-4
Sample Size:	0.925 L	GC Column ID(s):	SPB-OCTYL
Concentration Units :	pg/L	Sample Datafile(s):	PB3C_357 S:8

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	WHO 1998 TEF	TEQ U=1/2 DL	TEQ U=0	
3,3',4,4'-TetraCB	77			1.26	0.761	0.0001	1.26E-04	1.26E-04	
3,4,4',5-TetraCB	81		U		0.672	0.0001	3.36E-05	0.00E+00	
2,3,3',4,4'-PentaCB	105			~~3.95~~ UB1	0.216	0.0001	~~3.95E-04~~ 7.08E-5	~~3.95E-04~~	0.0
2,3,4,4',5-PentaCB	114			0.469	0.207	0.0005	2.35E-04	2.35E-04	
2,3',4,4',5-PentaCB	118		U		0.207	0.0001	1.04E-05	0.00E+00	
2',3,4,4',5-PentaCB	123		U		0.216	0.0001	1.08E-05	0.00E+00	
3,3',4,4',5-PentaCB	126		U		0.243	0.1	1.21E-02	0.00E+00	
2,3,3',4,4',5-HexaCB	156	156 + 157	C	~~0.853~~ UB	0.200	0.0005	~~4.27E-04~~ 5.0E-5	~~4.27E-04~~	0.0
2,3,3',4,4',5'-HexaCB	157	156 + 157	C156						
2,3',4,4',5,5'-HexaCB	167			~~0.391~~ UB2	0.160	0.00001	~~3.91E-06~~ 8.0E-7	~~3.91E-06~~	0.0
3,3',4,4',5,5'-HexaCB	169		U		0.176	0.01	8.80E-04	0.00E+00	
2,2',3,3',4,4',5-HeptaCB	170		Z						
2,2',3,4,4',5,5'-HeptaCB	180	180 + 193	Z						
2,3,3',4,4',5,5'-HeptaCB	189		U		0.0104	0.0001	5.20E-07	0.00E+00	
2,3,3',4',5,5',6-HeptaCB	193	180 + 193	Z						
						TOTAL TEQ	~~0.0142~~ 0.0134	~~0.00119~~	0.00036

(1) C = co-eluting congener; U = not detected; Z = compound not requested
(2) Concentrations that do not meet quantification criteria are not included in the TEQ calculations.

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9139PCBTEQ1_1.xls, S6 (TEQ)

Approved by: Mawsthorne QA/QC Chemist

28-08-2003
dd-mm-yyyy

AXYS METHOD MLA-010 Rev 04
1668A-S1_ARO-D1

CLIENT ID:
AN-D16GW-030515

Form 1A
PCB AROCLOR EQUIVALENT ANALYSIS REPORT

		Sample Collection:	15-May-2003
Lab Name: AXYS ANALYTICAL SERVICES			
Contract No.:	9952	Lab Sample ID:	L5850-4
Matrix:	AQUEOUS	Sample Size:	0.925 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	30-Jun-2003	Instrument ID:	HR GC/MS
Analysis Date:	07-Jul-2003 Time: 4:22:53	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Datafile:	PB3C_357 S: 8
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_357 S:4
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_357 S:1
Concentration Units:	pg/L		

COMPOUND	CAS NO.	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT
Aroclor 1016	12674-11-2	Z		
Aroclor 1221	11104-28-2	U		0.865
Aroclor 1232	11141-16-5	U		1.03
Aroclor 1242	53469-21-9 8/18/20/~~28~~/31 X3		~~19.0~~ U	1.85
Aroclor 1248	12672-29-6	U		3.74
Aroclor 1254	11097-69-1 83/86 X 8		~~20.0~~ U	1.29
Aroclor 1260	11096-82-5 /20/180/183 X 5		~~28.9~~ U	0.0910

(1) U = not detected; E = exceeds calibrated linear range, see dilution data; D = dilution data; Z = compound not requested; X = results reported separately
(2) PCB Aroclor equivalents were calculated from individual PCB congener concentrations using empirically determined conversion factors.

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9139ARD1_1.xls, S6

Approved by: Hawthorne QA/QC Chemist

24-08-2003
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SAMPLE NO. AN-D66GW-030515

Field Duplicate of
AN-D16GW-030515
(L5850-4)

AXYS METHOD MLA-010 Rev 04
1668A-S1_209

CLIENT ID:
AN-D66GW-030515

Form 1A
PCB CONGENER ANALYSIS REPORT

		Sample Collection:	15-May-2003
Lab Name: AXYS ANALYTICAL SERVICES			
Contract No.:	9952	Lab Sample ID:	L5850-5
Matrix:	AQUEOUS	Sample Size:	0.901 L
Sample Receipt Date:	16-May-2003	Initial Calibration Date:	19-Jun-2003
Extraction Date:	18-Jul-2003	Instrument ID:	HR GC/MS
Analysis Date:	25-Jul-2003 Time: 1:56:54	GC Column ID:	SPB-OCTYL
Extract Volume (µL):	22	Sample Data Filename:	PB3C_393 S:5
Injection Volume (µL):	1.0	Blank Data Filename:	PB3C_392 S:7
Dilution Factor:	N/A	Cal. Ver. Data Filename:	PB3C_393 S:1
Concentration Units :	pg/L		

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2 - MoCB	1		K	2.85 UBR	0.765	2.27	1.001
3 - MoCB	2			2.99 UB	0.808	2.97	0.988
4 - MoCB	3		K	4.17 UBR	0.685	3.84	1.000
2,2' - DiCB	4		U		2.13 ~~UBI~~ RM		
2,3 - DiCB	5		U		1.52		
2,3' - DiCB	6		U		1.41		
2,4 - DiCB	7			29.1 UB	1.39	1.41	1.159
2,4' - DiCB	8		K	4.55 UBR	1.32	0.93	1.209
2,5 - DiCB	9		U		1.39		
2,6 - DiCB	10		U		1.45		
3,3' - DiCB	11		K	14.2 UBR	1.53	1.94	0.970
3,4 - DiCB	12	12 + 13	C U		1.50		
3,4' - DiCB	13	12 + 13	C12				
3,5 - DiCB	14		U		1.50		
4,4' - DiCB	15		K	3.25 UR	1.82	1.04	1.000
2,2',3 - TriCB	16			1.46 UBI	0.510	1.05	1.164
2,2',4 - TriCB	17			2.04 UB	0.439	1.18	1.138
2,2',5 - TriCB	18	18 + 30	C K	3.64 UBR	0.358	1.35	1.113
2,2',6 - TriCB	19			0.641 UBI	0.503	1.11	1.000
2,3,3' - TriCB	20	20 + 28	C	5.68 UB	0.364	1.15	0.848

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9761AD2_1.xls, S3

Approved by: RawSthorne QA/QC Chemist

28-08-2003
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AXYS METHOD MLA-010 Rev 04
Form 1A

CLIENT ID: AN-D66GW-030515

Lab Sample ID: L5850-5

Sample Data Filename: PB3C_393 S:5

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,4 - TriCB	21	21 + 33	C	3.98 UB	0.352	0.89	0.856
2,3,4' - TriCB	22			1.91 UB	0.404	1.17	0.871
2,3,5 - TriCB	23		U		0.372		
2,3,6 - TriCB	24		U		0.307		
2,3',4 - TriCB	25		K	0.574 UR	0.329	0.79	0.825
2,3',5 - TriCB	26	26 + 29	C K	0.912 UR	0.375	1.23	1.301
2,3',6 - TriCB	27		U		0.300		
2,4,4' - TriCB	28	20 + 28	C20				
2,4,5 - TriCB	29	26 + 29	C26				
2,4,6 - TriCB	30	18 + 30	C18				
2,4',5 - TriCB	31			5.55 UB	0.361	1.08	0.837
2,4',6 - TriCB	32		K	1.09 UBR	0.351	1.24	1.196
2',3,4 - TriCB	33	21 + 33	C21				
2',3,5 - TriCB	34		U		0.380		
3,3',4 - TriCB	35		U		0.388		
3,3',5 - TriCB	36		U		0.377		
3,4,4' - TriCB	37		K	2.42 UR	0.414	1.31	1.000
3,4,5 - TriCB	38		U		0.393		
3,4',5 - TriCB	39		U		0.373		
2,2',3,3' - TeCB	40	40 + 41 + 71	C	2.68 UB1	0.408	0.87	1.335
2,2',3,4 - TeCB	41	40 + 41 + 71	C40				
2,2',3,4' - TeCB	42		K	0.664 UR	0.428	0.98	1.311
2,2',3,5 - TeCB	43		U		0.470		
2,2',3,5' - TeCB	44	44 + 47 + 65	C	42.7 UB1	0.378	0.83	1.287
2,2',3,6 - TeCB	45	45 + 51	C	38.3 UB1	0.403	0.81	1.149
2,2',3,6' - TeCB	46		U		0.486		
2,2',4,4' - TeCB	47	44 + 47 + 65	C44				
2,2',4,5 - TeCB	48		U		0.404		
2,2',4,5' - TeCB	49	49 + 69	C	3.78 UB	0.354	0.71	1.259
2,2',4,6 - TeCB	50	50 + 53	C K	0.782 UR	0.388	0.96	1.110
2,2',4,6' - TeCB	51	45 + 51	C45				
2,2',5,5' - TeCB	52			9.17 UB	0.401	0.82	1.234
2,2',5,6' - TeCB	53	50 + 53	C50				
2,2',6,6' - TeCB	54		U		0.324		
2,3,3',4 - TeCB	55		U		0.611		
2,3,3',4' - TeCB	56			1.96	0.640	0.74	0.905
2,3,3',5 - TeCB	57		U		0.592		
2,3,3',5' - TeCB	58		U		0.594		
2,3,3',6 - TeCB	59	59 + 62 + 75	C U		0.311		
2,3,4,4' - TeCB	60			1.24	0.632	0.78	0.911
2,3,4,5 - TeCB	61	61 + 70 + 74 + 76	C	10.4 UB	0.595	0.81	0.875
2,3,4,6 - TeCB	62	59 + 62 + 75	C59				
2,3,4',5 - TeCB	63		U		0.597		

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9761AD2_1.xls, S3

Approved by: JR QA/QC Chemist

28-08-2003
dd-mm-yyyy

Lab Sample ID: L5850-5

CLIENT ID: AN-D66GW-030515

Sample Data Filename: PB3C_393 S:5

COMPOUND	IUPAC NO.	CO-ELUTIONS	LAB FLAG[1]	CONC. FOUND	DETECTION LIMIT	ION ABUND. RATIO	RRT
2,3,4',6 - TeCB	64			5.93	0.299	0.68	1.348
2,3,5,6 - TeCB	65	44 + 47 + 65	C44				
2,3',4,4' - TeCB	66			10.6	0.609	0.86	0.885
2,3',4,5 - TeCB	67		U		0.528		
2,3',4,5' - TeCB	68			23.3 UB1	0.540	0.80	0.832
2,3',4,6 - TeCB	69	49 + 69	C49				
2,3',4',5 - TeCB	70	61 + 70 + 74 + 76	C61				
2,3',4',6 - TeCB	71	40 + 41 + 71	C40				
2,3',5,5' - TeCB	72		U		0.568		
2,3',5',6 - TeCB	73		U		0.303		
2,4,4',5 - TeCB	74	61 + 70 + 74 + 76	C61				
2,4,4',6 - TeCB	75	59 + 62 + 75	C59				
2',3,4,5 - TeCB	76	61 + 70 + 74 + 76	C61				
3,3',4,4' - TeCB	77		K	1.92 UBR	0.711	0.92	1.000
3,3',4,5 - TeCB	78		U		0.679		
3,3',4,5' - TeCB	79		U		0.545		
3,3',5,5' - TeCB	80		U		0.593		
3,4,4',5 - TeCB	81		U		0.722		
2,2',3,3',4 - PeCB	82		U		0.454		
2,2',3,3',5 - PeCB	83	83 + 99	C	6.23 UB1	0.397	1.78	1.261
2,2',3,3',6 - PeCB	84			3.56	0.445	1.71	1.163
2,2',3,4,4' - PeCB	85	85 + 116 + 117	C	4.31	0.336	1.65	1.309
2,2',3,4,5 - PeCB	86	86 + 87 + 97 + 108 + 119 + 125	C	7.69 UB	0.336	1.65	1.284
2,2',3,4,5' - PeCB	87	86 + 87 + 97 + 108 + 119 + 125	C86				
2,2',3,4,6 - PeCB	88	88 + 91	C	2.30	0.384	1.40	1.154
2,2',3,4,6' - PeCB	89		U		0.416		
2,2',3,4',5 - PeCB	90	90 + 101 + 113	C	13.3	0.343	1.68	1.238
2,2',3,4',6 - PeCB	91	88 + 91	C88				
2,2',3,5,5' - PeCB	92			2.73 UB1	0.400	1.59	0.853
2,2',3,5,6 - PeCB	93	93 + 95 + 98 + 100 + 102	C U		0.369		
2,2',3,5,6' - PeCB	94		U		0.398		
2,2',3,5',6 - PeCB	95	93 + 95 + 98 + 100 + 102	C93				
2,2',3,6,6' - PeCB	96			0.055	0.0541	1.43	1.015
2,2',3',4,5 - PeCB	97	86 + 87 + 97 + 108 + 119 + 125	C86				
2,2',3',4,6 - PeCB	98	93 + 95 + 98 + 100 + 102	C93				
2,2',4,4',5 - PeCB	99	83 + 99	C83				
2,2',4,4',6 - PeCB	100	93 + 95 + 98 + 100 + 102	C93				
2,2',4,5,5' - PeCB	101	90 + 101 + 113	C90				
2,2',4,5,6' - PeCB	102	93 + 95 + 98 + 100 + 102	C93				
2,2',4,5',6 - PeCB	103		U		0.336		
2,2',4,6,6' - PeCB	104		K	0.069 UR	0.0582	0.55	1.001
2,3,3',4,4' - PeCB	105			7.12 UB1	0.543	1.63	1.000
2,3,3',4,5 - PeCB	106		U		0.544		

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Approved by: JR QA/QC Chemist

28-08-2003
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