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Supplementary Material

Table SS1. Information about the sampling sites.

Latitude	**Longitude**	**Sampling Duration**	**Air Temp**	**local land use**
31°25′02.3″ N	72°11′37.3″ E	May, 2007- November, 2009	26°C	Agricultural
31°25′81.2″ N	72°20′71.8″ E	May, 2007- November, 2009	25.3°C	Urban and Industrial
31°08′27.5″ N	72°14′25.3″E	May, 2007- November, 2009	25.5°C	Agricultural
30°62′14.8″ N	71°82′72.3″ E	May, 2007- November, 2009	19.2°C	Urban
30°57′63.3″ N	71°65′99.7″ E	May, 2007- November, 2009	31.3°C	Agricultural
30°44′33″ N	71°50′68″ E	May, 2007- November, 2009	27.3°C	Sub-urban and Agricultural
30°07′48.2″ N	71°28′42.7″ E	May, 2007- November, 2009	31.1°C	Urban
31°54′43.3″ N	72°33′12.3″ E	May, 2007- November, 2009	28.8°C	Urban and Industrial

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Table SS2. Molecular diagnostic Ratios for petrogenic and pyrogenic source of PAHs

Ratios	Season	Mean	Min-Max	Petrogenic	Pyrogenic	Source
Phe/Ant	Summer	17.23	0.87-33.8	> 10	< 10	Petrogenic
	Winter	14.4	1.21-32.77			Petrogenic
Flua/Pyr	Summer	0.44	0.23-0.71	> 1	< 1	Pyrogenic
	Winter	0.76	0.36-2.57			Pyrogenic
Ant/(Phe+Ant)	Summer	0.19	0.03-0.53	< 0.1	> 0.1	Pyrogenic
	Winter	0.2	0.03-0.45			Pyrogenic
Flua/(Flua+Pyr)	Summer	0.7	0.58-0.81	< 0.4	> 0.4	Pyrogenic
	Winter	0.62	0.28-0.73			Pyrogenic
BaA/(BaA+Chr)	Summer	0.28	0.03-0.62	< 0.2	> 0.2	Pyrogenic
	Winter	0.24	0.00-0.57			Pyrogenic
LMW/HMW	Summer	5.56	3.56-9.67	> 1	< 1	Petrogenic
	Winter	6.12	3.12-13.72			Petrogenic

References: Cai et al.[12], Zhang et al.[3], Sun et al.[10]

Table SS 3. Risk classification of individual PAHs and ∑PAHs.

Individual PAHs			∑PAHs		
	$RQ_{(NCs)}$	$RQ_{(MPCs)}$		$RQ_{\sum PAHs(NCs)}$	$RQ_{\sum PAHs(MPCs)}$
Risk-free	0		Risk-free	0	
			Low-risk	≥1; <800	0
Moderate-risk	≥1	<1	Moderate-risk 1	≥800	0
			Moderate-risk 2	<800	≥1
High-risk		≥1	High-risk	≥800	≥1

Reference: Sun et al.[10], Cao et al.[2]