

Table S1. Concentration of 16PAHs ($\mu\text{g}\cdot\text{g}^{-1}$) in sediments from the Pearl River Estuary, 2011 [1]

Site	P19(HE)	P1(HU)	P33(JT)	P43(JI)	P38(HT)	P37(YA)	P17(HQ)	P29(MD)	P44	P2
NAP	0.2404469	0.1176336	0.1547917	0.1548305	0.0671098	0.1354081	0.1039895	0.1237220	0.1079679	0.1826729
ACY	0.0068605	0.0075011	0.0046675	0.0046148	0.0053991	0.0034136	0.0051367	0.0080678	0.0068089	0.0014561
ACE	0.0087827	0.0074367	0.0089955	0.0087131	0.0043137	0.0051477	0.0040133	0.0082938	0.0085234	0.0026107
FLU	0.0183965	0.0174040	0.0330347	0.0200171	0.0115389	0.0184853	0.0124656	0.0166817	0.0158381	0.0034211
PHE	0.0838777	0.0569091	0.1071092	0.0691608	0.0534277	0.0556824	0.0526614	0.0633786	0.0719672	0.0134090
ANT	0.0293880	0.0154654	0.0157896	0.0190307	0.0157007	0.0146640	0.0132324	0.0177414	0.0202622	0.0079522
FLA	0.0752878	0.0450694	0.0374306	0.0425532	0.0437057	0.0332911	0.0378721	0.0553442	0.0459423	0.0075495
PYR	0.0976265	0.0513981	0.0412171	0.0440383	0.0511363	0.0371115	0.0569833	0.0535433	0.0658157	0.0090823
BaA	0.0195866	0.0101920	0.0087657	0.0094637	0.0152798	0.0103656	0.0137565	0.0109207	0.0115703	0.0000700
CHR	0.0621359	0.0385093	0.0430721	0.0292284	0.0385481	0.0241120	0.0424175	0.0292884	0.0362718	0.0043582
BbF	0.0395744	0.0311269	0.0288434	0.0311845	0.0338925	0.0260349	0.0331558	0.0314137	0.0221820	0.0047518
BkF	0.0344431	0.0196333	0.0106067	0.0124715	0.0107077	0.0087616	0.0285709	0.0164816	0.0317307	0.0016720
BaP	0.0575559	0.0335766	0.0281517	0.0240444	0.0295504	0.0178060	0.0287365	0.0279667	0.0263874	0.0062306
IcdP	0.0584322	0.0337213	0.0193933	0.0160697	0.0227480	0.0173724	0.0241316	0.0283330	0.0265010	0.0029220
BghiP	0.0471462	0.0273839	0.0104624	0.0116170	0.0148895	0.0128448	0.0201188	0.0204033	0.0181971	0.0012667
DahA	0.0179255	0.0124860	0.0087184	0.0087641	0.0103776	0.0083271	0.0077835	0.0105660	0.0109345	0.0033632
TPAHs	0.8974664	0.5254467	0.5610496	0.5058018	0.4283255	0.4288281	0.4850254	0.5221462	0.5269005	0.2527883

Table S1. Concentration of 16PAHs ($\mu\text{g}\cdot\text{g}^{-1}$) in sediments from the Pearl River Estuary, 2011 (Cont.) [1]

Site	P3	P26	P30	P34	P39	P40	P5	P12	P14	P9
NAP	0.0557717	0.1098188	0.1294811	0.0580793	0.0578186	0.0842172	0.0623096	0.1273504	0.1022090	0.1630559
ACY	0.0032467	0.0048650	0.0014847	0.0043782	0.0025214	0.0044714	0.0039101	0.0036322	0.0018630	0.0021178
ACE	0.0024395	0.0068033	0.0032340	0.0061180	0.0053591	0.0077455	0.0054334	0.0053202	0.0032221	0.0042123
FLU	0.0141373	0.0160382	0.0055650	0.0141775	0.0099430	0.0186800	0.0139069	0.0111282	0.0051492	0.0065892
PHE	0.0446656	0.0485153	0.0179623	0.0563122	0.0284039	0.0665965	0.0428095	0.0385109	0.0202777	0.0223087
ANT	0.0105418	0.0159369	0.0065154	0.0182018	0.0078982	0.0193056	0.0120300	0.0137076	0.0155767	0.0103320
FLA	0.0244410	0.0410012	0.0087605	0.0494775	0.0205322	0.0459374	0.0345717	0.0292038	0.0169562	0.0154946
PYR	0.0279110	0.0458114	0.0118286	0.0517312	0.0205275	0.0544916	0.0632940	0.0476159	0.0255908	0.0196895
BaA	0.0055109	0.0070264	0.0020188	0.0087462	0.0031019	0.0057688	0.0077275	0.0098237	0.0036875	0.0000700
CHR	0.0146915	0.0247436	0.0061147	0.0353377	0.0099252	0.0288692	0.0319110	0.0224035	0.0120968	0.0101726
BbF	0.0153634	0.0212740	0.0061046	0.0190145	0.0101490	0.0210930	0.0147029	0.0267199	0.0108895	0.0065803
BkF	0.0073482	0.0133527	0.0038374	0.0152678	0.0048341	0.0168089	0.0117496	0.0119875	0.0055913	0.0036638
BaP	0.0114424	0.0201596	0.0037336	0.0225780	0.0058654	0.0216321	0.0160583	0.0188104	0.0064664	0.0047164
IcdP	0.0081677	0.0174474	0.0036091	0.0189961	0.0054490	0.0206988	0.0146761	0.0176967	0.0071738	0.0046302
BghiP	0.0049323	0.0123289	0.0015266	0.0125876	0.0034168	0.0125351	0.0108534	0.0138629	0.0050857	0.0028546
DahA	0.0048266	0.0069189	0.0038531	0.0084607	0.0045174	0.0085075	0.0082602	0.0084839	0.0054966	0.0041270
TPAHs	0.2554376	0.4120416	0.2156295	0.3994643	0.2002627	0.4373586	0.3542042	0.4062577	0.2473323	0.2806149

Table S1. Concentration of 16PAHs ($\mu\text{g}\cdot\text{g}^{-1}$) in sediments from the Pearl River Estuary, 2011 (Cont.) [1]

Site	P11	P27	P36	P41	S1	P2	P4	P6	P7	P8
NAP	0.1025028	0.2400972	0.0974921	0.0516912	0.0448860	0.0395324	0.1759340	0.0544307	0.0428834	0.1117111
ACY	0.0032191	0.0483810	0.0042995	0.0021061	0.0012283	0.0015127	0.0022730	0.0013808	0.0015848	0.0018777
ACE	0.0070317	0.0236219	0.0060929	0.0014177	0.0024921	0.0031361	0.0048146	0.0030355	0.0059905	0.0052601
FLU	0.0139939	0.0607129	0.0183068	0.0083687	0.0058838	0.0066639	0.0102823	0.0039083	0.0080439	0.0088195
PHE	0.0518019	0.1490140	0.0522233	0.0237878	0.0198792	0.0210865	0.0299353	0.0124800	0.0331948	0.0303144
ANT	0.0125505	0.0605958	0.0273698	0.0086115	0.0087447	0.0080520	0.0078004	0.0062385	0.0111552	0.0067885
FLA	0.0324755	0.0588805	0.0388814	0.0163940	0.0138100	0.0192905	0.0214031	0.0068069	0.0258528	0.0268806
PYR	0.0443157	0.1360113	0.0391608	0.0186570	0.0135266	0.0173414	0.0241547	0.0093991	0.0222512	0.0248672
BaA	0.0011961	0.0253455	0.0051330	0.0034244	0.0021234	0.0035482	0.0041202	0.0019747	0.0033335	0.0045210
CHR	0.0242257	0.0409616	0.0205398	0.0083739	0.0071047	0.0100071	0.0123535	0.0036831	0.0128071	0.0126736
BbF	0.0154435	0.0198442	0.0255090	0.0125581	0.0033768	0.0101614	0.0122206	0.0056932	0.0152135	0.0135706
BkF	0.0101867	0.0152654	0.0142232	0.0040452	0.0008817	0.0059989	0.0062878	0.0026508	0.0082628	0.0067480
BaP	0.0127873	0.0278266	0.0143454	0.0062459	0.0032055	0.0051991	0.0069331	0.0015539	0.0055190	0.0068702
IcdP	0.0138568	0.0211209	0.0115764	0.0049330	0.0046971	0.0046828	0.0062014	0.0015645	0.0057659	0.0059865
BghiP	0.0083398	0.0084417	0.0079266	0.0029777	0.0031109	0.0031859	0.0050558	0.0015786	0.0035182	0.0047176
DahA	0.0038708	0.0062014	0.0069345	0.0040960	0.0031989	0.0047187	0.0051255	0.0036128	0.0037267	0.0051206
TPAHs	0.3577978	0.9423219	0.3900145	0.1776882	0.1381497	0.1641176	0.3348953	0.1199914	0.2091033	0.2767272

Table S1. Concentration of 16PAHs ($\mu\text{g}\cdot\text{g}^{-1}$) in sediments from the Pearl River Estuary, 2011 (Cont.) [1]

Site	P10	P15	P22	P16	P23	P24	P28	P31	P32	S2
NAP	0.2703050	0.0547673	0.0441748	0.0905192	0.1904126	0.1059345	0.0474631	0.1858161	0.0578299	0.3629680
ACY	0.0026617	0.0018501	0.0017222	0.0027422	0.0011845	0.0016409	0.0016116	0.0017565	0.0018379	0.0026576
ACE	0.0061166	0.0065423	0.0039098	0.0083692	0.0034810	0.0050831	0.0033906	0.0051661	0.0080475	0.0069142
FLU	0.0102147	0.0074564	0.0094852	0.0129583	0.0067186	0.0081231	0.0050424	0.0094026	0.0106820	0.0090597
PHE	0.0297027	0.0245453	0.0431215	0.0433603	0.0283394	0.0258746	0.0193478	0.0234761	0.0476565	0.0296518
ANT	0.0091438	0.0092548	0.0156006	0.0132374	0.0132295	0.0124359	0.0096765	0.0066337	0.0129182	0.0089544
FLA	0.0314445	0.0191766	0.0273645	0.0329513	0.0166736	0.0250816	0.0129304	0.0171612	0.0272119	0.0210449
PYR	0.0332082	0.0153969	0.0250324	0.0369975	0.0164209	0.0213084	0.0125569	0.0209247	0.0231298	0.0207396
BaA	0.0030134	0.0021279	0.0031410	0.0031896	0.0019851	0.0038350	0.0014703	0.0025499	0.0029138	0.0011961
CHR	0.0176076	0.0072624	0.0131765	0.0149705	0.0106161	0.0120032	0.0060240	0.0097822	0.0119760	0.0090301
BbF	0.0094815	0.0097653	0.0128903	0.0158837	0.0083077	0.0132629	0.0056545	0.0059987	0.0197541	0.0037143
BkF	0.0046144	0.0079484	0.0088118	0.0080658	0.0049448	0.0069608	0.0024689	0.0023744	0.0054973	0.0010632
BaP	0.0057398	0.0041011	0.0065973	0.0060005	0.0041566	0.0067965	0.0026255	0.0030673	0.0045014	0.0031391
IcdP	0.0069007	0.0047324	0.0081933	0.0070401	0.0052538	0.0067746	0.0040042	0.0037040	0.0063084	0.0040107
BghiP	0.0051074	0.0031146	0.0050152	0.0054118	0.0032157	0.0053396	0.0027344	0.0023173	0.0034122	0.0025160
DahA	0.0052506	0.0044569	0.0060492	0.0052879	0.0038994	0.0051652	0.0034920	0.0035629	0.0045480	0.0040771
TPAHs	0.4505126	0.1824987	0.2342856	0.3069853	0.3188393	0.2656199	0.1404931	0.3036937	0.2482249	0.4907368

Table S1. Concentration of 16PAHs ($\mu\text{g}\cdot\text{g}^{-1}$) in sediments from the Pearl River Estuary, 2011 (Cont.) [1]

Site	P42	P35	P13	P25	P21	P20	P18	P45	P3	S6
NAP	0.1909857	0.1130908	0.1545726	0.0902340	0.2409466	0.0739536	0.1357676	0.1728514	0.1797633	0.0546209
ACY	0.0017676	0.0032498	0.0021531	0.0027509	0.0015863	0.0018095	0.0020226	0.0059117	0.0060991	0.0029674
ACE	0.0049869	0.0075409	0.0052722	0.0064717	0.0039093	0.0019578	0.0020042	0.0088333	0.0098120	0.0009541
FLU	0.0062558	0.0156009	0.0076325	0.0142982	0.0085211	0.0082600	0.0085645	0.0219972	0.0209687	0.0060871
PHE	0.0202873	0.0351380	0.0222614	0.0401497	0.0332672	0.0253043	0.0395501	0.0878316	0.0678882	0.0221126
ANT	0.0093501	0.0070587	0.0096909	0.0152182	0.0134331	0.0100068	0.0117623	0.0239032	0.0243595	0.0072747
FLA	0.0116399	0.0367052	0.0221679	0.0930036	0.0269181	0.0288399	0.0292615	0.0481964	0.0571688	0.0106044
PYR	0.0114711	0.0313161	0.0195244	0.0404705	0.0237812	0.0293230	0.0312367	0.0686978	0.0862995	0.0156290
BaA	0.0011961	0.0037137	0.0016780	0.0044162	0.0036190	0.0045627	0.0063972	0.0159071	0.0149289	0.0022227
CHR	0.0058987	0.0165077	0.0101964	0.0174032	0.0136395	0.0146831	0.0151269	0.0405115	0.0434894	0.0059105
BbF	0.0053227	0.0112589	0.0073715	0.0198224	0.0133216	0.0152942	0.0232020	0.0486527	0.0579164	0.0066589
BkF	0.0020773	0.0126182	0.0049511	0.0142468	0.0089405	0.0071921	0.0121033	0.0158272	0.0219403	0.0030659
BaP	0.0080669	0.0084107	0.0051637	0.0100590	0.0072061	0.0094450	0.0114871	0.0336682	0.0357409	0.0041385
IcdP	0.0031595	0.0091224	0.0058106	0.0132551	0.0089431	0.0077670	0.0131362	0.0296109	0.0298247	0.0032741
BghiP	0.0021557	0.0059582	0.0036569	0.0104183	0.0065709	0.0057223	0.0120760	0.0230585	0.0247012	0.0015194
DahA	0.0036077	0.0060945	0.0043320	0.0069756	0.0054395	0.0045167	0.0059399	0.0136459	0.0132508	0.0037735
TPAHs	0.2882290	0.3233847	0.2864352	0.3991934	0.4200431	0.2486380	0.3596381	0.6591046	0.6941517	0.1508137

Table S1. Concentration of 16PAHs ($\mu\text{g}\cdot\text{g}^{-1}$) in sediments from the Pearl River Estuary, 2011 (Cont.) [1]

Site	S7	S3	S4	S5	D11	D12	D6	D7	D3	D16
NAP	0.0717683	0.1390147	0.0909812	0.0425742	0.1506349	0.1553390	0.1248085	0.2263875	0.2421222	0.0530477
ACY	0.0024546	0.0019646	0.0025142	0.0039748	0.0042826	0.0031573	0.0056009	0.0034711	0.0057854	0.0033258
ACE	0.0022545	0.0052230	0.0049394	0.0010270	0.0058993	0.0048205	0.0097206	0.0048902	0.0100288	0.0047690
FLU	0.0082974	0.0085822	0.0105607	0.0111263	0.0145055	0.0084615	0.0204476	0.0097975	0.0210164	0.0121227
PHE	0.0248230	0.0234310	0.0447743	0.0425202	0.0546744	0.0278906	0.0811851	0.0290510	0.0602471	0.0489492
ANT	0.0084331	0.0070096	0.0158968	0.0168642	0.0143583	0.0072698	0.0376198	0.0097634	0.0137794	0.0118519
FLA	0.0168108	0.0126261	0.0228889	0.0300919	0.0369587	0.0218294	0.0353322	0.0330023	0.0336213	0.0365759
PYR	0.0254834	0.0129606	0.0231312	0.0473591	0.0520234	0.0253249	0.0444069	0.0474841	0.0378081	0.0418768
BaA	0.0046508	0.0021312	0.0018778	0.0102738	0.0069309	0.0014720	0.0052352	0.0037288	0.0064105	0.0042429
CHR	0.0109384	0.0072251	0.0158287	0.0241793	0.0260188	0.0132371	0.0229935	0.0260024	0.0183418	0.0235495
BbF	0.0123382	0.0067789	0.0083564	0.0183512	0.0165858	0.0087296	0.0168271	0.0125324	0.0165252	0.0197240
BkF	0.0063436	0.0034117	0.0059702	0.0147862	0.0123239	0.0054702	0.0133087	0.0084763	0.0090347	0.0113711
BaP	0.0082494	0.0036168	0.0072446	0.0140706	0.0163335	0.0078603	0.0178793	0.0131771	0.0136383	0.0150549
IcdP	0.0065057	0.0033668	0.0075187	0.0124504	0.0108650	0.0075516	0.0173195	0.0115488	0.0106657	0.0121972
BghiP	0.0044736	0.0016900	0.0045861	0.0100119	0.0065207	0.0046450	0.0096135	0.0075062	0.0077105	0.0065067
DahA	0.0047939	0.0035994	0.0055822	0.0061504	0.0060488	0.0050166	0.0082430	0.0065312	0.0063382	0.0070076
TPAHs	0.2186187	0.2426317	0.2726514	0.3058115	0.4349645	0.3080754	0.4705414	0.4533503	0.5130736	0.3121729

Table S1. Concentration of 16PAHs ($\mu\text{g}\cdot\text{g}^{-1}$) in sediments from the Pearl River Estuary, 2011 (Cont.) [1]

Site	D13	D8	D2	D4	D9	D5	D17	D1	D14	D15	D10
NAP	0.1143548	0.1138874	0.0822712	0.0877067	0.0676289	0.1428445	0.0790840	0.0996119	0.0643719	0.0730967	0.0718520
ACY	0.0035048	0.0018859	0.0026492	0.0050459	0.0093101	0.0020654	0.0045264	0.0054819	0.0031542	0.0011658	0.0135458
ACE	0.0063932	0.0044484	0.0017243	0.0035967	0.0230730	0.0030448	0.0032640	0.0088422	0.0056074	0.0019685	0.0075551
FLU	0.0161308	0.0074625	0.0089484	0.0173565	0.0230705	0.0085564	0.0162842	0.0204025	0.0119857	0.0043711	0.0197984
PHE	0.0482248	0.0242087	0.0340484	0.0626133	0.1143977	0.0226111	0.0542979	0.0695793	0.0479095	0.0147835	0.0778605
ANT	0.0290818	0.0090818	0.0156316	0.0161280	0.0352908	0.0083213	0.0149029	0.0170042	0.0157242	0.0062700	0.0285116
FLA	0.0288911	0.0259671	0.0245914	0.0432964	0.2067697	0.0197200	0.0391208	0.0539940	0.0315707	0.0073616	0.0927721
PYR	0.0277891	0.0222987	0.0288113	0.0511961	0.1814678	0.0220918	0.0476120	0.0628550	0.0322578	0.0113584	0.1080312
BaA	0.0029718	0.0032941	0.0041860	0.0088131	0.0783832	0.0049121	0.0090512	0.0065865	0.0021385	0.0017815	0.0316193
CHR	0.0142291	0.0122777	0.0143649	0.0274249	0.1105910	0.0125270	0.0234602	0.0354944	0.0223928	0.0051262	0.0725415
BbF	0.0168562	0.0131301	0.0104530	0.0249440	0.0899773	0.0163653	0.0185138	0.0356347	0.0162303	0.0055197	0.0672139
BkF	0.0101475	0.0078278	0.0076359	0.0139141	0.0797379	0.0055780	0.0167876	0.0286382	0.0086476	0.0018749	0.0378829
BaP	0.0099950	0.0068547	0.0105241	0.0230593	0.0918003	0.0081096	0.0207598	0.0216691	0.0129461	0.0021986	0.0502951
IcdP	0.0081626	0.0061657	0.0074286	0.0191213	0.0783951	0.0082263	0.0187722	0.0128576	0.0125833	0.0024006	0.0396575
BghiP	0.0053986	0.0041970	0.0046379	0.0124144	0.0739702	0.0062205	0.0126037	0.0066569	0.0068509	0.0010334	0.0359218
DahA	0.0061352	0.0050514	0.0048762	0.0070085	0.0255602	0.0051364	0.0070200	0.0072958	0.0066144	0.0032906	0.0166810
TPAHs	0.3482664	0.2680390	0.2627824	0.4236392	1.2894237	0.2963305	0.3860607	0.4926042	0.3009853	0.1436011	0.7717397

Table S2. Concentration of 16PAHs ($\mu\text{g}\cdot\text{g}^{-1}$) in sediments from the Pearl River Estuary, 2012 [2]

Site	A1	A2	A3	A4	A5	A6	A7	A8	A9
NAP	0.1983	0.06823	0.07853	0.01651	0.0102	0.00852	0.00558	0.0082	0.07315
ACY	0.04732	0.01519	0.03111	0.01426	0.01219	0.01002	0.00768	0.00746	0.01233
ACE	0.07771	0.01258	0.02817	0.02472	0.01069	0.01278	0.00788	0.01007	0.00823
FLU	0.35361	0.02929	0.13678	0.05247	0.01689	0.07766	0.01684	0.04609	0.01902
PHE	0.30971	0.06191	0.14219	0.06158	0.08009	0.06886	0.04979	0.08211	0.03786
ANT	0.0636	0.00868	0.01591	0.00862	0.01211	0.01077	0.0058	0.01005	0.00862
FLA	0.38921	0.02095	0.03485	0.00889	0.0313	0.02924	0.03028	0.03208	0.02373
PYR	0.4495	0.01945	0.04015	0.01234	0.04251	0.04237	0.01932	0.02872	0.02347
BaA	0.26894	0.01409	0.03016	0.01417	0.02789	0.02789	0.02111	0.02016	0.02657
CHR	0.33024	0.02056	0.03696	0.01357	0.03043	0.02771	0.02642	0.01985	0.02372
BbF	0.37153	0.02344	0.04917	0.01569	0.06152	0.0292	0.02989	0.02811	0.02913
BkF	0.09705	0.00678	0.04233	0.00786	0.01119	0.01299	0.0071	0.00871	0.0074
BaP	0.29443	0.02551	0.03517	0.02357	0.03682	0.04692	0.01964	0.03106	0.0307
IcdP	0.22023	0.01304	0.0312	0.00942	0.03746	0.01819	0.01918	0.01888	0.01588
BghiP	0.28969	0.01248	0.03069	0.009	0.0295	0.01746	0.01219	0.06018	0.01268
DahA	0.06748	0.00637	0.01392	0.00724	0.0093	0.00812	0.0077	0.01316	0.00928
TPAHs	3.82855	0.35855	0.77729	0.29991	0.46009	0.4487	0.2864	0.42489	0.36177

Table S2. Concentration of 16PAHs ($\mu\text{g}\cdot\text{g}^{-1}$) in sediments from the Pearl River Estuary, 2012 (Cont.) [2]

Site	A10	A11	A12	A13	A14	A15	A16	A17
NAP	0.06854	0.02427	0.01437	0.00328	0.017	0.00882	0.0087	0.00306
ACY	0.01221	0.00461	0.03216	0.00896	0.00662	0.00962	0.00367	0.00481
ACE	0.0096	0.00491	0.01223	0.01117	0.01217	0.00805	0.00657	0.00833
FLU	0.06344	0.01547	0.17611	0.0649	0.01814	0.01623	0.01891	0.01183
PHE	0.10806	0.03288	0.11779	0.05376	0.06958	0.03136	0.02709	0.02829
ANT	0.01276	0.00436	0.01027	0.00611	0.00903	0.0069	0.0027	0.00393
FLA	0.03669	0.00476	0.02666	0.0254	0.0349	0.0248	0.0102	0.01244
PYR	0.04858	0.00968	0.02784	0.02055	0.03125	0.02135	0.00714	0.00972
BaA	0.01344	0.01058	0.01169	0.01222	0.01233	0.01605	0.0064	0.00554
CHR	0.02517	0.01924	0.01488	0.01258	0.0216	0.0133	0.00676	0.00572
BbF	0.02047	0.01925	0.01779	0.01583	0.02059	0.01236	0.00631	0.00836
BkF	0.00832	0.00773	0.00654	0.00663	0.01064	0.00778	0.00482	0.00463
BaP	0.02818	0.02297	0.02961	0.02538	0.02571	0.01505	0	0
IcdP	0.01959	0.01245	0.01462	0.009	0.0151	0.00674	0.00432	0.00616
BghiP	0.01866	0.01294	0.01671	0.00802	0.01438	0.0083	0.0061	0.00666
DahA	0.01337	0.00681	0.00835	0.00678	0.0079	0.01065	0.00638	0
TPAHs	0.50708	0.21291	0.53762	0.29057	0.32694	0.21736	0.12607	0.11948

Table S3. Degradation rates of PAHs

PAHs	Degradation rate (d ⁻¹)	Data source
NAP	2.00×10 ⁻²	Agarry et al., 2015 [3]
ACY	1.20×10 ⁻²	Rogers et al., 2002 [4]
ACE	5.20×10 ⁻³	Rogers et al., 2002 [4]
FLU	4.00×10 ⁻⁴	Thiele-Bruhn et al., 2005[5]
PHE	1.38×10 ⁻¹	Baltrons et al., 2018 [6]
ANT	1.20×10 ⁻²	Rogers et al., 2002 [4]
FLA	1.20×10 ⁻¹	Baltrons et al., 2018 [6]
PYR	1.50×10 ⁻¹	Rogers et al., 2002 [4]
BaA	8.87×10 ⁻³	Rogers et al., 2002 [4]
CHR	1.00×10 ⁻⁴	Thiele-Bruhn et al., 2005
BbF	5.40×10 ⁻³	Baltrons et al., 2018 [6]
BkF	1.00×10 ⁻⁴	Thiele-Bruhn et al., 2005[5]
BaP	2.80×10 ⁻²	Rogers et al., 2002 [4]
IcdP	3.00×10 ⁻³	Rogers et al., 2002 [4]
DahA	1.10×10 ⁻³	Wild et al., 1991 [7]
BghiP	4.81×10 ⁻⁵	Rogers et al., 2002 [4]

Table S4. Correlations between modelling results and monitoring data in 2011 based on the original PMF model

PAHs	Intercept	Slope	r ²
NAP	0.045	0.57	0.41
ACY	0.002	0.26	0.61
ACE	0.002	0.51	0.64
FLU	0.001	0.91	0.83
PHE	0.001	0.99	0.83
ANT	0.003	0.71	0.78
FLA	0.011	0.72	0.64
PYR	0.001	0.81	0.92
BaA	0.003	0.43	0.74
CHR	0.001	0.94	0.94
BbF	0.001	0.86	0.84
BkF	0.001	0.88	0.88
BaP	0.001	0.92	0.98
IcdP	0.001	0.93	0.97
DahA	0.000	1.06	0.97
BghiP	0.001	0.80	0.92

Table S5. Correlations between modelling results and monitoring data in 2012 based on the original PMF model

PAHs	Intercept	Slope	r ²
NAP	0.000	0.99	0.99
ACY	0.003	0.58	0.70
ACE	0.002	0.69	0.58
FLU	0.013	0.50	0.78
PHE	0.004	0.89	0.87
ANT	-0.001	1.06	0.90
FLA	0.003	0.77	0.60
PYR	0.005	0.72	0.74
BaA	0.002	0.81	0.76
CHR	-0.001	1.01	0.88
BbF	0.006	0.66	0.82
BkF	0.005	0.34	0.62
BaP	0.002	0.77	0.60
IcdP	0.004	0.69	0.83
DahA	0.001	0.77	0.84
BghiP	0.009	0.29	0.37

Table S6. Correlations between modelling results and monitoring data in 2011 based on the advanced PMF model

PAHs	Intercept	Slope	r²
NAP	0.327	0.57	0.41
ACY	0.011	0.26	0.61
ACE	0.005	0.51	0.64
FLU	0.001	0.91	0.83
PHE	0.028	0.99	0.83
ANT	0.015	0.71	0.78
FLA	0.467	0.71	0.64
PYR	0.277	0.81	0.92
BaA	0.011	0.43	0.74
CHR	0.001	0.94	0.94
BbF	0.002	0.86	0.84
BkF	0.001	0.88	0.88
BaP	0.010	0.92	0.98
IcdP	0.001	0.93	0.97
DahA	0.000	1.07	0.97
BghiP	0.002	0.80	0.92

Table S7. Correlations between modelling results and monitoring data in 2012 based on the advanced PMF model

PAHs	Intercept	Slope	r²
NAP	0.017	0.79	0.86
ACY	0.190	0.44	0.52
ACE	0.095	0.51	0.39
FLU	0.017	0.28	0.45
PHE	0.405	0.79	0.81
ANT	-0.001	1.01	0.89
FLA	0.111	0.80	0.64
PYR	0.341	0.66	0.74
BaA	0.007	0.81	0.80
CHR	0.000	0.81	0.89
BbF	0.016	0.63	0.81
BkF	0.005	0.35	0.66
BaP	0.007	0.91	0.72
IcdP	0.067	0.65	0.79
DahA	0.001	0.76	0.51
BghiP	0.011	0.27	0.34

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