

Keynote speech

Considerations for Mine Water Management in Operations

John Foriyes LUPO

Newmont Mining Corporation, Geotechnical and Hydrology, 6363 South Fiddler's Green Circle, Suite 800, 80111, Greenwood Village, CO, United States; john.lupo@newmont.com

Abstract Mine water management plans at operating mines can be challenging to design and implement. The primary challenges to mine water management at stems from the fact that there are often multiple water sources to manage, such as:

- Open pit dewatering and de-pressurization
- Underground mine dewatering
- Process plants
- Tailings storage facilities
- Heap leach facilities
- Overburden storage areas
- Water storage reservoirs
- Run-off from precipitation

Water management of these (and other) sources consists of collection, routing, storage, treatment, and permitted discharge of water. However, the quantity and quality of water generally varies from source-to-source and over time, making the source water difficult to predict and manage. To address this variability (in quality and quantity), a robust mine water management plan should be developed to consider the natural dynamic process at mine operations. This means the plans must consider the inherent variability in mining operations and be able to adapt to the variability while still functioning.

This paper presents considerations for developing mine water management plans for operating mines, with a focus on the variability in sources of mine water and methods than can be used to effectively managing water.

Keywords Mine, Water, Management, Operations

