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Solutions for Arsenic Control in Mining Processes and Extractive Industry

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In mining, quarrying and industrial minerals production arsenic is a common element, thus creating a challenge in mining processes. This project aimed to develop solutions to control and remove As-compounds in materials and effluents of beneficiation processes and other mining operations. Focus was on various technologies e.g. traditional mineral processing, bioprocessing, water treatment, as well as various materials such as gold ores and concentrates, industrial by-products, and mine waters.

The results of suggest that by novel mineral processing and proper water treatment methods the amount of As-compounds in tailings and effluents can be reduced to levels that satisfy the regulations concerning mining waste management. According to the environmental research, mining activities tend to increase the proportion of potentially mobile and available elements in soil. The effect of mining activity on geogenic contamination needs to be considered in risk assessment.