Supplementary information

Spatial-temporal variation, possible sources and soil-air exchange of polychlorinated biphenyls in urban environment in China

Song Cui¹, Qiang Fu¹*, Yi-Fan Li²,³,¹*, Tian-xiao Li¹, Dong Liu¹, Wen-cai Dong¹, Min Wang¹, Kun-yang Li¹

Affiliation:
¹ International Joint Research Center for Persistent Toxic Substances (IJRC-PTS), School of Water Conservancy and Civil Engineering, Northeast Agricultural University, Harbin, Heilongjiang, 150030, P. R. China
² IJRC-PTS, State Key Laboratory of Urban Water Resource and Environment, Harbin Institute of Technology, Harbin, Heilongjiang, 150090, P. R. China
³ IJRC-PTS-NA, Toronto, M2N 6X9, Canada

Corresponding author: Qiang FU, International Joint Research Center for Persistent Toxic Substances (IJRC-PTS), School of Water Conservancy and Civil Engineering, Northeast Agricultural University, Harbin, China.

Yi-Fan Li, IJRC-PTS, State Key Laboratory of Urban Water Resource and Environment, Harbin Institute of Technology, Harbin, Heilongjiang, 150090, P. R. China

E-mail address: ijrc_pts_neau_paper@yahoo.com (Qiang Fu);
ijrc_pts_hit06@yahoo.com (Yi-Fan Li)
Soil concentrations of PCBs in 2008

The concentration of PCBs in urban soils of Beijing in 2008 is presented in Fig. A1 [1].

Figure A1. Soil concentrations of indicator PCB congeners in Beijing[1]

Soil concentration of PCBs in 2014

The soil concentration of PCBs in Beijing in 2014 is presented in Fig. A2 [2]. The composition of indicator PCB congeners was determined according to Chinese products containing PCBs [3], which is presented in Fig. A3.

Figure A2. Soil concentration of PCBs in Beijing in 2014[2]

The composition of Chinese produced PCB congeners (%) = the composition of PCB
congeners in Chinese transformer oils (%)$\times0.9$ + the composition of PCB congeners in Aroclor 1254 (%)$\times0.1$, these composition are shown in Fig. 3(a-c).
Figure A3. Composition of PCB congeners in (a) Chinese PCB product 1 [3,4]; (b) Chinese PCB product 2 (same as Aroclor 1254); and (c) Chinese PCB product [3,4].

Air concentration of PCBs in 2013-2014

The air concentration of PCBs in Beijing in 2013-2014 is presented in Fig. A4 [5].

Figure A4. Air concentration of indicator PCB congeners in Beijing in 2013-2014

References:

Toxic., 2014, 92, 466-471.

3 Z. Zhang, C. G. Tian, H. L. Jia, Y. F. Li, J. Nat. Sci. Heilongjiang Univ., 2010, 27,

27, 608-612. (in Chinese)

5 W. Z. Hong, Y. M. Li, L. N. Zhang, J. Bao, P. Wang, C. F. Zhu, Q. H. Zhang,