



Get Caught Looking



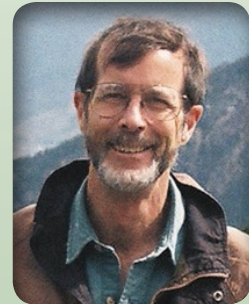
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James Gusek

Senior Consultant, Golder Associates Inc., Lakewood, CO

“Engineered Pumpable pHoam™: An Innovative Method for Mitigating ARD”

If one can embrace the medical analogue, much of the mining industry currently suffers from a massive bacterial infection. When pyrite-bearing or sulfide-bearing rock formations, tailings, or mine wastes are infected by *Acidithiobacillus ferro-oxidans*, the likelihood of forming acid rock drainage (ARD) is almost guaranteed. The “pharmacy” of antibiotics available is extensive, ranging from solid alkaline amendments like limestone to liquid “medicines” such as sodium lauryl sulfate, sodium thiocyanate, waste milk, and bipolar lipids. Unfortunately, the “geo-medical” teams of geochemists, microbiologists, engineers, and mine managers lack the tools to surgically apply these active ingredients where they are needed most with a minimum of waste. Distribution of fine grained limestone on the surface of an acidic mine waste dump is analogous to applying a bandage soaked in antacid to treat an upset stomach. The implementation of up-to-date best management practices has not healed the patient; an equivalent combination of hypodermic needle, cyber knife, and arthroscopic probe is clearly needed. Mr. Gusek is a Senior Consultant with Golder Associates, Inc. He graduated from the Colorado School of Mines in 1973 with a B.Sc. in Mining Engineering. He specializes in the design of passive treatment systems for mine influenced water. Since 1987, his work with acid rock drainage prevention and passive water treatment systems has included about 50 projects throughout the U.S. and internationally. He is on the steering and mitigation committees of the Acid Drainage Technology Initiative - Metal Mining Sector (ADTI-MMS).



Thursday, April 25, 2013, 2:00pm MDT

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