Customer Success Story

Location: Canada

AMI system reduces process water discharge for mining operations

Optimizing water usage while minimizing discharge is crucial for mining operations.

Challenge

With multiple mining operations in Canada, the demand for efficient water management solutions is key.

A nickel mine and advanced base metal exploration company in Canada represents one of the most advanced nickel sulfide projects in North America.

The company had an extremely urgent need to implement a water treatment system capable of reducing process water discharge while maintaining high-quality water standards.

The system had to be installed quickly to meet operational and regulatory demands, with minimal disruption to ongoing mining activities.

Solution

Applied Membranes designed and built an advanced Reverse Osmosis (RO) system with a capacity of **200 GPM (45 m3/h)**.

The skid-mounted AMI system includes microfiltration pretreatment to effectively remove contaminants and impurities from the process water.

Applied Membranes also conducted field check performance testing to ensure optimal system functionality and performance at the client site.

Key Components:

- Antiscalant
- Chemical injection system
- Standalone clean-in-place system
- System controller

Results

AMI system effectively treats contaminated process water and produces high-quality potable water for reuse or safe discharge.

Rapid deployment: Understanding the client's urgent timeline, AMI expedited the design, manufacturing, and installation to meet the tight deadlines.

Compact design: The skid-mounted AMI system allowed for easy installation and integration, minimizing downtime and disruption to mining activities. The modular design also offers scalability for future expansion or relocation as needed.

Community impact: Water produced by AMI system extends beyond the mining operations, providing potable water to the surrounding community of over 500 residents.