



Barkerville Gold Mine's Refurbishment



THE CLIENT

Barkerville Gold Mine is a mining company with gold assets throughout central British Columbia. They are involved in all phases of development, from early exploration through advanced projects, mining operations, and reclamation.

THE PROBLEM

Barkerville Gold Mine came to us with a request to help them refurbish their mine at Quesnel River Mill. In particular, they needed our expertise on two projects:

1. a new Cyanide Mixing System to replace the worn-out existing system
2. the repair and reconditioning of four Leach Tanks, each thirty meters in diameter, as well as the engineering of a crane-mounted monorail to help with maintenance and access to tank pumps

This project posed several challenges for Mainland:

- working within the crowded confines of an existing mill
- relying on old drawings, overlaid with 3D imaging, which made it difficult to see what actually existed and how we could best apply our solutions
- determining how much extra support was required for refurbished structures
- integrating customer concepts into a workable design



QUALITY SOLUTIONS YOU CAN COUNT ON



Mainland Machinery prides ourselves on our ability to not only build top quality steel fabrication, but also on our ability to build strong, long-lasting, relationships with all of our customers. Regardless of scale or complexity, we work hand in hand with our customers to help them achieve their goals.

THE SOLUTION

Mainland's aim was not only to make sure that the new equipment fit well into the existing space but also that its new setting was designed for maximum safety and efficiency, so that future maintenance would be easier.

Mainland designed a Sodium Cyanide Mixing System that included a dust-collecting hood, hopper, mixing tank with agitator, transfer pump, and solution storage tank, as well as auxiliary equipment and instruments. The dust-collecting hood was designed to meet the super sack bag's dimensions. The new refurbished system used our standard dust-collection process without waste of product because the exhaust fan vacuumed dust into mixing tank that acted as solid particle settle down zone. Dust flowed into an in-line HEPA filter and activated carbon filter stack. Air entered the exhaust fan and was vented to a plant-designated point outside.

For the Leach Tanks, we replaced sections of the tank's walls that were corroded and worn thin, and we completely replaced the steel floors. We also replaced the pump nozzle. To make future maintenance and care easier, we design a monorail with crane and a maintenance shed at the top of the tanks.

THE OUTCOME

In the end, Barkerville Gold Mine was so pleased with how simple the new system was to operate that they waived the on-site training and commissioning. All in all, the project was a big success and Mainland was grateful for another effective partnership with a satisfied customer.

