Supplementary Material (ESI) for Journal of Environmental Monitoring

Supplementary Information Table S1. Details of the soil treatments and basic parameters for the HCB experiment (* = removed from the chamber at t=63 days)

Phase I (sampled days on 0, 14, 28 and 63)					**Phase II** (sampled on days 63, 77 and 110)				
Soil Code	**Starting % SOM**	**Starting %WC**	**Starting soil mass (g)**	**Mixed (m) Unmixed (u)**	**Soil Code**	**Starting % SOM**	**Starting %WC**	**Starting soil mass (g)**	**Mixed (m) Unmixed (u)**
PI 1*	0.01	0.02	590	m					
PI 2*	0.01	0.02	750	m					
PI 3*	4.0	13	460	m					
PI 4	4.0	13	460	m	**PI/II 4**	3.7	0.5	230	m
PI 5*	26	33	240	m					
PI 6*	26	33	250	m					
PI 7*	65	53	180	m					
PI 8	65	53	180	m	**PI/II 8**	64	7.5	54	m
					PII 9	0.01	0.09	400	m
					PII 10	0.01	0.09	400	m
					PII 11	4.0	13	390	m
					PII 12	4.0	13	400	m
					PII 13	65	52	140	m
					PII 14	65	52	140	m
					PII 15	4.0	13	410	u
					PII 16	65	52	150	u

%SOM = %soil organic matter; %WC = % of soil content which was water at t = 0.

Supplementary Information Table S2: Phase I data from a study with HCB and PCBs conducted over 105 days.

							LO^u	LO^m	HO^u	HO^m
							OM%	4.7	4.7	22	22
			ng/g DW				ng/g OM			
Compound	**Days**	**Replicate**	**LO^u**	**LO^m**	**HO^u**	**HO^m**	**LO^u**	**LO^m**	**HO^u**	**HO^m**
	0	1	0.2	0.2	0.7	0.7	4.5	4.5	3.1	3.1
		2	0.2	0.2	0.6	0.6	4.6	4.6	3	3
	27	1	14	16	120	160	300	330	540	720
		2	12		120	160	260	na	560	750
HCB	57	1	64	63	130	236	1400	1400	630	1100
		2	51	80	na	na	1100	1700		
	105	1	120	160	330	580	2600	3600	1500	2800
		2	120	170	350	570	2600	3800	1700	2700
	0	1	0.1	0.1	0.6	0.6	1.2	1.2	2.7	2.7
		2	0.0	0.0	0.6	0.6	0.9	0.9	3	3
	27	1	2	3	10	15	46	63	44	71
		2	2	3	78	13	42	64	36	62
PCB 28	57	1	22	22	20	36	470	480	93	170
		2	16	20	na	na	340	450		
	105	1	45	70	59	490	990	1600	280	2400
		2	44	63	51	na	980	1400	240	na
	0	1	0.01	0.01	0.03	0.03	0.2	0.2	0.1	0.1
		2	0.01	0.01	0.05	0.05	0.2	0.2	0.2	0.2
	27	1	3.1	4.3	18	26	67	90	85	120
		2	3.6	4.1	18	25	76	90	82	120
PCB52	57	1	21	29	49	67	460	640	230	320
		2	na	29	na	na		650		
	105	1	34	59	90	220	750	1300	430	1100
		2	36	66	82	240	800	1500	390	1100
	0	1	0.1	0.1	0.1	0.1	1.4	1.4	0.7	0.7
		2	0.1	0.1	0.2	0.2	1.6	1.6	0.8	0.8
	27	1	0.7	1.1	3.7	2.3	14	24	17	11
		2	1.2	1.1	4.0	1.5	25	23	19	7.2
PCB 153	57	1	3.4	4.1	7.3	8.0	73	90	35	38
		2	na	na	na	na	na	na	na	na
	105	1	7.7	8.1	20	25	170	180	93	120
		2	6.5	10	19	28	140	230	88	140
	0	1	0.03	0.03	0.03	0.03	0.6	0.6	0.1	0.1
		2	0.03	0.03	0.03	0.03	0.7	0.7	0.2	0.2
	27	1	0.4	1.1	0.8	0.7	8.5	24	3.9	3.3
		2	0.4	1.1	0.8	0.9	9.4	23	3.6	4.1
PCB 180	57	1	1.0	0.8	1.3	1.4	22	17	6.0	6.5
		2	na	na	na	na	na	na	na	na
	105	1	1.0	1.4	1.5	3.3	22	32	7.3	16
		2	0.9	1.3	1.6	2.8	20	30	7.4	13

R: Replicates, u: unmixed, m: mixed, LO: Low organic matter soil, HO: High Organic matter soil

Supplementary Information Table S3: Independent Samples t-test results for selected compounds

				ng/g DW basis				ng/g OM basis			
	Day	CI	t-test	LO(u) vs LO(m)		HO(u) vs HO(m)		LO(u) vs LO(m)		HO(u) vs HO(m)	
HCB	0	95%	Lower	na		na		-0.3	0.3	-0.3	0.3
			Upper	na		na		-0.3	0.3	-0.3	0.3
	27	95%	Lower	-25	19	-25	19	-490	390	-262	-107
			Upper							-274	-95
	57	95%	Lower	-60	32	-60	32	-1212	617	na	Na
			Upper	-63	35	-63	35	-1212	617		
	105	95%	Lower	-66	-23	-66	-23	-1530	-669	-1631	-668
			Upper	-108	18	-108	18	-2370	170	-1841	-458
PCB 52	0	95%	Lower	na	na	-.06	0.06	na	na	-0.3	0.3
			Upper			-0.06	0.06			-0.3	0.3
	27	95%	Lower	-2	0.3	-9	-5	-37	0.86	-42	-30
			Upper	-2.1	1.1	-13	-1	-75	38	-55	-17
	57	95%	Lower	-8	-8	na	na	-295	-74	na	na
			Upper								
	105	95%	Lower	-43	-11	-190	-97	-1068	-181	-776	-603
			Upper	-60	5.9	-223	-64	-1637	387	-944	-435
PCB 153	0	95%	Lower	na	na	na	na	-0.6	0.6	na	Na
			Upper					-0.6	0.6		
	27	95%	Lower	-1.2	0.9	-1	7	-27	19	-10	34
			Upper	-3.3	3	-9	14	-71	63	-43	67
	57	95%	Lower	na	na	na	na	na	na	na	na
			Upper								
	105	95%	Lower	-6.7	2	-710	434	-175	75	-3368	2050
			Upper	-7.7	3.8	-575	299	-206	106	-2729	1411

Supplementary Information Table S4. Summary of the data for Phase II of the experiment with the loading per tray and concentrations (ng/g DW and ng/g OM) +

			PI/II 4*,m	PI/II 8*,m	PII 9 m	PII 10 m	PII 11 m	PII 12 m	PII 13 m	PII 14 m	PII 15 u	PII 16 u
	SOM%		4.0	65	0.01	0.01	4	4	65	65	4	65
63	**Soil mass in tray (DW) δ**		230	50	400	400	340	340	70	70	350	70
	ng/tray (DW)		40000	69000	na	na	16	16	160	160	16	170
	ng/g DW:	***Replicate I***	220	1200	BDL	BDL	0.05	0.05	2.2	2.2	0.05	2.2
		Replicate II	130	1600	BDL	BDL	0.05	0.05	2.5	2.5	0.05	2.5
	mean ng/g DW		180	1400	NA	NA	0.05	0.05	2.4	2.4	0.05	2.35
	ng/g OM		4300	2200	NA	NA	1.2	1.2	3.7	3.7	1.2	3.7
77	**Soil mass in tray (DW) δ**		230	50	400	400	340	340	70	70	350	70
	ng/tray (DW)		48000	43000	1500	1500	2400	2300	4600	4400	2300	4400
	ng/g DW:	***Replicate I***	270	880	4	4	8	7	71	77	7	80
		Replicate II	160	870	3	4	7	6	62	56	6	46
	mean ng/g DW		210	870	4	4	8	7	67	66	7	61
	ng/g OM		5100	1400	6200	13000	190	180	100	100	160	94.5
110	**Soil mass in tray (DW) δ**		170	40	300	300	240	260	53	60	290	62
	ng/tray (DW)		19000	24000	2700	2400	2300	2000	3600	3600	3000	3100
	ng/g DW:	***Replicate I***	120	580	10	8	11	8	81	73	11	44
		Replicate II	98	630	8	7	8	8	53	53	10	54
	mean ng/g DW		110	610	9	8	10	8	67	63	10	50
	ng/g OM		2700	970	30000	20000	260	230	100	99	320	77

+ see Table 1 for treatment details. BDL= Below Detection Limit, NA: not available due to lack of concentration data, δ Soil mass in tray before sampling, * Soil from Phase I, m: mixed, u: unmixed