Hylebos Waterway Fish Injury Studies
Individual Data and Quality Assurance Results
CASE NARRATIVE

Reproductive Toxicology in Flatfish
(Revised 1/22/97)

Rapid PCB Analysis of Livers (Table 1)

Calibrations

The calibration data used to quantitate the analytes (Tables 1J and 1K) met thecontinuing calibration criteria detailed in the "Hylebos Waterway Fish InjuryQuality Assurance Plan, 4/25/95" (QAP).

Method Blank Analysis

The criteria in the QAP for method blanks (Tables 1E and 1F) were met (nomore than 4 analytes to exceed 4 X the MDL).

Surrogate Recoveries

Surrogate recoveries for samples analyzed by HPLC/PDA for dioxin-like PCBs and other selected PCBs and pesticides (Tables 1A, 1D and 1G) were within the guidelines detailed in the QA Plan (60-125% recovery).

Control Material Analyses

An aliquot of NIST whale blubber control materW (QC91-WB1) was analyzed with each of the sample sets and the results (Tables 1E and 1F) met the criteria in the QA plan (concentrations of >70% of these selected analytes, [PCBs 105, 118,138,153,156,180, p,p'-DDE (at 266 nm), o,p'-DDD, p,p'-DDD, pp'-DDT, hexachlorobenzene] were within ±50% of the published reference values). Non-certified values for the other analytes in the NIST control material are also shown in the tables.

Sample Duplicates

Eleven samples were analyzed in duplicate (Tables 1H and 1I) and the criteria(RSD ≤ 50%) in the QAP were met (QA plan, Table 4).

Reanalyses

The method blank in one sample set (HY015 through HY028) contained a large interfering peak and therefore the English sole liver samples from that set were re-extracted, and reanalyzed as samples HY154 through HY161. The following samples from that set were not re-extracted because < 0.20 g of sample remained to be extracted and thus these samples were not analyzed: 94.35281, 94.3530, 94.3531, 94.3532, 94.3535 and 94.3544. One sample (94.3577) was inadvertently not analyzed with the other samples from the same sample set (HY043 through HY056). Therefore, the QA samples (method blank, NIST whale blubber control material and samples duplicates) from this sample set were reanalyzed with the sample 943577.

Table Revision (01/22/97)

Table 1B-p2. For sample 94.3600, the concentration value of.CB189 was inadvertently missed and was reported as <0.16 ng/g, wet weight. The correct value for CB189 is 1.8 ng/g wet weight.

Hylebos Waterway Damage Assessment Project/1994-1995

Rapid Analyses for PCBs
Table I Notes

The concentrations of analytes were calculated using 1,7,8-trichlorodibenzo-*p*-dioxin as the surrogate standard.

The “less than” symbol (<) indicates that the analyte was not detected in concentrations above the stated value.

Analyte concentrations were determined by high-performance liquid chromatography with photodiode array detection WLC/PDA) at 220 nm except p,p’-DDE concentrations; this analyte was analyzed by BrLC/PDA at 266 nm.

Analyte concentrations are rounded to two significant figures.

The percent recoveries of the surrogate standard were calculated using 1,2,3,4-tetrachlorodibenzo-*p*-dioxin added after the acidic silica gel cleanup step.

Extract number designation was used for internal lab use and identification only. Field number and site name represent Hylebos Damage Assessment official sample identification designations.

The sample weights used to calculate concentrations for the method blanks are the mean sample weights calculated for the field samples in the corresponding sample set.

Table 1A-p1: Sample information for English sole liver samples analyzed for dioxin-like PCBs and other selected PCBs and pesticides as part of the Hylebos Waterway Damage Assessment Project.

Field Number	Extract Number	Sample Matrix	Site	Sampling Date	Sample Wt. (g)	TriCDD Rec. (%)	Extract. Date
94.3514	HY002	Liver	Colvos Passage	12/02/94	0.30	114	05/23/95
94.3515	HY003	Liver	Colvos Passage	12/02/94	0.86	120	05/23/95
94.3516	HY004	Liver	Colvos Passage	12/02/94	0.60	120	05/23/95
94.3518	HY005	Liver	Colvos Passage	12/02/94	1.03	116	05/23/95
94.3520	HY006	Liver	Colvos Passage	12/02/94	1.20	116	05/23/95
94.3521	HY007	Liver	Colvos Passage	12/02/94	1.08	107	05/23/95
94.3523	HY008	Liver	Colvos Passage	12/02/94	0.97	111	05/23/95
94.3524	HY009	Liver	Colvos Passage	12/02/94	0.40	118	05/23/95
94.3525	HY010	Liver	Colvos Passage	12/02/94	1.25	112	05/23/95
94.3526	HY011	Liver	Colvos Passage	12/02/94	0.59	118	05/23/95
94.3527	HY012	Liver	Colvos Passage	12/02/94	1.30	116	05/23/95
94.3539	HY029	Liver	Colvos Passage	12/02/94	0.40	103	06/15/95
94.3540	HY030	Liver	Colvos Passage	12/02/94	1.35	99	06/15/95
94.3541	HY031	Liver	Colvos Passage	12/02/94	0.42	101	06/15/95
94.3542	HY032	Liver	Colvos Passage	12/02/94	0.43	93	06/15/95
94.3546	HY033	Liver	Hylebos	12/05/94	1.52	97	06/15/95
94.3548	HY035	Liver	Hylebos	12/05/94	0.87	102	06/15/95
94.3550	HY036	Liver	Hylebos	12/05/94	0.64	98	06/15/95
94.3552	HY037	Liver	Hylebos	12/05/94	1.19	99	06/15/95
94.3554	HY038	Liver	Hylebos	12/05/94	1.41	81	06/15/95
94.3560	HY039	Liver	Hylebos	12/05/94	0.92	96	06/15/95
94.3562	HY040	Liver	Hylebos	12/05/94	1.35	95	06/15/95
94.3564	HY043	Liver	Hylebos	12/05/94	1.47	89	06/22/95
94.3565	HY044Ø	Liver	Hylebos	12/05/94	1.20	74	06/22/95
94.3566	HY046	Liver	Hylebos	12/05/94	0.69	91	06/22/95
94.3567	HY047	Liver	Hylebos	12/05/94	0.68	83	06/22/95
94.3568	HY048	Liver	Hylebos	12/05/94	1.08	85	06/22/95
94.3569	HY049	Liver	Hylebos	12/05/94	1.06	80	06/22/95
94.3572	HY050	Liver	Hylebos	12/05/94	0.37	86	06/22/95
94.3574	HY051	Liver	Hylebos	12/05/94	1.00	78	06/22/95
94.3575	HY052	Liver	Hylebos	12/05/94	1.95	85	06/22/95
94.3576	HY053	Liver	Hylebos	12/05/94	1.16	94	06/22/95
94.3577	HY054	Liver	Hylebos	12/05/94	0.97	89	06/22/95
94.3578	HY058	Liver	Hylebos	12/05/94	0.50	122	07/06/95
94.3581	HY059	Liver	Hylebos	12/05/94	1.80	124	07/06/95
94.3586	HY060	Liver	Hylebos	12/05/94	2.01	121	07/06/95
94.3587	HY061	Liver	Hylebos	12/05/94	0.71	123	07/06/95

TriCDD = 1,7,8-trichlorodibenzo-*p*-dioxin
R - Tissue sample was re-extracted

Table 1A-p2: Sample information for English sole liver samples analyzed for dioxin-like PCBs and other selected PCBs and pesticides as part of the Hylebos Waterway Damage Assessment Project.

Field Number	Extract Number	Sample Matrix	Site	Sampling Date	Sample Wt. (g)	TriCDD Rec. (%)	Extract. Date
94.3588	HY062	Liver	Hylebos	12/05/94	1.25	121	07/06/95
94.3589	HY063	Liver	Hylebos	12/05/94	0.61	123	07/06/95
94.3590	HY064	Liver	Hylebos	12/05/94	0.71	121	07/06/95
94.3591	HY065	Liver	Hylebos	12/05/94	2.03	101	07/06/95
94.3592	HY066	Liver	Hylebos	12/05/94	0.91	115	07/06/95
94.3593	HY067	Liver	Hylebos	12/05/94	1.50	118	07/06/95
94.3594	HY068	Liver	Hylebos	12/05/94	0.39	123	07/06/95
94.3594A	HY071	Liver	Hylebos	01/04/95	2.05	121	07/11/95
94.3595	HY072	Liver	Hylebos	01/04/95	1.28	122	07/11/95
94.3598	HY073	Liver	Hylebos	01/04/95	1.75	122	07/11/95
94.3600	HY074	Liver	Hylebos	01/04/95	1.73	123	07/11/95
94.3602	HY075	Liver	Hylebos	01/04/95	0.90	121	07/11/95
94.3603	HY076	Liver	Hylebos	01/04/95	0.97	122	07/11/95
94.3604	HY077	Liver	Hylebos	01/04/95	1.25	118	07/11/95
94.3605	HY078	Liver	Hylebos	01/04/95	0.27	120	07/11/95
94.3607	HY080	Liver	Hylebos	01/04/95	0.73	125	07/11/95
94.3615	HY081	Liver	Hylebos	01/04/95	2.02	121	07/11/95
94.3616	HY082	Liver	Hylebos	01/04/95	2.04	119	07/11/95
94.3617	HY085	Liver	Hylebos	01/04/95	1.31	122	07/20/95
94.3618	HY086	Liver	Hylebos	01/04/95	0.95	123	07/20/95
94.3628	HY087	Liver	Hylebos	01/04/95	2.02	121	07/20/95
94.3629	HY089	Liver	Hylebos	01/04/95	2.00	112	07/20/95
94.3630	HY090	Liver	Hylebos	01/04/95	2.06	119	07/20/95
94.3631	HY091	Liver	Hylebos	01/04/95	0.73	120	07/20/95
94.3632	HY092	Liver	Hylebos	01/04/95	1.32	99	07/20/95
94.3633	HY093	Liver	Hylebos	01/04/95	1.80	123	07/20/95
94.3634	HY094	Liver	Hylebos	01/04/95	1.08	117	07/20/95
94.3635	HY095	Liver	Hylebos	01/04/95	1.50	116	07/20/95
94.3636	HY096	Liver	Hylebos	01/04/95	2.03	119	07/20/95
94.3637	HY099	Liver	Hylebos	01/04/95	1.02	104	07/25/95
94.3639	HY100	Liver	Hylebos	01/04/95	0.55	107	07/25/95
94.3644	HY101	Liver	Hylebos	01/04/95	1.01	111	07/25/95
94.3645	HY102	Liver	Hylebos	01/04/95	1.32	107	07/25/95
94.3647	HY103	Liver	Hylebos	01/04/95	1.09	109	07/25/95
94.3648	HY104	Liver	Hylebos	01/04/95	0.54	108	07/25/95
94.3649	HY105	Liver	Hylebos	01/04/95	0.49	111	07/25/95
94.3650	HY106	Liver	Colvos Passage	01/06/95	0.64	110	07/25/95

TriCDD = 1,7,8-trichlorodibenzo-*p*-dioxin
R - Tissue sample was re-extracted

Table 1A-p3: Sample information for English sole liver samples analyzed for dioxin-like PCBs and other selected PCBs and pesticides as part of the Hylebos Waterway Damage Assessment Project.

Field Number	Extract Number	Sample Matrix	Site	Sampling Date	Sample Wt. (g)	TriCDD Rec. (%)	Extract. Date
94.3652	HY108	Liver	Colvos Passage	01/06/95	1.46	110	07/25/95
94.3651	HY113	Liver	Colvos Passage	01/06/95	0.57	117	08/01/95
94.3653	HY114	Liver	Colvos Passage	01/06/95	1.03	119	08/01/95
94.3654	HY115	Liver	Colvos Passage	01/06/95	0.72	118	08/01/95
94.3655	HY116	Liver	Colvos Passage	01/06/95	0.96	118	08/01/95
94.3656	HY117	Liver	Colvos Passage	01/06/95	1.10	114	08/01/95
94.3657	HY118	Liver	Colvos Passage	01/06/95	0.90	119	08/01/95
94.3658	HY119	Liver	Colvos Passage	01/06/95	0.94	108	08/01/95
94.3659	HY120	Liver	Colvos Passage	01/06/95	1.02	113	08/01/95
94.3660	HY121	Liver	Colvos Passage	01/06/95	0.98	115	08/01/95
94.3661	HY122	Liver	Colvos Passage	01/06/95	0.97	119	08/01/95
94.3663	HY123	Liver	Colvos Passage	01/06/95	1.00	116	08/01/95
94.3664	HY128	Liver	Colvos Passage	01/06/95	0.95	118	08/04/95
94.3666	HY129	Liver	Colvos Passage	01/06/95	0.58	123	08/04/95
94.3667	HY130	Liver	Colvos Passage	01/06/95	1.32	121	08/04/95
94.3669	HY131	Liver	Colvos Passage	01/06/95	1.07	118	08/04/95
94.3670	HY132	Liver	Colvos Passage	01/06/95	0.51	122	08/04/95
94.3672	HY141	Liver	Colvos Passage	01/06/95	0.58	116	08/08/95
94.3681	HY142	Liver	Colvos Passage	01/06/95	1.08	113	08/08/95
94.3682	HY143	Liver	Colvos Passage	01/06/95	0.98	116	08/08/95
94.3683	HY144	Liver	Colvos Passage	01/06/95	0.93	114	08/08/95
94.3684	HY145	Liver	Colvos Passage	01/06/95	0.98	116	08/08/95
94.3685	HY146	Liver	Colvos Passage	01/06/95	0.81	119	08/08/95
94.3687	HY147	Liver	Colvos Passage	01/06/95	1.24	121	08/08/95
94.3688	HY148	Liver	Colvos Passage	01/06/95	1.05	121	08/08/95
94.3689	HY149	Liver	Colvos Passage	01/06/95	0.56	95	08/08/95
94.3690	HY150	Liver	Colvos Passage	01/06/95	0.48	125	08/08/95
94.3537R	HY154	Liver	Colvos Passage	12/02/94	0.26	101	10/18/95
94.3538R	HY155	Liver	Colvos Passage	12/02/94	0.22	98	10/18/95
94.3536R	HY156	Liver	Colvos Passage	12/02/94	0.25	93	10/18/95
94.3543R	HY157	Liver	Colvos Passage	12/02/94	0.21	97	10/18/95
94.3529R	HY159	Liver	Colvos Passage	12/02/94	0.28	99	10/18/95

TriCDD = 1,7,8-trichlorodibenzo-*p*-dioxin
R - Tissue sample was re-extracted

Table 1B-p1: Concentrations (ng/g, wet weight) of dioxin-like PCBs* in English sole liver samples analyzed as part of the Hylebos Waterway Damage Assessment Project.

Site	Field Number	77	105	118	126	156	157	169	170	180	189
Colvos Passage											
	94.3514	< 1.1	1.7	59	< 1	< 0.7	< 0.64	< 1.3	25	1.6	< 0.67
	94.3515	< 0.34	2.2	18	< 0.18	< 0.21	< 0.2	< 0.41	8.5	1.4	< 0.2
	94.3516	< 0.58	14	43	< 0.31	1.7	< 0.33	< 0.69	18	14	< 0.33
	94.3518	< 0.36	4.7	40	< 0.19	1.3	< 0.21	< 0.43	13	7.7	< 0.21
	94.3520	< 0.35	2	12	< 0.19	< 0.22	< 0.2	< 0.41	5.6	4.5	< 0.2
	94.3523	< 0.37	6.3	24	< 0.2	0.8	< 0.21	< 0.44	9.3	6.4	< 0.21
	94.3524	< 0.58	2.9	13	< 0.31	< 0.36	< 0.33	< 0.7	12	3.9	< 0.34
	94.3525	< 0.29	1.5	12	< 0.16	0.8	< 0.17	< 0.35	10	12	< 0.17
	94.3526	< 0.67	4.4	19	< 0.36	< 0.42	< 0.38	< 0.8	9.6	6.2	< 0.39
	94.3527	< 0.28	12	37	< 0.15	1.1	< 0.16	< 0.34	9.3	11	< 0.17
	94.3539	< 1.1	1.4	12	< 0.96	< 0.69	< 0.63	< 1.4	2.8	3.2	< 0.67
	94.3540	< 0.32	6.8	24	< 0.27	2.2	< 0.18	< 0.4	5.8	9.9	< 0.19
	94.3541	< 1	8.1	26	< 0.89	< 0.64	< 0.58	< 1.3	6.1	9.4	< 0.62
	94.3542	< 1.2	2.4	12	< 01	< 0.72	< 0.65	< 1.4	2.2	3.7	< 0.7
	94.3652	< 0.39	20	43	< 0.32	2.1	< 0.21	< 0.43	< 0.24	14	< 0.23
	94.3651	< 0.53	4.1	13	< 0.44	< 0.32	< 0.29	< 0.62	3.3	4.4	< 0.31
	94.3653	< 0.29	5.7	18	< 0.24	< 0.17	< 0.16	< 0.34	6.4	6	< 0.17
	94.3654	< 0.54	3.9	13	< 0.44	< 0.32	< 0.29	< 0.63	2.8	4	< 0.31
	94.3656	< 0.39	7.6	21	< 0.32	< 0.23	< 0.21	< 0.46	< 0.24	6.5	< 0.23
	94.3657	< 0.49	4.6	24	< 0.4	< 0.29	< 0.27	< 0.57	5.7	8.7	< 0.29
	94.3658	< 0.48	4.4	9.9	< 0.4	< 0.29	< 0.26	< 0.57	0.66	2.8	< 0.28
	94.3659	< 0.47	9.6	17	< 0.39	< 0.28	< 0.26	< 0.55	< 0.29	7.8	< 0.28
	94.3660	< 0.43	6.1	23	< 0.35	< 0.26	< 0.23	< 0.5	8.7	12	< 0.25
	94.3661	< 0.38	3.6	12	< 0.32	< 0.23	< 0.21	< 0.45	2.9	4.2	< 0.22
	94.3663	< 0.51	11	34	< 0.42	< 0.31	< 0.28	< 0.6	6	10	< 0.3
	94.3664	< 0.46	2.1	7.3	< 0.37	< 0.28	< 0.25	< 0.53	1.1	6.6	< 0.27
	94.3666	< 0.72	10	43	< 0.58	1.2	< 0.39	< 0.82	7.7	23	< 0.42
	94.3667	< 0.3	3.1	8.5	< 0.24	3.3	< 0.16	< 0.34	1.2	5.8	< 0.18
	94.3669	< 0.42	8.2	19	< 0.33	< 0.25	< 0.22	< 0.47	2	11	< 0.24
	94.3672	< 0.68	4.2	16	< 0.55	< 0.4	< 0.37	< 0.77	5.6	5.1	< 0.4
	94.3681	< 0.35	2.6	28	< 0.29	7.1	< 0.19	< 0.4	12	4	< 0.2
	94.3683	< 0.47	9.4	32	< 0.38	0.92	< 0.26	< 0.53	13	10	< 0.27
	94.3684	< 0.48	1.8	6.6	< 0.39	< 0.28	< 0.26	< 0.54	2.7	2.8	< 0.28
	94.3685	< 0.5	9.7	30	< 0.4	< 0.29	< 0.27	< 0.56	5.7	8.2	< 0.29
	94.3687	< 0.34	2.3	11	< 0.27	< 0.2	< 0.18	< 0.38	2.7	2.8	< 0.2
	94.3688	< 0.39	5.4	17	< 0.31	1.6	< 0.21	< 0.44	3.2	5.3	< 0.22

R - Tissue sample was re-extracted

* The dioxin-like PCB congeners (shown in this table) have minimal interferences from co-eluting compounds which generally contribute < 10% to the total concentration.

Table 1B-p2: Concentrations (ng/g, wet weight) of dioxin-like PCBs* in English sole liver samples analyzed as part of the Hylebos Waterway Damage Assessment Project.

Site	Field Number	77	105	118	126	156	157	169	170	180	189
	94.3689	< 1	5.3	34	< 0.85	2.3	1.9	< 1.2	13	16	< 0.61
	94.3690	< 1	5.2	24	< 0.85	< 0.62	< 0.57	< 1.2	2.2	6.3	< 0.61
	94.3537R	< 2.6	< 1.4	10	< 2.1	< 1.5	< 1.3	< 2.8	< 1.5	20	< 1.4
	94.3538R	< 2.8	11	42	< 2.2	< 1.6	< 1.4	< 3	6.4	26	< 1.5
	94.3536R	< 2.6	< 1.4	23	< 2	< 1.5	< 1.3	< 2.7	3.7	33	< 1.4
	94.3543R	< 3	< 1.6	6.5	< 2.4	< 1.7	< 1.5	< 3.2	< 1.7	12	< 1.6
Hylebos											
	94.3548	< 0.56	39	92	< 0.48	9	1.9	< 0.69	50	67	< 0.33
	94.3550	< 0.61	63	160	< 0.52	14	1.8	< 0.75	43	90	< 0.36
	94.3552	< 0.37	130	530	< 0.32	34	6	< 0.46	40	110	< 0.22
	94.3554	< 0.27	21	63	< 0.23	5.4	0.8	< 0.33	28	51	< 0.16
	94.3560	< 0.42	10	29	< 0.36	1.7	< 0.23	< 0.51	9.6	13	< 0.25
	94.3562	< 0.32	17	51	< 0.27	3.3	0.7	< 0.39	24	30	< 0.19
	94.3564	< 0.25	28	86	< 0.2	12	1.4	< 0.27	42	77	< 0.14
	94.3566	< 0.78	12	27	< 0.63	2.9	< 0.4	< 0.84	9.5	19	< 0.42
	94.3567	< 0.7	69	220	< 0.55	20	4.3	< 0.75	76	130	< 0.37
	94.3568	< 0.43	38	110	< 0.34	9.6	1.3	< 0.46	37	60	< 0.23
	94.3569	< 0.41	61	150	< 0.33	15	3.2	< 0.44	93	130	< 0.22
	94.3572	< 1.3	61	220	< 1	18	2.8	< 1.4	20	48	< 0.69
	94.3574	0.6	120	340	< 0.32	27	3.2	< 0.43	110	160	< 0.21
	94.3575	< 0.21	130	550	< 0.17	34	5.1	< 0.23	11	70	< 0.11
	94.3576	< 0.37	150	580	< 0.3	44	8.6	< 0.4	37	130	< 0.2
	94.3577	< 0.56	80	300	< 0.45	20	4.4	< 0.61	26	62	< 0.3
	94.3578	< 0.85	66	250	< 0.72	17	2.9	< 1	13	42	< 0.49
	94.3581	< 0.23	87	350	< 0.2	23	4.1	< 0.28	33	67	< 0.14
	94.3586	< 0.23	27	86	< 0.2	7.9	1.8	< 0.28	54	100	< 0.13
	94.3587	< 0.56	14	58	< 0.47	2.9	< 0.31	< 0.66	24	37	< 0.32
	94.3588	< 0.36	24	62	< 0.32	6.5	1.5	< 0.45	26	43	< 0.22
	94.3589	< 0.82	17	42	< 0.7	3.9	< 0.45	< 0.98	12	23	< 0.47
	94.3590	< 0.69	120	450	< 0.59	29	5	< 0.83	13	60	< 0.4
	94.3592	< 0.55	26	63	< 0.47	5.7	< 0.3	< 0.66	18	31	< 0.32
	94.3593	< 0.35	3.1	13	< 0.3	< 0.22	< 0.19	< 0.42	7.5	14	< 0.2
	94.3594	< 1.3	5.9	46	< 1.1	2.2	< 0.72	< 1.6	22	36	< 0.76
	94.3595	< 0.44	74	230	< 0.36	20	4.3	< 0.52	57	100	< 0.26
	94.3598	< 0.5	4.4	22	< 0.41	1.1	< 0.28	< 0.6	7.4	14	< 0.3
	94.3600	< 0.27	110	400	< 0.22	41	8.4	< 0.33	210	370	1.8
	94.3602	< 0.52	31	58	< 0.43	3.5	< 0.29	< 0.62	24	19	< 0.31

R - Tissue sample was re-extracted

* The dioxin-like PCB congeners (shown in this table) have minimal interferences from co-eluting compounds which generally contribute < 10% to the total concentration.

Table 1B-p3: Concentrations (ng/g, wet weight) of dioxin-like PCBs* in English sole liver samples analyzed as part of the Hylebos Waterway Damage Assessment Project.

Site	Field Number	77	105	118	126	156	157	169	170	180	189
	94.3603	< 0.58	13	32	< 0.48	2.6	< 0.32	< 0.7	10	16	< 0.34
	94.3604	< 0.34	10	37	< 0.28	2.2	<0.19	< 0.41	15	27	< 0.2
	94.3605	< 2.2	15	93	< 1.8	4.9	< 1.2	< 2.6	25	57	< 1.3
	94.3607	< 0.62	32	63	< 0.51	7.1	0.5	< 0.74	23	40	< 0.37
	94.3615	< 0.26	29	88	< 0.21	7	1	< 0.31	19	36	< 0.15
	94.3616	< 0.22	51	110	< 0.18	11	2.2	< 0.26	58	69	< 0.13
	94.3617	< 0.29	82	220	< 0.25	12	2.4	< 0.34	59	80	< 0.17
	94.3618	< 0.48	14	43	< 0.41	< 0.29	< 0.25	< 0.56	11	24	< 0.28
	94.3629	< 0.24	84	240	< 0.21	25	5.9	< 0.28	100	160	< 0.14
	94.3630	< 0.22	6.2	18	< 0.19	1.5	< 0.11	< 0.26	6.7	14	< 0.13
	94.3631	< 0.72	11	35	< 0.61	3.3	< 0.37	< 0.84	20	33	< 0.41
	94.3632	< 0.41	490	2400	< 0.35	150	23	< 0.48	150	450	< 0.24
	94.3633	< 0.2	3.8	110	< 0.17	7.9	1.7	< 0.23	53	61	< 0.11
	94.3634	< 0.36	86	230	< 0.3	16	3.6	< 0.42	80	110	< 0.21
	94.3635	< 0.32	7.9	78	< 0.27	5	0.9	< 0.38	44	69	< 0.19
	94.3636	< 0.25	44	200	< 0.22	12	2.2	< 0.3	22	40	< 0.15
	94.3637	< 0.6	< 0.34	59	< 0.48	2.5	0.37	< 0.66	< 0.36	15	< 0.35
	94.3639	< 0.85	25	120	< 0.68	5.7	0.54	< 0.94	38	59	< 0.49
	94.3644	< 0.54	5.7	54	< 0.43	2.9	< 0.29	< 0.6	29	48	< 0.31
	94.3645	< 0.35	31	73	< 0.28	5.7	0.69	< 0.39	28	35	< 0.2
	94.3647	< 0.35	37	85	< 0.28	8.2	1.8	< 0.38	46	71	< 0.2
	94.3648	< 0.91	21	63	< 0.73	5.3	1.4	< 01	26	48	< 0.52
	94.3649	< 1.1	5.6	30	< 0.86	< 0.64	< 0.58	< 1.2	9.5	16	< 0.62

R - Tissue sample was re-extracted

* The dioxin-like PCB congeners (shown in this table) have minimal interferences from co-eluting compounds which generally contribute < 10% to the total concentration.

Table 1C-p1: Concentrations (ng/g, wet weight) of selected nondioxin-like PCBs* and pesticides in English sole liver samples analyzed as the part of the Hylebos Waterway Damage Assessment Project.

Site	Field Number	Nondioxin-like CB Congeners				Selected Pesticides					
		101	128	138	153	opDDD	ppDDD	ppDDE	opDDT	ppDDT	HCB
Colvos Passage											
	94.3514	3.4	0.6	10	7.6	< 1.6	< 3.9	I	I	< 2.7	< 0.64
	94.3515	3.3	1.6	5	7.9	< 0.52	< 0.9	I	< 0.68	< 0.76	< 0.2
	94.3516	20	10	24	49	< 0.87	< 1.5	I	I	< 1.3	1.6
	94.3518	6.2	5.3	14	27	< 0.54	< 0.94	I	< 0.71	< 0.79	1.2
	94.3520	4.4	2.5	7.7	10	< 0.52	< 0.91	I	< 0.68	< 0.77	0.4
	94.3523	10	5.5	12	25	< 0.55	< 0.96	I	< 0.73	< 0.82	1.4
	94.3524	4.1	3.1	9.9	11	< 0.88	< 1.5	I	I	< 1.3	1.1
	94.3525	6.9	4.5	13	27	< 0.44	< 0.76	I	I	< 0.65	0.6
	94.3526	10	5.4	13	21	< 1	< 1.7	I	I	< 1.5	< 0.38
	94.3527	14	8.6	20	39	< 0.43	< 0.74	I	I	< 0.63	1.9
	94.3539	4.2	2.2	9.4	9	< 1.6	< 3.4	I	I	< 2.3	< 0.64
	94.3540	14	8.5	18	29	< 0.45	< 0.98	I	I	< 0.67	1.1
	94.3541	21	6.8	19	31	< 1.5	< 3.2	I	< 1.9	< 2.2	< 0.59
	94.3542	7.6	< 0.62	9.1	14	< 1.7	< 3.5	I	< 2.2	< 2.4	< 0.67
	94.3652	15	10	23	48	< 0.52	< 1.1	I	I	< 0.75	2.8
	94.3651	9.7	3.9	7.9	17	< 0.72	< 1.6	I	I	< 1.2	< 0.29
	94.3653	6.5	4.6	10	20	< 0.39	< 0.89	I	< 0.55	< 0.63	1.6
	94.3654	7.2	3.6	7.3	14	< 0.73	< 1.6	I	< 1	< 1.2	0.8
	94.3656	6.4	5.2	11	23	< 0.53	< 1.2	I	< 0.74	I	2.5
	94.3657	14	6.7	13	28	< 0.66	< 1.5	I	I	< 1.1	1.4
	94.3658	6.5	1.2	5.3	13	< 0.65	< 1.5	I	I	I	1.5
	94.3659	9.7	5.9	14	29	< 0.64	< 1.5	I	< 0.89	< 1	< 0.26
	94.3660	13	9.8	18	39	< 0.58	< 1.3	I	I	< 0.93	1.8
	94.3661	8.5	3.5	6.6	17	< 0.51	< 1.2	I	I	< 0.83	1.1
	94.3663	12	7.6	18	36	< 0.69	< 1.6	I	I	< 1.1	3
	94.3664	6.2	2.6	8.7	15	< 0.64	< 1.4	I	I	< 0.94	< 0.25
	94.3666	25	14	30	56	< 1	< 2.2	I	I	< 1.5	1.4
	94.3667	6.3	3.3	6.6	15	< 0.42	< 0.92	I	< 0.54	< 0.61	< 0.17
	94.3669	7.7	5.3	11	26	< 0.58	< 1.3	I	< 0.75	I	< 0.23
	94.3672	13	5	12	19	< 0.93	< 2.2	I	I	< 1.4	< 0.37
	94.3681	29	2.6	9.7	12	I	< 1.1	I	I	< 0.72	1.2
	94.3683	16	6.6	18	33	I	< 1.5	I	< 0.84	< 0.96	1.8
	94.3684	3.2	1.6	4.1	7.6	< 0.65	< 1.5	I	< 0.86	< 0.98	< 0.26
	94.3685	18	7.6	16	32	< 0.68	< 1.6	I	I	< 1	0.92
	94.3687	5.9	2.4	5.2	10	< 0.46	< 1.1	I	< 0.6	< 0.69	< 0.18
	94.3688	8.9	4.3	9.6	19	< 0.53	< 1.2	I	I	< 0.79	2.3
	94.3689	22	8.2	22	49	< 1.4	< 3.3	I	I	< 2.1	< 0.57

HCB = hexachlorobenzene
R - Tissue sample was re-extracted
* The nondioxin-like PCB congeners (shown in this table) generally co-elute with other PCBs, therefore we report the PCB congener that is usually present in the greatest proportion.
I = The compound could not be quantitated due to analytical interference with a coeluting PCB congener.

Table 1C-p2: Concentrations (ng/g, wet weight) of selected nondioxin-like PCBs* and pesticides in English sole liver samples analyzed as the part of the Hylebos Waterway Damage Assessment Project.

Site	Field Number	Nondioxin-like CB Congeners				Selected Pesticides					
		101	128	138	153	opDDD	ppDDD	ppDDE	opDDT	ppDDT	HCB
	94.3690	30	4.9	11	24	< 1.4	< 3.3	I	I	< 2.1	< 0.57
	94.3537R	9.8	3.6	6.7	11	< 3.5	< 7.3	I	< 4.5	< 4.9	< 1.7
	94.3538R	18	2	25	35	< 3.7	< 7.8	I	I	< 5.2	< 1.8
	94.3536R	8.6	10	14	22	< 3.4	< 7.2	I	I	< 4.8	< 1.6
	94.3543R	7.6	< 1.5	< 1.8	8	< 4	< 8.3	I	I	< 5.5	< 1.9
Hylebos											
	94.3548	160	38	77	250	< 0.79	15	I	I	< 1.2	62
	94.3550	340	53	120	320	< 0.86	31	I	I	< 1.3	52
	94.3552	1100	120	300	710	< 0.52	84	I	I	< 0.77	18
	94.3554	100	21	61	150	< 0.38	9.2	I	I	< 0.57	21
	94.3560	19	9.8	21	41	< 0.59	< 1.3	I	I	< 0.87	2.6
	94.3562	63	15	31	120	< 0.45	4.8	I	I	< 0.66	19
	94.3564	140	30	86	230	< 0.35	16	I	I	< 0.52	40
	94.3566	50	13	27	65	< 1.1	< 2.2	I	I	< 1.6	22
	94.3567	410	32	180	490	< 0.96	49	I	I	< 1.4	130
	94.3568	220	40	93	240	< 0.6	15	I	I	< 0.88	28
	94.3569	240	38	140	420	< 0.57	30	I	I	< 0.84	98
	94.3572	480	64	140	310	< 1.8	20	I	I	< 2.6	16
	94.3574	700	110	230	700	< 0.56	80	I	I	< 0.82	120
	94.3575	1300	120	260	710	< 0.29	110	I	I	I	22
	94.3576	1300	170	390	840	< 0.51	96	I	I	I	26
	94.3577	710	86	190	440	< 0.78	48	I	I	< 1.1	27
	94.3578	530	63	130	330	< 1.2	35	I	I	I	16
	94.3581	770	85	210	470	< 0.33	45	I	I	< 0.5	16
	94.3586	160	29	90	250	< 0.33	15	I	I	< 0.49	26
	94.3587	61	20	50	110	< 0.79	6.6	I	I	< 1.2	16
	94.3588	120	26	58	160	< 0.54	8	I	I	< 0.8	29
	94.3589	75	17	36	90	< 1.2	9.1	I	I	< 1.7	20
	94.3590	1000	110	220	630	< 0.99	140	I	I	< 1.5	38
	94.3592	100	23	47	120	< 0.79	< 1.7	I	I	< 1.2	23
	94.3593	19	5.5	14	32	< 0.5	< 1.1	I	I	< 0.75	6.9
	94.3594	24	17	40	80	< 1.9	< 4	I	I	< 2.8	< 0.73
	94.3595	540	72	160	440	< 0.65	35	I	I	< 1	59
	94.3598	22	9.1	19	40	< 0.74	< 1.6	I	I	< 1.2	5.9
	94.3600	700	130	390	1100	< 0.4	55	I	I	< 0.64	94
	94.3602	94	23	33	130	< 0.76	12	I	I	< 1.2	47
	94.3603	57	14	23	72	< 0.86	5.2	I	I	10	35
	94.3604	44	13	31	76	< 0.5	8.5	I	I	32	23

HCB = hexachlorobenzene
R - Tissue sample was re-extracted
* The nondioxin-like PCB congeners (shown in this table) generally co-elute with other PCBs, therefore we report the PCB congener that is usually present in the greatest proportion.
I = The compound could not be quantitated due to analytical interference with a coeluting PCB congener.

Table 1C-p3: Concentrations (ng/g, wet weight) of selected nondioxin-like PCBs* and pesticides in English sole liver samples analyzed as the part of the Hylebos Waterway Damage Assessment Project.

Site	Field Number	Nondioxin-like CB Congeners				Selected Pesticides					
		101	128	138	153	opDDD	ppDDD	ppDDE	opDDT	ppDDT	HCB
	94.3605	91	30	64	130	< 3.2	< 6.9	I	I	< 5.1	< 1.2
	94.3607	120	30	56	160	< 0.92	11	I	I	I	54
	94.3615	140	25	53	130	< 0.38	17	I	I	< 0.61	40
	94.3616	140	45	81	250	< 0.32	24	I	I	< 0.51	89
	94.3617	310	65	110	340	< 0.42	38	I	I	< 0.7	100
	94.3618	70	13	30	110	< 0.69	12	I	I	37	24
	94.3629	280	67	230	480	< 0.35	58	I	I	< 0.58	96
	94.3630	32	7.2	18	45	< 0.31	< 0.7	I	I	< 0.52	9.5
	94.3631	80	14	39	110	< 1	11	I	I	< 1.7	24
	94.3632	3700	460	1400	3300	I	400	I	I	< 0.98	27
	94.3633	160	34	69	230	< 0.28	25	I	I	I	69
	94.3634	360	71	170	480	< 0.51	28	I	I	< 0.85	79
	94.3635	62	33	83	180	I	< 1	I	I	< 0.77	1
	94.3636	270	40	98	220	I	25	I	I	< 0.6	16
	94.3637	72	14	32	81	< 0.8	13	I	I	I	25
	94.3639	78	42	93	180	< 1.1	< 2.5	I	I	< 1.6	5.6
	94.3644	34	24	56	120	I	< 1.6	I	I	< 1	4.1
	94.3645	120	24	49	140	< 0.47	17	I	I	< 0.67	46
	94.3647	130	29	72	200	< 0.46	21	I	I	< 0.66	66
	94.3648	85	24	52	120	< 1.2	< 2.6	I	I	< 1.7	8.8
	94.3649	29	7.8	18	50	< 1.4	< 3.1	I	I	< 2.1	13

HCB = hexachlorobenzene
R - Tissue sample was re-extracted
* The nondioxin-like PCB congeners (shown in this table) generally co-elute with other PCBs, therefore we report the PCB congener that is usually present in the greatest proportion.
I = The compound could not be quantitated due to analytical interference with a coeluting PCB congener.

Table 1D-p1: Quality assurance sample information in method blanks and standard control material analyzed for dioxin-like PCBs and other selected PCBs and pesticides as part of the Hylebos Waterway Damage Assessment Project.

Extract Number	Sample Matrix	Sample Wt. (g)	TriCDD Rec. (%)	Extract. Date
Method Blank				
HY001	Method Blank	0.89	113	05/23/95
HY042	Method Blank	1.00	98	06/15/95
HY055◊	Method Blank	1.07	72	06/22/95
HY055◊	Method Blank	1.07	72	06/22/95
HY057	Method Blank	1.21	121	07/06/95
HY083	Method Blank	1.41	119	07/11/95
HY097	Method Blank	1.57	120	07/20/95
HY111	Method Blank	0.95	107	07/25/95
HY125	Method Blank	0.93	112	08/01/95
HY127	Method Blank	0.83	122	08/04/95
HY151	Method Blank	0.89	125	08/08/95
HY160	Method Blank	0.25	103	10/18/95
NIST Whale Blubber				
HY014	NIST Whale Blubber	0.30	101	05/23/95
HY041	NIST Whale Blubber	0.34	84	06/15/95
HY056◊	NIST Whale Blubber	0.36	83	06/22/95
HY056◊	NIST Whale Blubber	0.36	82	06/22/95
HY069	NIST Whale Blubber	0.30	113	07/06/95
HY084	NIST Whale Blubber	0.32	116	07/11/95
HY098	NIST Whale Blubber	0.32	115	07/20/95
HY112	NIST Whale Blubber	0.29	103	07/25/95
HY126	NIST Whale Blubber	0.31	106	08/01/95
HY138	NIST Whale Blubber	0.30	118	08/04/95
HY152	NIST Whale Blubber	0.33	110	08/08/95
HY161	NIST Whale Blubber	0.36	93	10/18/95

TriCDD = 1,7,8-trichlorodibenzo-*p*-dioxin
◊ Sample was analyzed twice by HPLC/PDA.

Table 1E-p1: QA: Concentrations (ng/g, wet weight) of dioxin-like PCBs in method blanks and standard control material analyzed as part of the Hylebos Waterway Damage Assessment Project.

Field Number		77	105	118	126	156	157	169	170	180	189
Method Blank											
HY001	Method Blank	<0.45	<0.27	<0.29	<0.24	<0.28	<0.26	<0.53	4.8	<0.28	<0.26
HY042	Method Blank	<0.52	<0.3	<0.33	<0.44	<0.32	<0.29	<0.63	<0.32	<0.32	<0.31
HY055◊	Method Blank	<0.73	<0.41	<0.46	<0.59	<0.43	<0.37	<0.79	<0.43	1.9	<0.39
HY055◊	Method Blank	<0.44	<0.25	0.7	<0.35	<0.26	<0.22	<0.47	<0.26	<0.25	<0.23
HY057	Method Blank	<0.5	<0.28	<0.31	<0.42	<0.3	<0.27	<0.59	16	<0.32	<0.29
HY083	Method Blank	<0.4	<0.22	0.63	<0.33	<0.24	<0.22	<0.48	1.6	<0.25	<0.23
HY097	Method Blank	<0.3	<0.17	0.56	<0.26	<0.18	<0.16	<0.36	<0.19	<0.18	<0.18
HY111	Method Blank	<0.46	0.65	1.6	<0.37	<0.27	<0.25	<0.5	<0.28	<0.27	<0.26
HY125	Method Blank	<0.5	<0.28	0.73	<0.42	<0.3	<0.27	<0.59	<0.3	<0.3	<0.29
HY127	Method Blank	<0.6	<0.33	1.2	<0.48	<0.36	<0.32	<0.68	<0.37	<0.35	<0.35
HY151	Method Blank	<0.41	<0.23	<0.25	<0.34	<0.24	<0.23	<0.47	<0.25	<0.25	<0.24
HY160	Method Blank	<2	<1.1	<1.2	<1.6	<1.1	<1	<2.1	<1.2	<1.1	<1.1
	Average*		0.65	0.90					7.47	2	
	SD		0.00	0.37					6.17	0	
NIST Whale Blubber											
HY014	NIST Whale Blubber	<1.1	100	330	<1	32	8.9	<1.3	170	540	7.7
HY041	NIST Whale Blubber	<1.5	100	310	<1.3	34	7.4	<1.8	190	550	3.2
HY056◊	NIST Whale Blubber	<1	75	240	<0.8	29	9.7	<1.1	160	480	4.7
HY056◊	NIST Whale Blubber	<1.3	79	240	<1	28	8.1	<1.4	140	480	6.2
HY069	NIST Whale Blubber	<1.7	82	230	<1.5	23	7.2	<2	170	430	5.4
HY084	NIST Whale Blubber	<1.7	91	270	<1.4	28	11	<2.1	140	480	5.8
HY098	NIST Whale Blubber	<1.4	86	260	<1.2	29	10	<1.7	160	490	3
HY112	NIST Whale Blubber	<1.4	83	260	<1.1	28	8.7	<1.5	130	480	3.5
HY126	NIST Whale Blubber	<1.4	91	260	<1.2	26	6.8	<1.7	150	470	3.9
HY138	NIST Whale Blubber	<1.8	86	240	<1.4	27	5	<2	150	470	3
HY152	NIST Whale Blubber	<1.3	85	250	<1	25	7.4	<1.5	150	460	4.1
HY161	NIST Whale Blubber	<1.7	77	230	<1.4	28	6.6	<1.8	140	460	3.4
	Average*		86.58	260.00		28.08	8.07		154.17	483	4.49
	SD		7.76	29.72		2.78	1.60		16.05	32	1.43
NIST Whale Blubber Published concentrations (ng/g, wet wt)	**X**	—	86.9	267	—	28.2	—	—	226	483	—
	X + 0.5X		133.4	400.5		57.3			339	724.5	
	X - 0.5X		44.4	133.5		19.1			113	241.5	

X is the average concentration (ng/g, wet wt)
X + 0.5X is the upper control limit (+50% of published value)
X - 0.5X is the lower control limit (-50% of published value)

◊ Sample was analyzed twice by HPLC/PDA.

* When an analyte was detected in some, but not all of the method blanks, the average concentration is based on the concentration when detected and not included in the average calculation when not detected. When an analyte was not detected in any of the method blanks or control materials, the average and SD analyte values are blank.

Table 1F-p1: QA: Concentrations (ng/g, wet weight) of selected nondioxin-like PCBs and pesticides in method blanks and control material analyzed as part of the Hylebos Waterway Damage Assessment Project.

Field Number		Nondioxin-like Congeners				Selected Pesticides					
		101	128	138	153	opDDD	ppDDD	ppDDE	opDDT	ppDDT	HCB
Method Blank											
HY001	Method Blank	< 0.29	< 0.25	6.9	1.1	< 0.67	< 1.2	2.5	< 0.88	< 0.99	< 0.25
HY042	Method Blank	< 0.33	< 0.27	5.6	< 0.29	< 0.72	< 1.6	< 0.83	< 0.96	< 1.1	< 0.29
HY055◊	Method Blank	0.84	< 0.38	< 0.45	0.55	< 1	< 2	< 1.1	< 1.3	< 1.5	< 0.45
HY055◊	Method Blank	< 0.28	< 0.23	4.7	< 0.25	< 0.61	< 1.2	< 0.68	< 0.79	< 0.89	< 0.27
HY057	Method Blank	< 0.31	< 0.26	7.3	0.63	< 0.71	< 1.5	< 0.82	11	< 1.1	< 0.28
HY083	Method Blank	< 0.25	< 0.21	4.3	0.92	< 0.59	< 1.3	< 0.65	< 0.73	< 0.93	< 0.22
HY097	Method Blank	1.1	< 0.16	< 0.19	17	< 0.44	< 0.98	< 0.49	< 0.57	< 0.72	< 0.17
HY111	Method Blank	2.6	< 0.24	< 0.29	2.4	< 0.61	< 1.3	< 0.73	< 0.83	< 0.88	< 0.25
HY125	Method Blank	< 0.31	< 0.26	3.7	2.5	< 0.68	< 1.5	< 0.82	< 0.94	< 1.1	< 0.28
HY127	Method Blank	1.9	< 0.31	10	2.2	< 0.83	< 1.8	< 0.96	1.6	< 1.2	< 0.33
HY151	Method Blank	4	< 0.22	3.1	0.97	< 0.56	< 1.3	< 0.64	< 0.74	< 0.85	< 0.23
HY160	Method Blank	< 1.2	3.7	< 1.2	2.2	< 2.6	< 5.5	< 2.9	< 3.4	< 3.7	< 1.3
	Average*	2.1	3.7	5.7	2.6			2.5	6.3		
	SD	1.1	0.0	2.1	4.4			0.0	4.7		
NIST Whale Blubber											
HY014	NIST Whale Blubber	540	170	560	950	46	370	2900	520	1200	29
HY041	NIST Whale Blubber	520	160	570	960	45	320	2800	520	990	41
HY056◊	NIST Whale Blubber	440	110	470	840	33	310	2400	400	910	42
HY056◊	NIST Whale Blubber	430	120	480	840	34	340	2600	400	930	38
HY069	NIST Whale Blubber	390	120	440	740	36	270	1900	400	910	32
HY084	NIST Whale Blubber	440	150	500	840	46	320	2300	470	1000	37
HY098	NIST Whale Blubber	490	140	510	950	34	300	2700	410	920	36
HY112	NIST Whale Blubber	520	140	500	860	36	330	2600	410	1100	37
HY126	NIST Whale Blubber	460	140	490	840	37	310	2500	460	960	35
HY138	NIST Whale Blubber	420	120	490	820	39	300	2100	390	920	36
HY152	NIST Whale Blubber	390	130	470	780	40	310	2700	430	930	29
HY161	NIST Whale Blubber	450	120	470	810	34	330	3000	370	920	39
	Average*	457.5	135.0	495.8	852.5	38.3	317.5	2541.7	431.7	974.2	35.9
	SD	48.0	17.6	35.7	65.8	4.7	23.5	309.5	47.8	86.1	4.0
NIST Whale Blubber Published concentrations (ng/g, wet wt)	**X**	261**	99**	664	870	58.4	260	1750	222**	651	36.9
	X + 0.5X	391.5**	148.5**	996	1305	87.6	390	2625	333**	976.5	55.4
	X - 0.5X	130.5**	49.5**	332	435	29.2	130	875	111**	325.5	18.4

HCB = hexachlorobenzene

X is the average concentration (ng/g, wet wt)
X + 0.5X is the upper control limit (+50% of published value)
X - 0.5X is the lower control limit (-50% of published value)

◊ Sample was analyzed twice by HPLC/PDA.

* When an analyte was detected in some, but not all of the method blanks, the average concentration is based on the concentration when detected and not included in the average calculation when not detected. When an analyte was not detected in any of the method blanks or control materials, the average and SD analyte values are blank.

** Other PCBs coelute with these analytes when analyzed by HPLC/PDA, therefore these compounds were not included in the analytes selected for reference material performance criteria.

Table 1G-p1: QA: Sample information for English sole tissue analyzed in replicate for dioxin-like PCBs and other PCBs and pesticides as part of the Hylebos Waterway Damage Assessment Project.

Field Number	Extract Number	Sample Matrix	Site	Sampling Date	Sample Wt. (g)	TriCDD Rec. (%)	Extract. Date
94.3521	HY007	Liver	Colvos Passage	12/02/94	1.01	107	05/23/95
94.3521	HY013	Liver	Colvos Passage	12/02/94	1.15	70	05/23/95
94.3529R	HY158	Liver	Colvos Passage	12/02/94	0.28	97	10/18/95
94.3529R	HY159	Liver	Colvos Passage	12/02/94	0.28	99	10/18/95
94.3546	HY033	Liver	Hylebos	12/05/94	1.52	97	06/15/95
94.3546	HY034	Liver	Hylebos	12/05/94	1.44	98	06/15/95
94.3565	HY0440	Liver	Hylebos	12/05/94	1.20	77	06/22/95
94.3565	HY0440	Liver	Hylebos	12/05/94	1.20	74	06/22/95
94.3565	HY0450	Liver	Hylebos	12/05/94	1.25	67	06/22/95
94.3565	HY0450	Liver	Hylebos	12/05/94	1.25	70	06/22/95
94.3591	HY065	Liver	Hylebos	12/06/94	2.03	101	07/06/95
94.3591	HY070	Liver	Hylebos	12/06/94	2.06	101	07/06/95
94.3594A	HY071	Liver	Hylebos	01/04/95	2.05	121	07/11/95
94.3594A	HY079	Liver	Hylebos	01/04/95	1.97	119	07/11/95
94.3628	HY087	Liver	Hylebos	01/05/95	2.02	121	07/20/95
94.3628	HY088	Liver	Hylebos	01/05/95	2.02	118	07/20/95
94.3650	HY106	Liver	Colvos Passage	01/06/95	0.64	110	07/25/95
94.3650	HY107	Liver	Colvos Passage	01/06/95	1.34	110	07/25/95
94.3655	HY116	Liver	Colvos Passage	01/06/95	0.96	118	08/01/95
94.3655	HY124	Liver	Colvos Passage	01/06/95	0.97	113	08/01/95
94.3670	HY132	Liver	Colvos Passage	01/06/95	0.51	122	08/04/95
94.3670	HY140	Liver	Colvos Passage	01/06/95	0.54	122	08/04/95
94.3682	HY143	Liver	Colvos Passage	01/09/95	0.98	116	08/08/95
94.3682	HY153	Liver	Colvos Passage	01/09/95	1.09	121	08/08/95

TriCDD = 1,7,8-trichlorodibenzo-*p*-dioxin
R - Tissue sample was re-extracted
◊ Sample was analyzed twice by HPLC/PDA.

Table 1H-p1: QA: Concentrations (ng/g, wet weight) of dioxin-like PCBs* in English sole tissue analyzed in replicate as part of the Hylebos Waterway Damage Assessment Project.

Field Number	Extract Number		77	105	118	126	156	157	169	170	180	189
94.3521	HY007		< 0.37	12	48	< 0.2	1.9	< 0.21	< 0.45	16	17	< 0.22
94.3521	HY013		< 0.61	8.3	48	< 0.33	2.3	< 0.35	< 0.73	15	16	< 0.35
		Average†		10.15	48.00		2.10			15.50	16.50	
		SD		1.85	0.00		0.20			0.50	0.50	
		RSD	?	18.2%	0.0%	?	9.5%	?	?	3.2%	3.0%	?
94.3529R	HY158		< 2	14	57	< 1.6	< 1.1	< 1	< 2.1	12	32	< 1.1
94.3529R	HY159		< 2.1	17	56	< 1.6	< 1.2	< 1.1	< 2.2	14	25	< 1.1
		Average†		15.50	56.50					13.00	28.50	
		SD		1.50	0.50					1.00	3.50	
		RSD	?	9.7%	0.9%	?	?	?	?	7.7%	12.3%	?
94.3546	HY033		< 0.27	77	190	< 0.23	21	3.9	< 0.33	100	130	< 0.16
94.3546	HY034		< 0.31	81	200	< 0.27	23	4	< 0.38	110	140	< 0.19
		Average†		79.00	195.00		22.00	3.95		105.00	135.00	
		SD		2.00	5.00		1.00	0.05		5.00	5.00	
		RSD	?	2.5%	2.6%	?	4.5%	1.3%	?	4.8%	3.7%	?
94.3565	HY044◊		< 0.51	99	260	< 0.41	30	6.5	< 0.55	210	270	< 0.27
94.3565	HY044◊		< 0.49	120	320	< 0.39	44	8	< 0.53	260	320	< 0.26
94.3565	HY045◊		< 0.44	140	370	< 0.35	45	4.2	< 0.48	340	330	< 0.24
94.3565	HY045◊		< 0.32	160	360	< 0.26	14	4.2	< 0.35	300	330	< 0.17
		Average†		129.75	327.50		33.25	5.73		277.50	312.50	
		SD		22.70	43.23		12.60	1.61		48.15	24.87	
		RSD	?	17.5%	13.2%	?	37.9%	28.2%	?	17.4%	8.0%	?
94.3591	HY065		< 0.33	74	190	< 0.28	17	3.5	< 0.4	99	150	< 0.19
94.3591	HY070		< 0.32	74	190	< 0.27	18	3.6	< 0.38	96	150	< 0.19
		Average†		74.00	190.00		17.50	3.55		97.50	150.00	
		SD		0.00	0.00		0.50	0.05		1.50	0.00	
		RSD	?	0.0%	0.0%	?	2.9%	1.4%	?	1.5%	0.0%	?
94.3594A	HY071		< 0.26	41	160	< 0.22	14	2.4	< 0.32	61	100	< 0.16
94.3594A	HY079		< 0.25	46	160	< 0.21	15	3	< 0.3	63	97	< 0.15
		Average†		43.50	160.00		14.50	2.70		62.00	98.50	
		SD		2.50	0.00		0.50	0.30		1.00	1.50	
		RSD	?	5.7%	0.0%	?	3.4%	11.1%	?	1.6%	1.5%	?

R - Tissue sample was re-extracted
◊ Sample was analyzed twice by HPLC/PDA.
* The dioxin-like PCB congeners (shown in this table) have minimal interferences from co-eluting compounds which generally contribute < 10% to the total concentration.

† When an analyte was detected in some, but not all of the replicates, the average concentration is based on the concentration when detected and not included in the average calculation when not detected. When an analyte was not detected in any of the replicates, the average and SD analyte values are blank and a "?" is reported for the RSD.

Table 1H-p2: QA: Concentrations (ng/g, wet weight) of dioxin-like PCBs* in English sole tissue analyzed in replicate as part of the Hylebos Waterway Damage Assessment Project.

Field Number	Extract Number		77	105	118	126	156	157	169	170	180	189
94.3628	HY087		< 0.23	33	100	< 0.2	10	2.2	< 0.27	50	86	< 0.13
94.3628	HY088		< 0.28	29	110	< 0.24	10	2.5	< 0.33	50	77	< 0.16
		Average†		31.00	105.00		10.00	2.35		50.00	81.50	
		SD		2.00	5.00		0.00	0.15		0.00	4.50	
		RSD	?	6.5%	4.8%	?	0.0%	6.4%	?	0.0%	5.5%	?
94.3650	HY106		< 0.69	3.6	16	< 0.56	< 0.41	< 0.38	< 0.76	3.8	9.9	< 0.4
94.3650	HY107		< 0.37	4.4	17	< 0.3	< 0.22	< 0.2	< 0.41	4	7.2	< 0.22
		Average†		4.00	16.50					3.90	8.55	
		SD		0.40	0.50					0.10	1.35	
		RSD	?	10.0%	3.0%	?	?	?	?	2.6%	15.8%	?
94.3655	HY116		< 0.39	4.1	14	< 0.33	< 0.24	< 0.21	< 0.46	3.2	5.2	< 0.23
94.3655	HY124		< 0.45	3.9	15	< 0.37	< 0.27	< 0.25	< 0.53	3	4.9	< 0.26
		Average†		4.00	14.50					3.10	5.05	
		SD		0.10	0.50					0.10	0.15	
		RSD	?	2.5%	3.4%	?	?	?	?	3.2%	3.0%	?
94.3670	HY132		< 1	2	9.8	< 0.8	< 0.6	< 0.54	< 1.1	2.3	13	< 0.59
94.3670	HY140		< 0.94	1.7	8.1	< 0.75	< 0.56	< 0.51	< 1.1	1.8	12	< 0.55
		Average†		1.85	8.95					2.05	12.50	
		SD		0.15	0.85					0.25	0.50	
		RSD	?	8.1%	9.5%	?	?	?	?	12.2%	4.0%	?
94.3682	HY143		< 0.44	1.5	5.4	< 0.36	< 0.26	< 0.24	< 0.5	1	1.7	< 0.26
94.3682	HY153		< 0.31	1.1	4.8	< 0.25	< 0.18	< 0.17	< 0.35	1	2.1	< 0.18
		Average†		1.30	5.10					1.00	1.90	
		SD		0.20	0.30					0.00	0.20	
		RSD	?	15.4%	5.9%	?	?	?	?	0.0%	10.5%	?

R - Tissue sample was re-extracted
◊ Sample was analyzed twice by HPLC/PDA.
* The dioxin-like PCB congeners (shown in this table) have minimal interferences from co-eluting compounds which generally contribute < 10% to the total concentration.

† When an analyte was detected in some, but not all of the replicates, the average concentration is based on the concentration when detected and not included in the average calculation when not detected. When an analyte was not detected in any of the replicates, the average and SD analyte values are blank and a "?" is reported for the RSD.

Table 1l-p1: QA: Concentrations (ng/g, wet weight) of selected nondioxin-like PCBs* and pesticides in English sole tissue analyzed in replicate as part of the Hylebos Waterway Damage Assessment Project.

Field Number	Extract Number		Nondioxin-like CB Congeners				Selected Pesticides					
			101	128	138	153	opDDD	ppDDD	ppDDE	opDDT	ppDDT	HCB
94.3521	HY007		21	12	28	55	< 0.56	< 0.98	I	I	< 0.83	2.2
94.3521	HY013		25	12	24	54	< 0.92	< 1.6	I	I	< 1.4	1.6
		Average†	23.00	12.00	26.00	54.50			0.00	0.00		1.90
		SD	2.00	0.00	2.00	0.50			0.00	0.00		0.30
		RSD	8.7%	0.0%	7.7%	0.9%	?	?	?	?	?	15.8%
94.3529R	HY158		31	18	36	65	< 2.6	< 5.5	I	< 3.4	< 3.6	< 1.2
94.3529R	HY159		34	15	36	67	< 2.7	< 5.7	I	< 3.6	< 3.8	< 1.3
		Average†	32.50	16.50	36.00	66.00			0.00			
		SD	1.50	1.50	0.00	1.00			0.00			
		RSD	4.6%	9.1%	0.0%	1.5%	?	?	?	?	?	?
94.3546	HY033		340	77	150	500	< 0.38	41	I	I	< 0.56	110
94.3546	HY034		370	61	170	540	< 0.44	42	I	I	< 0.65	110
		Average†	355.00	69.00	160.00	520.00		41.50	0.00	0.00		110.00
		SD	15.00	8.00	10.00	20.00		0.50	0.00	0.00		0.00
		RSD	4.2%	11.6%	6.3%	3.8%	?	1.2%	?	?	?	0.0%
94.3565	HY044◊		380	100	230	770	43	42	I	I	< 1	130
94.3565	HY044◊		470	130	280	960	54	49	I	I	< 1	160
94.3565	HY045◊		480	120	300	1300	110	90	I	I	< 0.9	160
94.3565	HY045◊		460	120	280	1100	69	63	I	I	< 0.66	160
		Average†	447.50	117.50	272.50	1032.50	69.00	61.00	0.00	0.00		152.50
		SD	39.61	10.90	25.86	193.83	25.41	18.37	0.00	0.00		12.99
		RSD	8.9%	9.3%	9.5%	18.8%	36.8%	30.1%	?	?	?	8.5%
94.3591	HY065		250	71	160	440	< 0.47	36	I	I	< 0.7	120
94.3591	HY070		270	71	160	440	< 0.46	34	I	I	< 0.68	120
		Average†	260.00	71.00	160.00	440.00		35.00	0.00	0.00		120.00
		SD	10.00	0.00	0.00	0.00		1.00	0.00	0.00		0.00
		RSD	3.8%	0.0%	0.0%	0.0%	?	2.9%	?	?	?	0.0%
94.3594A	HY071		220	45	120	320	< 0.39	26	I	I	< 0.62	55
94.3594A	HY079		220	42	110	300	< 0.37	26	I	I	< 0.59	52
		Average†	220.00	43.50	115.00	310.00		26.00	0.00	0.00		53.50
		SD	0.00	1.50	5.00	10.00		0.00	0.00	0.00		1.50
		RSD	0.0%	3.4%	4.3%	3.2%	?	0.0%	?	?	?	2.8%

HCB = hexachlorobenzene
R - Tissue sample was re-extracted
◊ Sample was analyzed twice by HPLC/PDA.
* The nondioxin-like PCB congeners (shown in this table) generally co-elute with other PCBs, therefore we report the PCB congener that is usually present in the greatest proportion.
I = The DDT could not be quantitated due to analytical interference with a coeluting PCB congener.

† When an analyte was detected in some, but not all of the replicates, the average concentration is based on the concentration when detected and not included in the average calculation when not detected. When an analyte was not detected in any of the replicates, the average and SD analyte values are blank and a "?" is reported for the RSD.

Table 1l-p2: QA: Concentrations (ng/g, wet weight) of selected nondioxin-like PCBs* and pesticides in English sole tissue analyzed in replicate as part of the Hylebos Waterway Damage Assessment Project.

Field Number	Extract Number		Nondioxin-like CB Congeners				Selected Pesticides					
			101	128	138	153	opDDD	ppDDD	ppDDE	opDDT	ppDDT	HCB
94.3628	HY087		130	22	82	240	< 0.33	12	I	I	< 0.55	49
94.3628	HY088		130	35	89	250	< 0.41	12	I	I	< 0.67	52
		Average†	130.00	28.50	85.50	245.00		12.00	0.00	0.00		50.50
		SD	0.00	6.50	3.50	5.00		0.00	0.00	0.00		1.50
		RSD	0.0%	22.8%	4.1%	2.0%	?	0.0%	?	?	?	3.0%
94.3650	HY106		12	5.2	10	22	< 0.92	< 2	I	< 1.3	< 1.3	0.95
94.3650	HY107		9	4.4	10	21	< 0.5	< 1.1	I	< 0.68	< 0.71	1.6
		Average†	10.50	4.80	10.00	21.50			0.00			1.28
		SD	1.50	0.40	0.00	0.50			0.00			0.33
		RSD	14.3%	8.3%	0.0%	2.3%	?	?	?	?	?	25.5%
94.3655	HY116		9.2	3.7	7.9	16	< 0.53	< 1.2	I	I	< 0.86	1
94.3655	HY124		8.9	4	8.7	19	< 0.61	< 1.4	I	I	< 0.98	1.4
		Average†	9.05	3.85	8.30	17.50			0.00	0.00		1.20
		SD	0.15	0.15	0.40	1.50			0.00	0.00		0.20
		RSD	1.7%	3.9%	4.8%	8.6%	?	?	?	?	?	16.7%
94.3670	HY132		6.2	7	6.6	23	< 1.4	< 3.1	I	I	< 2	< 0.55
94.3670	HY140		6.6	3.8	6.4	20	< 1.3	< 2.9	I	I	< 1.9	< 0.51
		Average†	6.40	5.40	6.50	21.50			0.00	0.00		
		SD	0.20	1.60	0.10	1.50			0.00	0.00		
		RSD	3.1%	29.6%	1.5%	7.0%	?	?	?	?	?	?
94.3682	HY143		3.1	1.3	3.3	5.8	< 0.6	< 1.4	I	I	< 0.91	< 0.24
94.3682	HY153		4.2	1.4	3.4	5.6	< 0.42	< 0.97	I	I	< 0.63	< 0.17
		Average†	3.65	1.35	3.35	5.70			0.00	0.00		
		SD	0.55	0.05	0.05	0.10			0.00	0.00		
		RSD	15.1%	3.7%	1.5%	1.8%	?	?	?	?	?	?

HCB = hexachlorobenzene
R - Tissue sample was re-extracted
◊ Sample was analyzed twice by HPLC/PDA.
* The nondioxin-like PCB congeners (shown in this table) generally co-elute with other PCBs, therefore we report the PCB congener that is usually present in the greatest proportion.
I = The DDT could not be quantitated due to analytical interference with a coeluting PCB congener.

† When an analyte was detected in some, but not all of the replicates, the average concentration is based on the concentration when detected and not included in the average calculation when not detected. When an analyte was not detected in any of the replicates, the average and SD analyte values are blank and a "?" is reported for the RSD.

Table 1J-p1: Continuing calibration verification data* for dioxin-like PCBs in standards run before, during and after the samples in English sole tissue sets analyzed as part of the Hylebos Waterway Damage Assessment Project.

Standard Name	77	105	118	126	156	157	169	170	180	189
09/06/95										
PCB/DDT Calib 09/06/95A	0.32184	0.31157	0.31947	0.32514	0.32026	0.31378	0.31769	0.31596	0.32440	0.32510
PCB/DDT Calib 09/06/95B	0.32752	0.32485	0.31910	0.30763	0.32468	0.32271	0.32702	0.32323	0.32461	0.32180
PCB/DDT Calib 09/06/95C	0.32032	0.32812	0.32623	0.33227	0.32285	0.32937	0.32034	0.32933	0.32693	0.32507
PCB/DDT Calib 09/06/95D	0.31832	0.32347	0.32320	0.32790	0.32021	0.32214	0.32294	0.31948	0.31206	0.31604
Average	0.32200	0.32200	0.32200	0.32324	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200
SD	0.003423	0.006255	0.002922	0.009361	0.001880	0.005532	0.003443	0.004952	0.005824	0.003694
RSD	1.1%	1.9%	0.9%	2.9%	0.6%	1.7%	1.1%	1.5%	1.9%	1.2%
09/11/95										
PCB/DDT Calib 09/11/95A	0.31954	0.31844	0.31776	0.32314	0.32092	0.32047	0.33864	0.31706	0.32114	0.31873
PCB/DDT Calib 09/11/95B	0.32703	0.32434	0.32682	0.32079	0.32290	0.32343	0.30931	0.32772	0.31822	0.32459
PCB/DDT Calib 09/11/95C	0.32013	0.32059	0.32379	0.32149	0.31916	0.31492	0.32047	0.32576	0.32563	0.32057
PCB/DDT Calib 09/11/95D	0.32129	0.32463	0.31963	0.32259	0.32501	0.32918	0.31958	0.31746	0.32302	0.32411
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200
SD	0.002973	0.002601	0.003537	0.000918	0.002185	0.005149	0.010561	0.004792	0.002704	0.002444
RSD	0.9%	0.8%	1.1%	0.3%	0.7%	1.6%	3.3%	1.5%	0.8%	0.8%
09/12/95										
PCB/DDT Calib 09/12/95A	0.31947	0.31739	0.32105	0.32730	0.32267	0.32216	0.32318	0.31582	0.32254	0.32041
PCB/DDT Calib 09/12/95B	0.32691	0.32362	0.32868	0.31932	0.32573	0.32666	0.32106	0.33127	0.31649	0.32947
PCB/DDT Calib 09/12/95C	0.32290	0.32266	0.31542	0.32573	0.31819	0.31849	0.31535	0.32014	0.31747	0.31855
PCB/DDT Calib 09/12/95D	0.31873	0.32434	0.32285	0.31565	0.32141	0.32069	0.32841	0.32077	0.33150	0.31958
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200
SD	0.003241	0.002729	0.004731	0.004730	0.002703	0.002991	0.004679	0.005681	0.005946	0.004361
RSD	1.0%	0.8%	1.5%	1.5%	0.8%	0.9%	1.4%	1.8%	1.8%	1.4%
09/21/95										
PCB/DDT Calib 09/21/95A	0.32456	0.32645	0.32969	0.32000	0.32041	0.31829	0.31877	0.32605	0.32029	0.32122
PCB/DDT Calib 09/21/95B	0.32508	0.32692	0.31263	0.31508	0.32430	0.33407	0.31673	0.31178	0.31975	0.32561
PCB/DDT Calib 09/21/95C	0.31882	0.31443	0.32155	0.32849	0.32007	0.31603	0.33007	0.30543	0.32422	0.31949
PCB/DDT Calib 09/21/95D	0.31954	0.32021	0.32413	0.32442	0.32322	0.31961	0.32243	0.33214	0.32374	0.32168
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.31885	0.32200	0.32200
SD	0.002837	0.005112	0.006158	0.004997	0.001805	0.007085	0.005087	0.010707	0.001996	0.002238
RSD	0.9%	1.6%	1.9%	1.5%	0.6%	2.2%	1.6%	3.2%	0.6%	0.7%

* Data are reported as analyte concentrations using a single point calibration analyzed with each day's sample analyses. This continuing calibration data format is the result of the Millennium PDA Software.

Table 1J-p2: Continuing calibration verification data* for dioxin-like PCBs in standards run before, during and after the samples in English sole tissue sets analyzed as part of the Hylebos Waterway Damage Assessment Project.

Standard Name	77	105	118	126	156	157	169	170	180	189
10/02/95										
PCB/DDT Calib 10/02/95A	0.31834	0.30779	0.30671	0.31207	0.31395	0.31254	0.30998	0.30978	0.31436	0.32024
PCB/DDT Calib 10/02/95B	0.32695	0.33192	0.33374	0.32264	0.32799	0.32689	0.32526	0.33146	0.32173	0.32547
PCB/DDT Calib 10/02/95C	0.31455	0.31941	0.31730	0.32138	0.31717	0.31819	0.32229	0.31573	0.32263	0.31415
PCB/DDT Calib 10/02/95D	0.32816	0.32888	0.33026	0.33191	0.32889	0.33037	0.33047	0.33103	0.32928	0.32814
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200
SD	0.005730	0.009412	0.010746	0.007029	0.006548	0.007035	0.007532	0.009483	0.005288	0.005349
RSD	1.7%	2.9%	3.3%	2.1%	2.0%	2.1%	2.3%	2.9%	1.6%	1.6%
10/05/95										
PCB/DDT Calib 10/05/95A	0.29918	0.30965	0.30563	0.31166	0.31187	0.31497	0.31828	0.31327	0.31076	0.32410
PCB/DDT Calib 10/05/95B	0.33097	0.32095	0.32985	0.32607	0.32595	0.32171	0.32347	0.32439	0.32811	0.31861
PCB/DDT Calib 10/05/95C	0.33584	0.33541	0.33053	0.32826	0.32819	0.32932	0.32425	0.32834	0.32713	0.32329
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200
SD	0.016256	0.010543	0.011581	0.007364	0.007223	0.005862	0.002650	0.006380	0.007958	0.002420
RSD	4.8%	3.1%	3.5%	2.2%	2.2%	1.8%	0.8%	1.9%	2.4%	0.7%
10/16/95										
PCB/DDT Calib 10/16/95A	0.31935	0.32145	0.33388	0.32362	0.32564	0.32442	0.32305	0.33210	0.33167	0.33115
PCB/DDT Calib 10/16/95B	0.32401	0.31275	0.31911	0.32098	0.31865	0.32392	0.31395	0.31871	0.32142	0.31918
PCB/DDT Calib 10/16/95C	0.33459	0.33039	0.32184	0.32194	0.32771	0.32844	0.32642	0.31878	0.32223	0.32436
PCB/DDT Calib 10/16/95D	0.31005	0.32341	0.31316	0.32146	0.31600	0.31122	0.32458	0.31842	0.31267	0.31331
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200
SD	0.006837	0.006290	0.007544	0.000995	0.004824	0.006466	0.004798	0.005831	0.006726	0.006572
RSD	2.9%	1.9%	2.4%	0.3%	1.5%	2.1%	1.5%	1.8%	2.2%	2.1%
11/01/95										
PCB/DDT Calib 11/01/95A	0.32745	0.32078	0.32363	0.31921	0.32606	0.32835	0.32445	0.32370	0.32391	0.33525
PCB/DDT Calib 11/01/95B	0.31123	0.31703	0.31491	0.31780	0.31524	0.31533	0.31110	0.31084	0.31128	0.30693
PCB/DDT Calib 11/01/95C	0.32732	0.32819	0.32746	0.32900	0.32470	0.32233	0.33045	0.33146	0.33081	0.32382
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200
SD	0.007616	0.004637	0.005252	0.004981	0.004812	0.005320	0.008087	0.008503	0.008087	0.011633
RSD	2.3%	1.4%	1.6%	1.5%	1.5%	1.7%	2.4%	2.6%	2.4%	3.6%

* Data are reported as analyte concentrations using a single point calibration analyzed with each day's sample analyses. This continuing calibration data format is the result of the Millennium PDA Software.

Table 1K-p1: Continuing calibration verification data* for selected nondioxin-like PCBs and pesticides in standards run before, during and after the samples in English sole tissue sets analyzed as part of the Hylebos Waterway Damage Assessment Project.

Standard Name	Nondioxin-like CB Congeners				Pesticides					
	101	128	138	153	opDDD	ppDDD	ppDDE	opDDT	ppDDT	HCB
09/06/95										
PCB/DDT Calib 09/06/95A	0.31072	0.31287	0.31442	0.31606	0.30738	0.29297	0.3177	0.30888	0.33245	0.31648
PCB/DDT Calib 09/06/95B	0.32546	0.32782	0.32321	0.32588	0.33181	0.33424	0.32395	0.33617	0.31119	0.32368
PCB/DDT Calib 09/06/95C	0.32419	0.32484	0.32581	0.32300	0.32570	0.35087	0.32359	0.32101	0.31325	0.32442
PCB/DDT Calib 09/06/95D	0.32763	0.32247	0.32456	0.32306	0.32311	0.31458	0.32276	0.32194	0.33110	0.32342
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32317	0.32200	0.32200	0.32200	0.32200
SD	0.006628	0.005602	0.004472	0.003622	0.009013	0.021654	0.002520	0.009668	0.009816	0.003208
RSD	2.0%	1.7%	1.4%	1.1%	2.8%	3.0%	0.8%	3.0%	3.0%	1.0%
09/11/95										
PCB/DDT Calib 09/11/95A	0.31685	0.31885	0.31997	0.32235	0.31685	0.32139	0.32285	0.32821	0.32011	0.31895
PCB/DDT Calib 09/11/95B	0.32148	0.32832	0.32546	0.32390	0.32693	0.34005	0.32761	0.32059	0.32793	0.32048
PCB/DDT Calib 09/11/95C	0.32639	0.32293	0.32145	0.32645	0.32873	0.30920	0.32084	0.32053	0.31558	0.32583
PCB/DDT Calib 09/11/95D	0.32328	0.31790	0.32112	0.31530	0.31549	0.31736	0.31670	0.31867	0.32438	0.32273
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200
SD	0.003453	0.004109	0.002072	0.004136	0.005884	0.011309	0.003925	0.003667	0.004626	0.002589
RSD	1.1%	1.3%	0.6%	1.3%	1.9%	1.4%	1.2%	1.2%	1.4%	0.8%
09/12/95										
PCB/DDT Calib 09/12/95A	0.31701	0.31925	0.32014	0.32004	0.31865	0.32627	0.32541	0.32585	0.33046	0.32271
PCB/DDT Calib 09/12/95B	0.32670	0.32975	0.32608	0.32513	0.32727	0.32814	0.32124	0.31981	0.33055	0.32529
PCB/DDT Calib 09/12/95C	0.32261	0.32022	0.31831	0.31997	0.31106	0.31493	0.32067	0.32123	0.29412	0.31880
PCB/DDT Calib 09/12/95D	0.32168	0.31879	0.32347	0.32285	0.33101	0.31866	0.32068	0.32111	0.33287	0.32119
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200
SD	0.003445	0.004503	0.002995	0.002150	0.007744	0.005410	0.001982	0.002291	0.016125	0.002357
RSD	1.1%	1.4%	0.9%	0.7%	2.3%	4.8%	0.6%	0.7%	4.8%	0.7%
09/21/95										
PCB/DDT Calib 09/21/95A	0.32626	0.33424	0.32678	0.32618	0.32149	0.33083	0.33578	0.34025	0.32606	0.32732
PCB/DDT Calib 09/21/95B	0.31843	0.31987	0.32002	0.31910	0.31098	0.30932	0.31942	0.31210	0.29539	0.31360
PCB/DDT Calib 09/21/95C	0.32372	0.31524	0.31477	0.32488	0.33090	0.33945	0.31609	0.31583	0.40544	0.32331
PCB/DDT Calib 09/21/95D	0.31959	0.31865	0.32643	0.31784	0.32463	0.30640	0.31670	0.31982	0.30426	0.32377
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.33329	0.32200
SD	0.003149	0.007268	0.004967	0.003588	0.007208	0.013493	0.008055	0.010885	0.043336	0.005092
RSD	1.0%	2.3%	1.5%	1.1%	2.2%	14.2%	2.5%	3.4%	14.2%	1.6%

* Data are reported as analyte concentrations using a single point calibration analyzed with each day's sample analyses. This continuing calibration data format is the result of the Millennium PDA Software.

Table 1K-p2: Continuing calibration verification data* for selected nondioxin-like PCBs and pesticides in standards run before, during and after the samples in English sole tissue sets analyzed as part of the Hylebos Waterway Damage Assessment Project.

Standard Name	Nondioxin-like CB Congeners				Pesticides					
	101	128	138	153	opDDD	ppDDD	ppDDE	opDDT	ppDDT	HCB
10/02/95										
PCB/DDT Calib 10/02/95A	0.31992	0.30716	0.31311	0.31006	0.30847	0.29296	0.31774	0.31438	0.31175	0.31462
PCB/DDT Calib 10/02/95B	0.32666	0.33126	0.33084	0.32918	0.34135	0.32894	0.32370	0.32194	0.32068	0.32720
PCB/DDT Calib 10/02/95C	0.31511	0.32117	0.31845	0.32026	0.31914	0.31928	0.31764	0.32335	0.33187	0.31923
PCB/DDT Calib 10/02/95D	0.32632	0.32840	0.32560	0.32850	0.31904	0.34682	0.32892	0.32834	0.32370	0.32695
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200
SD	0.004800	0.009322	0.006759	0.007736	0.011984	0.019461	0.004689	0.005002	0.007196	0.005331
RSD	1.5%	2.8%	2.1%	2.4%	3.8%	2.2%	1.4%	1.5%	2.2%	1.6%
10/05/95										
PCB/DDT Calib 10/05/95A	0.30100	0.31100	0.30799	0.30423	0.31705	0.31553	0.31446	0.30297	0.30634	0.27380
PCB/DDT Calib 10/05/95B	0.33176	0.32209	0.32686	0.32925	0.32220	0.31928	0.32809	0.33251	0.33642	0.34648
PCB/DDT Calib 10/05/95C	0.33324	0.33291	0.33115	0.33252	0.32674	0.33120	0.32344	0.33052	0.32324	0.34572
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200
SD	0.014862	0.008945	0.010060	0.012636	0.003959	0.006681	0.005648	0.013481	0.012311	0.034084
RSD	4.5%	2.7%	3.0%	3.8%	1.2%	3.8%	1.7%	4.1%	3.8%	9.9%
10/16/95										
PCB/DDT Calib 10/16/95A	0.33209	0.32275	0.32572	0.33055	0.33925	0.33669	0.33378	0.33512	0.33017	0.32156
PCB/DDT Calib 10/16/95B	0.31145	0.31927	0.31587	0.31341	0.30755	0.30910	0.31565	0.31934	0.32087	0.32502
PCB/DDT Calib 10/16/95C	0.32818	0.33048	0.32825	0.33162	0.32670	0.31727	0.32632	0.31925	0.31987	0.32474
PCB/DDT Calib 10/16/95D	0.31629	0.31549	0.31817	0.31241	0.31450	0.32494	0.31225	0.31429	0.31709	0.31667
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200
SD	0.008425	0.005530	0.005127	0.009102	0.012090	0.010164	0.008556	0.007846	0.004916	0.003363
RSD	2.7%	1.8%	1.6%	2.9%	3.8%	1.6%	2.7%	2.5%	1.6%	1.1%
11/01/95										
PCB/DDT Calib 11/01/95A	0.32530	0.32486	0.32124	0.31968	0.32212	0.33013	0.32687	0.33191	0.31426	0.32299
PCB/DDT Calib 11/01/95B	0.32099	0.31267	0.31787	0.31948	0.30618	0.30566	0.31807	0.31851	0.33634	0.31426
PCB/DDT Calib 11/01/95C	0.31971	0.32827	0.32689	0.32885	0.33570	0.33021	0.32107	0.31558	0.31540	0.32875
Average	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200	0.32200
SD	0.002391	0.006604	0.003721	0.003428	0.011235	0.011554	0.003653	0.007109	0.010151	0.005957
RSD	0.7%	2.0%	1.1%	1.0%	3.3%	3.2%	1.1%	2.3%	3.2%	1.8%

* Data are reported as analyte concentrations using a single point calibration analyzed with each day's sample analyses. This continuing calibration data format is the result of the Millennium PDA Software.