Table S1. Basic questionnaire of the chosen factories surroundings.

Full name	Abbr. name	History/a	Area/km²	Products	Surrounding environment
The Foxconn	F1	8	0.11	Electronic parts	N-Industrial and residential areas; S-The square and logistics center; W-Various factories; E-Railway and highway intersection zone
Zhengzhou Nissan	F2	8	1.10	Automobile and engine	N-Equipment manufacturing factory; S-Golf Course and park; W-Construction site E-Viaduct turntable
The Yutong group	F3	7	1.13	large and medium bus	N-Village; S-Residence Community; W-Wasteland, auto repair factory; E-Farmland and wasteland

Table S2. Exposure parameters used in the evaluation of health risks.

Items	Symbol	Units	Value	References
Basic parameter	*c*	mg·kg^{-1} /mg·m^{-3}	95%UCL	This study
Exposure behavior parameters	*ED*	a	24	[7,8]
	BW	kg	58.6	[24]
	EF	d/a	350	
	AT(non-cancer)	d	365×ED	[25]
	AT (cancer)		365×71.4	
Ingestion	*IngR*	mg·d^{-1}/m^3·d^{-1}	100	[7,8]
Inhalation	*InhR*	m^3·d^{-1}	12.8	
	PEF (soil and dust)	m^3·kg^{-1}	1.36×10^9	
Dermal contact	*SA*	cm^2/ m^2·d^{-1}	2145	[26]
	SL	mg·cm^{-2}	0.07	[8]
	CF (soil and dust)	mg·kg^{-1}	1.0×10^{-6}	[24,27]
	ABS	unitless	0.03(As); 0.001 (for the other metals)	[27–29]
Non-carcinogenic reference dose	*RfD*	(kg·d)·mg^{-1}	*RfD*$_{ingestion}$: 0.0003(As), 0.001 (Cd),	[27–29]

Items	Symbol	Units	Value	References
			0.003 (Co), 0.003 (Cr), 0.04 (Cu), 0.0003 (Hg), 0.047 (Mn), 0.02 (Ni), 0.0035 (Pb), 0.3 (Zn) $RfD_{inhalation}$: 1.23E-04 (As), 1.00E-03 (Cd), 2.80E-05 (Co), 2.86E-05 (Cr^{6+}), 4.02E-02 (Cu), 3.00E-04 (Hg), 1.40E-05 (Mn), 2.06E-02 (Ni), 3.52E-03 (Pb), 3.00E-01 (Zn) RfD_{dermal}: 3.00E-04 (As), 1.00E-05 (Cd), 6.00E-05 (Co), 6.00E-05 (Cr^{6+}), 1.20E-02 (Cu), 2.40E-05 (Hg), 2.40E-03 (Mn), 5.40E-03 (Ni), 5.25E-04 (Pb), 6.00E-02 (Zn)	
Carcinogenic slope factor	*SF*	$(kg \cdot d) \cdot mg^{-1}$	$SF_{ingestion}$: 1.5 (As) $SF_{inhalation}$: 15.1 (As), 6.4 (Cd), 9.8 (Co), 42 (Cr), 0.84 (Ni) *Dermal* SF: 3.66 (As)	[28,29]