Supporting Information for the manuscript entitled

A Statistical Comparison of Residential Soil Concentrations of PCDDs, PCDFs and PCBs from Two Communities in Michigan, USA

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This Supporting Information comprises three figures and one table: a map of the study area (Figure S1), a diagram of sampling locations at each residence (Figure S2), an example histogram of the measured $TEQ_{DFP-2005}$ showing the skewness of the distribution (Figure S3) and a table giving the individual concentrations of the 29 PCDD, PCDF and PCB congeners measured in the study (Table S1).

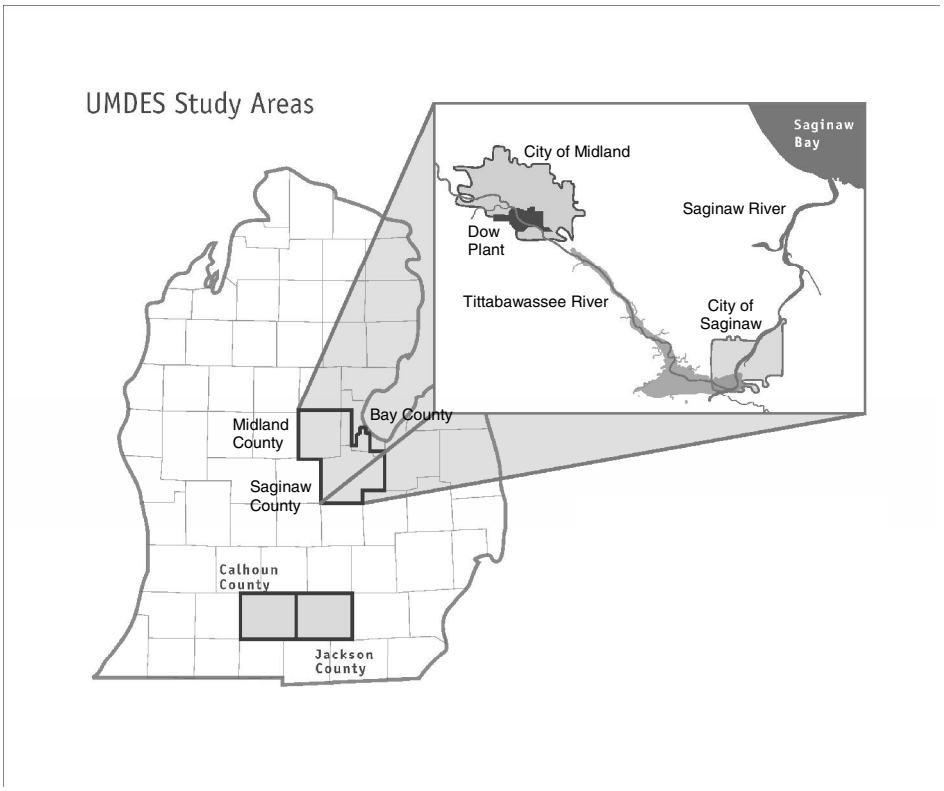

Figure S1. Map of the lower peninsula of the State of Michigan showing the UMDES study areas. Shaded area along Tittabawassee River shows the river's 100-year FEMA floodplain. The floodplain is very narrow until it approaches the City of Saginaw.

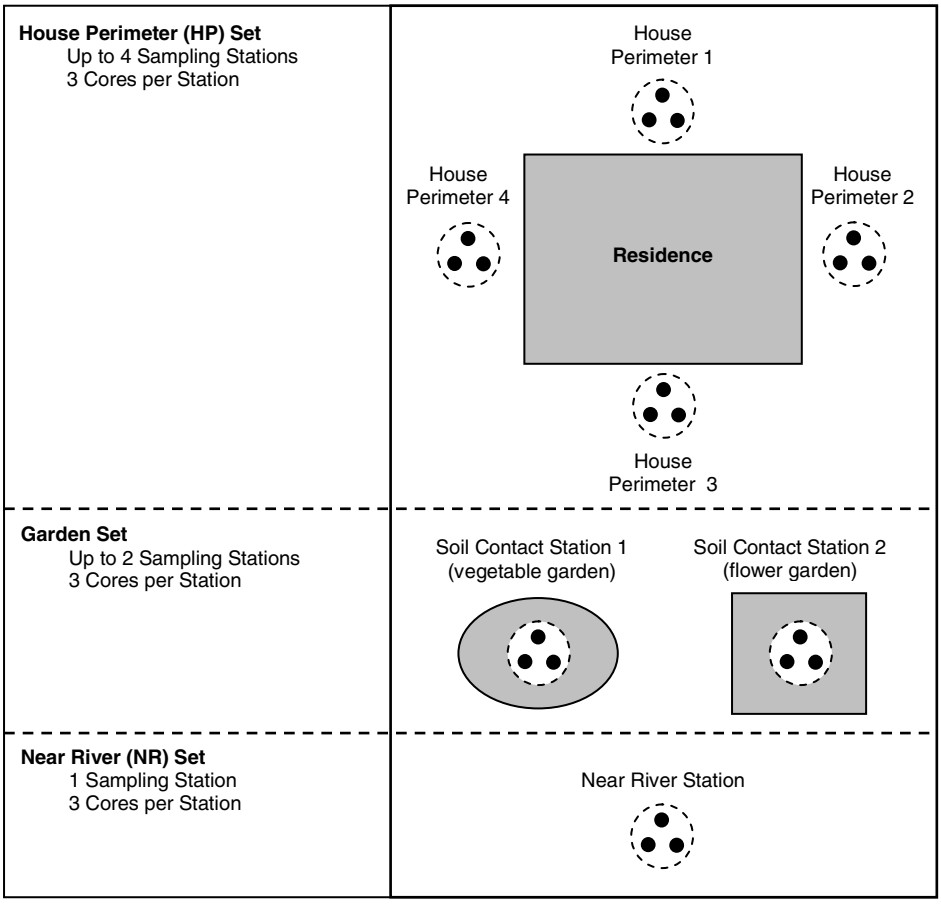

Figure S2. Location of sampling stations at residences. The dotted circles represent the sampling stations. The small dark circles represent the individual cores.

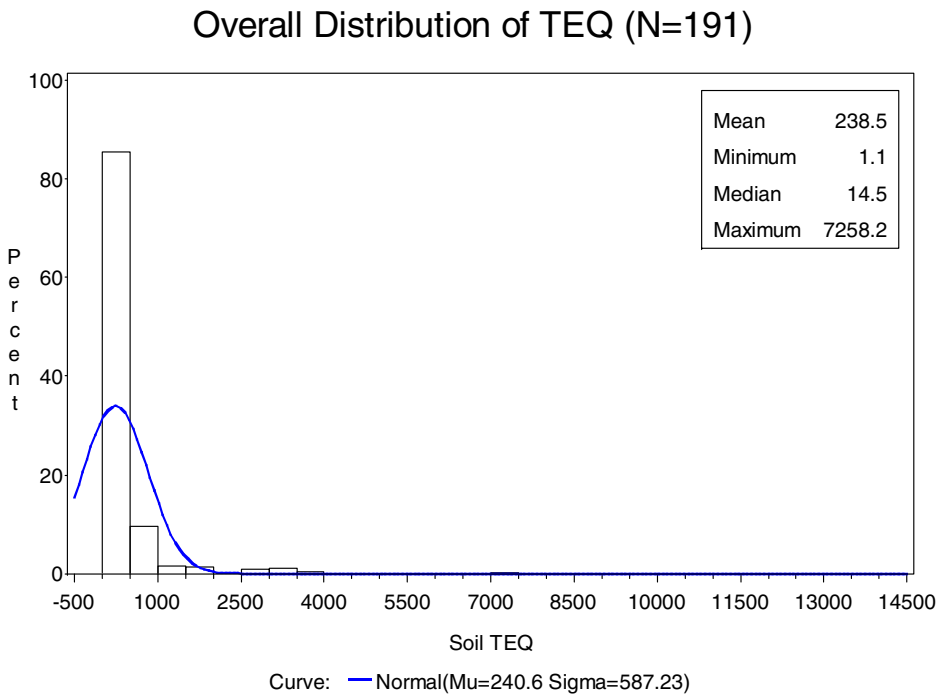

Figure S3. Histogram of $TEQ_{DFP-2005}$ for Near River 0-1 inch soil samples showing the skewness of the distribution.

Table S1. Mean Concentration, Standard Error (in parentheses), Median, 75th and 95th Percentiles (in italics), Number of Samples Below LOD and Median LOD [in brackets] for Each Congener for HP 0-1 Inch Soil Composites for the Five Areas (in pg/g without TEQ adjustment)

Mean (Standard Error) *Median, 75%ile, 95%ile* # < LOD [Median LOD]	Floodplain	Plume	Near Floodplain	Other M/S	Jackso Calho
2,3,7,8-TCDD	2.1 (0.3) *1.3, 2.3, 5.3* 11 [0.4]	36.6 (5.0) *32.1, 46.3, 93.0* 0 [NA]	1.0 (0.1) *0.7, 1.2, 3.2* 24 [0.4]	2.5 (0.7) *0.9, 1.8, 7.6* 24 [0.3]	0.9 (0 *0.2, 0.3* 125 [0
1,2,3,7,8-PeCDD	1.6 (0.1) *1.1, 2.0, 4.7* 11 [0.8]	16.0 (2.1) *11.1, 19.3, 41.9* 0 [NA]	1.0 (0.2) *0.7, 1.0, 2.7* 16 [0.4]	1.5 (0.2) *0.9, 1.5, 5.0* 13 [0.5]	0.7 (0 *0.4, 0.8* 45 [0.
1,2,3,4,7,8-HxCDD	1.5 (0.1) *1.1, 1.9, 3.8* 13 [0.7]	12.7 (1.8) *10.0, 14.3, 36.6* 0 [NA]	1.0 (0.1) *0.6, 1.0, 2.6* 14 [0.4]	1.4 (0.1) *1.0, 1.5, 3.9* 8 [0.4]	0.9 (0 *0.6, 1.0* 25 [0.
1,2,3,6,7,8-HxCDD	4.4 (0.4) *2.9, 4.8, 11.7* 0 [NA]	29.7 (4.7) *20.6, 38.2, 87.6* 0 [NA]	3.0 (0.7) *1.4, 2.6, 5.6* 3 [0.7]	3.7 (0.3) *2.4, 4.1, 11.6* 0 [NA]	2.8 (0 *1.8, 3.2* 10 [0.
1,2,3,7,8,9-HxCDD	3.0 (0.3) *2.1, 3.4, 7.5* 3 [1.4]	20.3 (2.8) *14.8, 24.0, 56.2* 0 [NA]	1.9 (0.2) *1.2, 1.9, 4.4* 3 [0.8]	2.8 (0.2) *1.9, 3.4, 7.4* 1 [0.6]	2.0 (0 *1.4, , 2.4* 9 [0.
1,2,3,4,6,7,8-HpCDD	87.6 (10.7) *50.5, 95.2, 226* 0 [NA]	532.1 (76.3) *370.0, 705.5, 1410* 0 [NA]	63.6 (20.7) *21.7, 48.2, 135* 0 [NA]	76.0 (6.4) *43.8, 92.9, 259.0* 0 [NA]	65.0 (7 *36.2, 78.* 0 [NA
OCDD	792.3 (107.6) *423.5, 886, 2110* 0 [NA]	4943.8 (708.9) *3560, 6770, 11800* 0 [NA]	533.4 (148.6) *158, 419, 1360* 0 [NA]	677.0 (69.1) *333.0, 766.0, 2430* 0 [NA]	592.0 (8 *274, 728,* 0 [NA
2,3,7,8-TCDF	167.7 (35.2) *14.4, 65.5, 736* 0 [NA]	90.4 (74.5) *6.8, 18.3, 333.0* 0 [NA]	150.4 (113.1) *1.9, 10.0, 328* 1 [1.1]	19.0 (5.3) *1.1, 5.2, 120* 19 [0.5]	1.1 (0 *0.5, 1.4* 31 [0.
1,2,3,7,8-PeCDF	78.8 (15.2) *7.4, 36.0, 337.5* 1 [0.3]	51.2 (40.8) *5.5, 13.5, 131.0* 0 [NA]	90.0 (71.1) *1.4, 6.7, 174* 3 [0.3]	9.9 (2.5) *0.9, 3.9, 72.6* 23 [0.4]	0.9 (0 *0.4, 1.1* 40 [0.
2,3,4,7,8-PeCDF	70.9 (13.7) *7.6, 30.7, 322* 1 [0.9]	49.6 (35.4) *7.6, 20.4, 117.0* 0 [NA]	70.0 (53.3) *1.6, 6.4, 145* 2 [0.3]	9.7 (2.1) *1.4, 4.8, 66.8* 7 [1.0]	2.4 (0 *1.0, 3.0* 13 [0.
1,2,3,4,7,8-HxCDF	53.6 (9.5) *6.5, 25.7, 229* 0 [NA]	47.9 (29.3) *13.2, 20.9, 199.0* 0 [NA]	56.9 (44.0) *1.8, 5.3, 112* 0 [NA]	7.1 (1.5) *1.4, 4.5, 34.8* 2 [0.5]	2.0 (0 *1.1, 2.1* 14 [0.
1,2,3,6,7,8-HxCDF	14.4 (2.2) *3.5, 8.7, 49.1* 2 [0.1]	23.3 (7.8) *12.7, 17.8, 90.8* 0 [NA]	14.5 (9.7) *1.2, 3.2, 27.8* 4 [0.1]	3.9 (0.5) *1.8, 4.2, 13.4* 2 [<0.05]	2.4 (0 *1.2, 2.4,* 6 (0.
1,2,3,7,8,9-HxCDF	10.2 (1.7) *1.3, 5.3, 37.5* 22 [0.3]	9.5 (5.3) *3.1, 5.8, 31.1* 0 [NA]	11.6 (9.0) *0.3, 1.3, 22.6* 41 [0.2]	1.7 (0.3) *0.4, 1.0, 9.7* 39 [0.1]	0.4 (0 *0.2, 0.5* 94 [0.
2,3,4,6,7,8-HxCDF	8.1 (1.3)	15.4 (5.0)	7.0 (4.6)	2.7 (0.3)	1.9 (0

	2.3, 5.8, 34.7 3 [0.1]	*7.2, 12.8, 44.6* 0 [NA]	*0.8, 1.8, 13.9* 2 [0.4]	*1.3, 3.1, 10.7* 1 [0.3]	*1.0, 2.5* 17 [0.
1,2,3,4,6,7,8-HpCDF	88.5 (17.5) *26.4, 70.9, 272* 0 [NA]	221.2 (45.8) *144, 225, 766* 0 [NA]	43.6 (16.1) *8.6, 23.6, 135* 0 [NA]	31.3 (4.8) *15.5, 32.4, 109* 0 [NA]	30.1 (4 *11.3, 31.* 0 [NA
1,2,3,4,7,8,9-HpCDF	5.6 (0.8) *1.6, 4.1, 16.7* 9 (0.4)	13.2 (3.7) *7.9, 11.8, 53.2* 0 [NA]	4.3 (2.5) *0.5, 1.4, 10.4* 20 [0.3]	1.9 (0.3) *0.8, 2.0, 5.5* 12 [0.2]	1.1 (0 *0.6, 1.2* 50 [0.
OCDF	132.1 (20.1) *52.2, 105, 520* 0 [NA]	511.5 (111.7) *300, 497, 1370* 0 [NA]	83.2 (31.3) *14.7, 46.0, 207* 0 [NA]	66.6 (10.2) *29.2, 72.4, 217* 0 [NA]	57.7 (1 *21.7, 60.* 0 [NA
PCB 77	46.9 (9.9) *18.5, 31.1, 110* 0 [NA]	221.4 (120.1) *55.4, 138, 2210* 0 [NA]	35.7 (18.0) *7.6, 17.9, 63.2* 0 [NA]	38.0 (4.7) *13.7, 43.9, 128* 0 [NA]	79.0 (3 *13.7, 38.1* 0 [NA
PCB 81	2.8 (0.5) *1.2, 2.5, 5.9* 15 [0.4]	8.5 (3.0) *3.1, 8.3, 56.7* 0 [NA]	2.8 (1.2) *0.6, 1.2, 13.6* 25 [0.5]	2.3 (0.3) *1.0, 2.3, 8.8* 23 [0.3]	3.1 (1 *0.8, 2.2* 18 [0.
PCB 126	7.2 (1.1) *4.2, 7.1, 28.9* 2 [1.0]	51.5 (28.3) *9.3, 23.9, 509* 0 [NA]	3.2 (0.4) *1.8, 3.6, 10.5* 4 [1.3]	6.8 (0.5) *3.8, 8.1, 21.8* 7 [0.8]	17.9 (5 *4.4, 10.1* 5 [0.
PCB 169	1.0 (0.2) *0.8, 1.0, 2.8* 26 [0.5]	3.9 (1.6) *1.4, 2.4, 25.5* 6 [1.3]	0.6 (0.0) *0.5, 0.6, 1.1* 40 [0.5]	0.9 (0.1) *0.6, 1.0, 2.2* 28 [0.5]	1.0 (0 *0.7, 1.2* 50 [0.
PCB 105	365.6 (80.7) *151, 232, 1100* 0 [NA]	5508.9 (4317.8) *374.5, 936, 79000* 0 [NA]	189.1 (50.2) *48.8, 123, 843* 0 [NA]	351.1 (34.1) *131, 335, 1430* 0 [NA]	2373.8 (1 *139, 497,* 0 [NA
PCB 114	16.0 (3.3) *6.7, 11.7, 53.5* 17 [0.8]	269.5 (214.0) *17.4, 72.7, 3915* 0 [NA]	11.6 (3.7) *1.9, 6.3, 38.8* 28 [0.9]	14.4 (1.6) *4.9, 12.4, 57.5* 31 [0.5]	106.8 (6 *4.3, 15.5* 40 [0.
PCB 118	655.1 (146.5) *265, 429, 2350* 0 [NA]	11995 (9571) *678, 1860, 175000* 0 [NA]	365.3 (98.9) *91.9, 240, 1920* 0 [NA]	648.8 (69.7) *248, 565, 2500* 0 [NA]	4982.7 (2 *244, 903,* 0 [NA
PCB 123	17.3 (3.2) *7.8, 14.1, 54.9* 6 (0.8)	183.3 (139.8) *16.7, 41.3, 2560* 0 [NA]	9.2 (2.3) *3.0, 7.0, 32.9* 12 [1.5]	15.0 (1.1) *7.4, 15.2, 58.3* 11 [0.6]	87.9 (4 *7.8, 22.8* 13 [0.
PCB 156	100.2 (18.7) *48.6, 87.8, 307* 0 [NA]	1615.9 (1213.3) *103, 303, 22200* 0 [NA]	51.6 (12.2) *17.3, 39.9, 217* 0 [NA]	118.6 (14.5) *48.8, 113, 426* 1 [0.2]	755.5 (3 *68.9, 189* 0 [NA
PCB 157	25.4 (4.6) *12.8, 21.2, 77.0* 0 [NA]	369.9 (283.0) *24.2, 69.4, 5180* 0 [NA]	12.8 (2.9) *4.8, 10.3, 50.7* 0 [NA]	28.0 (3.2) *12.6, 28.4, 97.5* 0 [NA]	179.1 (8 *15.9, 48.* 1 [0.
PCB 167	40.8 (6.7) *20.9, 36.2, 118* 1 [1.7]	563.7 (402.2) *38.4, 125, 7345* 0 [NA]	20.8 (4.3) *7.9, 16.7, 71.7* 1 [3.0]	45.4 (5.1) *20.5, 47.2, 153*	271.9 (1 *27.9, 82.* 0 [NA

				0 [NA]	
PCB 189	9.5 (1.2)	86.7 (47.3)	3.7 (0.5)	10.3 (1.4)	37.8 (1
	4.9, 9.2, 33.2	*9.3, 29.8, 706.5*	*2.1, 4.3, 10.6*	*4.6, 11.3, 29.7*	*6.8, 18.3*
	3 [0.9]	0 [NA]	3 [0.3]	1 [0.1]	8 [0.

HP = house perimeter; LOD = Limit of detection; M/S = Midland/Saginaw; NA = not applicable.