Filter-Pressed Dry Stacking: Design Considerations Based on Practical Experience

C.Hore, C.Crystal, I.Ezama

Tailings and Mine Waste, 2018, Keystone Colorado
The Challenge

Too Hard Basket
The Challenge

This is where we are going
Can my tailings be filtered?

Yes!

*With a tiny fine print disclaimer…

It’s about efficiency.
What variability should I expect?

Often a lot!

Talk to the Geologists
Do I need to filter all my tailings?

Maybe Not…
Target Moisture Content - Drivers

Conveyability

Truckability or trafficability

Water saving

Compaction

Liquefaction

Landform Stability
Target Moisture Content - Drivers

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Target Moisture Content

Moisture (%)
Target Moisture Content

Moisture (%) vs. Tailings Property or Use
Target Moisture Content

Image source: Nelson Amoah, published materials, April 2018
Target Moisture Content

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Upper limit
Target Range
Off-spec tailings management

Commissioning

Operations

Have a Plan!
Off-spec tailings management

Loading pad

Zones within facility or separate facility

Back-up transport
Climate – Not Just Arid Environments

Wet and/or Cold
Climate – Challenges and Opportunities

Wet and/or Cold
Pore Pressure Generation
Understanding is Critical

Instrumentation & Monitoring
Co-Disposal and Co-Mingling

Significant opportunities
Cost – Holistic, Not Isolated

- Water
- Land
- Closure
- Risk
- Tailings
- OPEX
The Challenge

Operating Filter Tailings Projects

Too Hard Basket

Scale
Thank You

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