Effective Biological Water Treatment for Metals and Other Inorganics in Mining Waters.

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Biological methods are gaining wider acceptance in the mining industry for the treatment of metals and other inorganics common to mining waste. While lower costs relative to conventional treatment have made biological treatment an attractive option, the performance of some biological systems has been less than predictable. In addition to performance complications, many biological methods make no provision for contaminant collection and disposal. Applied Biosciences has developed the ABMet™ water treatment process specifically to address these issues. The ABMet™ process is an engineered and highly controllable biological process for the removal of heavy metals, metalloids, and other inorganic compounds like cyanide, nitrate and ammonia. The contaminant removal activities of site-optimized microbial cultures in a bioreactor environment are precisely controlled through a regulated nutrient delivery system. ABMet™ systems are able to achieve non-detect effluent levels for contaminants such as arsenic, chromium, selenium, and zinc and are designed to remove these contaminants from the system as well as from the target stream. Data from operating full-scale plants, pilot plants and bench-tests will be presented.

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