

Hydropedological characterization of a coal mining waste deposition area affected by self-burning

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Supplementary Materials

Table S1. Soil morphological characteristics of the Uphill Soil (US) hydropedological zone.

Soil feature	O horizon	Ah horizon	C horizon
Colour	–	10YR4/4 (dark yellowish brown)	–
Texture	–	silt loam	–
Structure (morphology/distinctiveness/ size)	–	subangular blocky/strong/fine	–
Thickness	10–15 cm	15–25 cm	20–50 cm
Lower boundary (distinctness/topography)	clear/smooth	gradual/wavy	–
Organic matter (presence/abundance/ humification)	present/abundant/ none to incipient	present/abundant/ humified	mostly absent/none to very scarce/humified
Porosity (size/abundance)	–	very fine/common, fine/few, medium/ very few	–
Biological activity (roots: diameter/abundance)	–	very fine/common, fine/common medium/very few	very fine/none, fine/none medium/very few coarse/very few

Table S2. Soil morphological characteristics of the Unburned Coal Waste Pile (UCW) hydropedological zone.

Soil feature	O horizon	Incipient A horizon	C horizon
Colour	–	5Y3/1 (very dark gray)	–
Texture	–	silt loam/sandy loam	–
Structure (morphology/distinctiveness/ size)	–	apedal	–
Thickness	1–5 cm	2–8 cm	> 100 cm
Lower boundary (distinctness/topography)	gradual/wavy	gradual/wavy	–
Organic matter (presence/abundance/ humification)	present/abundant/ none to incipient	present/scarce/ humified	mostly absent/none to very scarce/humified
Porosity (size/abundance)	–	very fine/common, fine/common, medium/few coarse/few	very fine/common, fine/common, medium/few coarse/few
Biological activity (roots: diameter/abundance)	–	very fine/few, fine/very few medium/very few coarse/very few	very fine/none, fine/none medium/very few coarse/very few

Table S3. Soil morphological characteristics of the Mixed Burned Coal Waste (MBW) hydropedological zone.

Soil feature	C horizon
Colour	5Y2.5/1 (black)
Texture	silt loam/loamy sand
Structure (morphology/distinctiveness/ size)	apedal
Thickness	> 100 cm
Lower boundary (distinctness/topography)	–
Organic matter (presence/abundance/ humification)	absent
Porosity (size/abundance)	very fine/common, fine/common, medium/few coarse/few
Biological activity (roots: diameter/abundance)	medium/very few coarse/very few

Table S4. Soil morphological characteristics of the Burned Coal Waste Pile (BCW) hydropedological zone.

Soil feature	C1 horizon (cover layer, CL)	C2 horizon (burned material, BW)
Colour	7.5YR7/6 (reddish yellow)	5Y3/1 (very dark gray)
Texture	silt loam/sandy loam/loam	silt loam
Structure (morphology/distinctiveness/size)	apedal	apedal
Thickness	30–40 cm	> 100 cm
Lower boundary (distinctness/topography)	clear/wavy	–
Organic matter (presence/abundance/humification)	present/scarce/humified	absent
Porosity (size/abundance)	very fine/few, fine/common medium/common coarse/few	very fine/common, fine/common, medium/few
Biological activity (roots: diameter/abundance)	–	–

Table S5. Soil morphological characteristics of the Downhill Soil (DS) hydropedological zone.

Soil feature	O horizon	Ap horizon	C horizon
Colour	–	10YR3/2 (very dark greyish brown)	–
Texture	–	silt loam	–
Structure (morphology/distinctiveness/size)	–	subangular blocky/moderate to weak/very fine to fine	–
Thickness	5–8 cm	35–45 cm	50–100 cm
Lower boundary (distinctness/topography)	clear/smooth	gradual/wavy	–
Organic matter (presence/abundance/humification)	present/abundant/ none to incipient	present/moderately abundant/humified	mostly absent/none to very scarce/humified
Porosity (size/abundance)	–	very fine/few, fine/common, medium/common	–
Biological activity (roots: diameter/abundance)	–	very fine/very few, fine/few medium/few	very fine/none, fine/none medium/very few coarse/very few