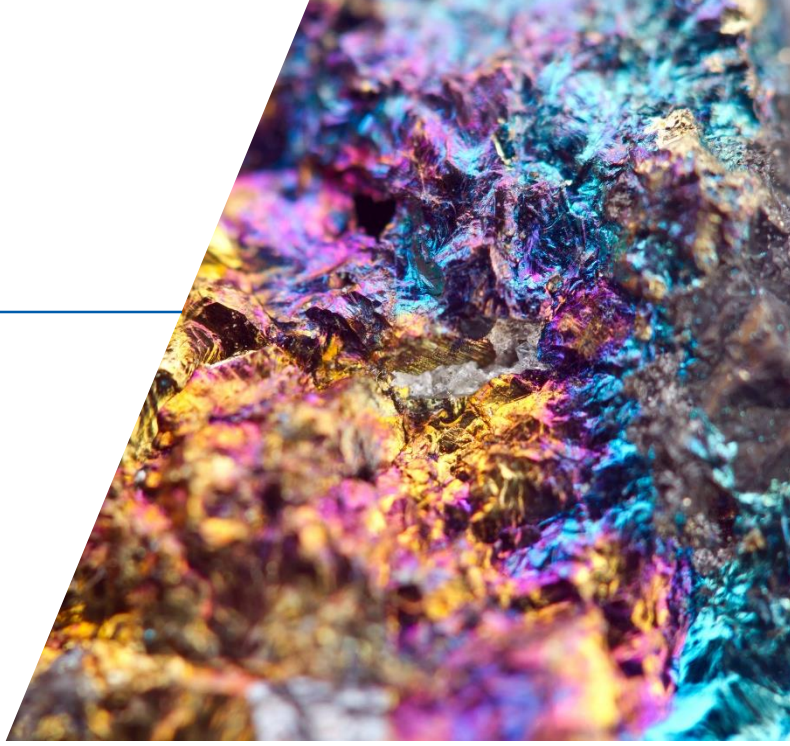
PALL Water



High Efficiency Mobile Membrane System Rapidly Restores Gold Mining Plant while Protecting the Environment

THE CHALLENGE

In 2015, a gold mining plant in Peru at 3,000 meters of altitude sought to protect its existing reverse osmosis (RO) unit from contaminated leachate water. An operator found that the plant's conventional treatment, consisting of neutralized and treated leaching water, could not provide a stable and high quality stream of water for mining production. The plant required a quick, reliable wastewater solution to not only meet peak demand in the summer months, as well as treat the mine leachate and prevent the existing RO membrane from collapsing or releasing contaminated water into the environment. Compounding the challenge was the geographical nature and environment of the Peruvian plant. The ideal solution would be able to operate with a quick delivery rate and small footprint for the plant given the difficult restrictions.

THE SOLUTION

Pall Corporation worked closely with a mobile water treatment specialist, who selected Pall's Aria™ FAST membrane system as a solution to treat the mine leachate, guarantee the availability of a quality water source and increase overall capacity. The gold mining plant initially deployed one Aria FAST unit that kept the treated leachate water neutral and chemically stable in order to avoid any form of precipitation and prevent the pre-existing membrane from collapsing.

With the Aria FAST unit's quick deployment of 6 months and seamless ability to increase capacity, the membrane system was a perfect solution to address the challenges of Peru's strict regulations and the gold mine's focus on social impact. Furthermore, Aria FAST's modular, self-contained form factor removed the need for the plant to erect any new buildings or spend time configuring the system before it became operational.

THE RESULT

The fully integrated Aria FAST unit allowed the gold mining plant to rapidly meet water supply demand and remove the colloids, algae and all particulate matter from the leachate water. After months of utilization following the implementation of Aria FAST, the operator was able to improve the quality of the pre-existing RO membranes and increase the flow capacity of the Aria FAST unit by 450 cubic meters without any additional unit extension. The unit quickly increased permeability in the plant, keeping the plant online. Additionally, the system was able to meet Peru's water regulation standards while preventing any harm to the environment.

Pall's dedicated Aria™ CARE customer service team provided a technician to facilitate the installation, and now provides continuous, remote monitoring to ensure the system is fully operational on an ongoing basis. With the rental agreement, the Aria CARE team provides 24/7 phone support and a technician can troubleshoot any issues that arise and quickly make necessary changes to the system.

aria fast

The speed of deployment allowed the gold mining plant to rapidly meet its water filtration needs while preventing any damage to the environment from occurring and saving the customer from a potentially costly shutdown procedure. Overall, the Aria FAST system provided the following benefits:

- User-friendly with quick & easy deployment
- Increase the protection of pre-existing RO membrane life
- Flexibility to increase capacity
- High efficiency to treat a difficult influent
- Positive impact on the environment

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