



Figure S1. Scheme of survey points and secondary sources of contamination (in red the Thiessen polygons of the source of contamination, in orange source of hypothetical contamination). The blue arrow shows the direction of groundwater flow.

Table S1. Analyte concentration values in soil samples taken from excavation walls S1-1, S1-2, S1-3, S1-4 (August 2010).

Samples in m (depth)	S1-1 (2.5)	S1-2 (2.5)	S1-3 (2.5)	S1-4 (2.5)	Limits (mg/kg)
Ethylbenzene	71	65	33	74	50
Styrene	65	62	64	41	50
Toluene	91	85	94	92	50
BTEX summation	227	212	191	207	100
PCB	2.9	3.9	0.001	6.1	5
Hydrocarbons C ≤ 12	341	351	383	302	250
Hydrocarbons C > 12	872	610	501	642	750

Table S2. Concentration values in soil samples taken from SA-1, SA-2, SA-3 (August 2010).

Samples in m (depth)	SA1-1 (2.2)	SA1-2 (4.4)	SA1-3 (3.1)	SA2-1 (0.6)	SA2-2 (2.3)	SA2-3 (3.6)	SA3-1 (2.5)	SA3-2 (3.5)	Limits (mg/kg)
Ethylbenzene	36	75	39	78	64	58	86	65	50
Styrene	41	63	61	54	85	61	38	41	50
Toluene	95	97	88	89	<LOQ	97	93	97	50
BTEX summation	172	235	188	221	149	216	217	203	100
PCB	5.9	4.2	2.2	<0.001	0.38	1.1	0.15	5.1	5
Hydrocarbons C ≤ 12	328	322	371	341	981	334	298	350	250
Hydrocarbons C > 12	697	627	690	918	<LOQ	985	554	490	750

Table S3. Concentration values in soil samples taken from SB-1, SB-2, SB-3 (February 2012).

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BTEX summation	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	100
PCB	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	5
Hydrocarbons C ≤ 12	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	161	<LOQ	<LOQ	<LOQ	250
Hydrocarbons C > 12	<LOQ	<LOQ	21	<LOQ	<LOQ	810	<LOQ	<LOQ	<LOQ	750

Table S4. Concentration values in soil samples taken from SB-4, SB-5 and SB-6 (February 2012).

Samples in m (depth)	SB-4 (2.5)	SB-4 (3.5)	SB-4 (4.5)	SB-5 (2.5)	SB-5 (3.5)	SB-5 (4.5)	SB-6 (2.5)	SB-6 (3.5)	SB-6 (4.5)	Limits (mg/kg)
Ethylbenzene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	50
Styrene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	50
Toluene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	50
BTEX summation	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	100
PCB	0.026	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	0.0008	<LOQ	<LOQ	5
Hydrocarbons C ≤ 12	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	41.1	<LOQ	<LOQ	250
Hydrocarbons C > 12	567	<LOQ	109	<LOQ	<LOQ	<LOQ	418	15.6	<LOQ	750

Table S5. Concentration values in soil samples taken from SB-7, SB-8, and SB-9 (February 2012).

Samples in m (depth)	SB-7 (2.5)	SB-7 (3.5)	SB-7 (4.5)	SB-8 (2.5)	SB-8 (3.5)	SB-8 (4.5)	SB-9 (2.5)	SB-9 (3.5)	SB-9 (4.5)	Limits (mg/kg)
Ethylbenzene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	50
Styrene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	50
Toluene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	50
BTEX summation	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	100
PCB	<LOQ	0.0011	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	0.0009	5
Hydrocarbons C ≤ 12	<LOQ	358	26	<LOQ	<LOQ	<LOQ	<LOQ	33.2	128	250
Hydrocarbons C >12	<LOQ	1852	154	<LOQ	<LOQ	<LOQ	<LOQ	819	688	750

Table S6. Concentration values in soil samples taken from SC-1 and SC-2 (February 2012).

Samples in m (depth)	SC-1 (2.5)	SC-1 (3.5)	SC-1 (4.5)	SC-2 (2.5)	SC-2 (3.5)	SC-2 (4.5)	Limits (mg/kg)
Ethylbenzene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	50
Styrene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	50
Toluene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	50
BTEX summation	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	100
PCB	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	5
Hydrocarbons C ≤ 12	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	250
Hydrocarbons C > 12	45	14.2	16.7	<LOQ	<LOQ	<LOQ	750

The formulation of the risk analysis, scheduled by ISPRA determined the source surface in the deep ground (SP) and in the topsoil (SS) (Tables S7-S8).

Table S7. Contaminants Index and Maximum Values of SP Source Concentrations.

Samples in m (depth)		SA1-1 (2.2)	SA2-2 (2.3)	SA3-1 (2.5)	SA3-2 (3.5) SA2-3 (3.6) SA1-2 (4.4)	SB-7 (3.5)	Limits
Lithostratigraphy		Calcare- nite	Calcare- nite	Calcare- nite	Clays Calcare- nite Clays	Clays	-
Contaminants Index	Cancer Toxic	CRS (mg/kg)					
Ethylbenzene	C			86			50
Styrene	T		85				50
Toluene	T				97		50
PCB	C	5.9					5
Hydrocarbons C ≤ 12	T		981				250

Hydrocarbons C > 12	T					1852	750
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Table S8. Contaminants Index and Values of Representative Concentrations at source SS.

Samples in m (depth)		SA2-1 (0.6)	Limits
Lithostratigraphy		backfill	-
Contaminants Index	Cancer/Toxics	CRS (mg/kg)	(mg/kg)
Ethylbenzene	C	78	50
Styrene	T	54	50
Toluene	T	89	50
Hydrocarbons C ≤ 12	T	221	250
Hydrocarbons C > 12	T	918	750