Controlled and Monitored Natural Attenuation Strategies for Arsenic Pollution in Mining Environments

Arsenic exposure is a world health concern and mining activities are one of the main causes of exposure to it. Natural attenuation mechanisms of arsenic include adsorption over iron oxides. Mexico and Australia share particular environments in which arsenic attenuation processes knowledge is cutting edge for various reasons: the hydric regime, the neutral to alkaline conditions and very specific mineralogy. The extreme wet and dry conditions in the mining environment take the limit solubility and precipitation cycle reactions, as opposed to high and regular rain and runoff, for arsenic attenuation.

Three samples of tailings with distinctive mineralogy were collected, characterised and weathered to detect natural attenuation mechanisms.

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