Xylem provides mobile solutions



Challenge

A southern mining company was developing salt dome gas storage facilities that uses water to mine salt from the domes shaping them so they can then be used to store natural gas inside under high pressures. The raw water used for the mining process contained high levels of iron (5-8 ppm) resulting in equipment fouling and high maintenance costs. This significantly reduced the rate at which the plant could develop the caverns, impacting both its on-line date and operating costs.

Time was of the essence. To purchase and install a capital system would take approximately 4-6 months, which left the customer concerned about production. A mobile system was the answer. The company was adamant about having the mobile system up and running within two weeks of receiving the project order. The amount of space allotted for the temporary solution was also a critical variable.

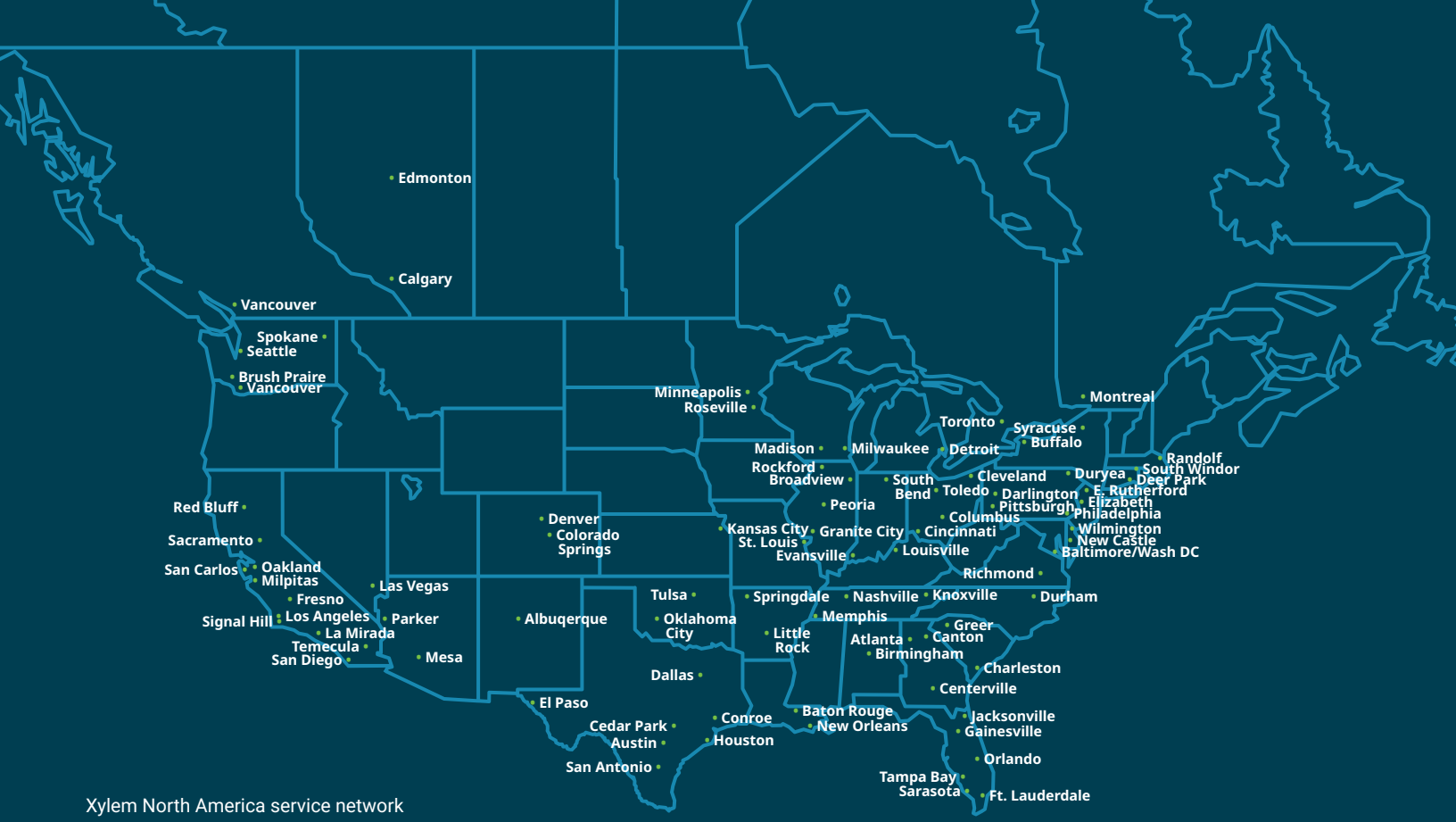
Solutions

The mobile solution included two Horizontal Filtration Trailers (HFT) loaded with multi-media. With the high amounts of iron and very few other suspended materials, Xylem felt that multi-media filters would be very effective. These filters follow oxidation of the iron from the well source. The customer is feeding chlorine gas approximately 200 feet from the filters, which provides sufficient contact time for oxidation of the iron to convert it to an insoluble form. Less than 0.2 ppm of coagulant is then added to increase the size of the particles for filtration. After the chlorination and filtration processes, the customer is now seeing iron levels at less than 0.5 ppm – a significant reduction – that reduces system fouling. Within the first month of service, the customer saw that the mobile system could provide the water quality required and with additional equipment, they could increase the facility's production. They then requested Xylem to bring in two additional Mobile Pretreatment (MPT) trailers to increase the total output capacity to 4,500 gpm.

The HFT and MPT units offered high flows in a limited footprint that served the customer's space issue well. The automated control and operation of the units required limited supervision from the on-site personnel. Weekly site visits from trained Xylem staff provided the mechanical and technical knowledge required to keep the system running at peak performance.

Results

The mobile system was on-site within seven days – earlier than requested by the customer. The customer was able to treat the water to their specification without losing production, thanks to the quick delivery and start up offered by the mobile system.



Xylem North America service network

North America service network

Our North America service network is backed by more than 80 offices staffed with certified technicians and applications experts who can solve your problems. In addition, Xylem provides response flexibility through either a lease or capital purchase option, and the company offers assured liability protection through environmentally safe waste destruction.

Services available

- Activated carbon supply, removal and reactivation services
- Filter media supply and removal
- Ion exchange resin supply
- Membrane supply and cleaning programs
- Parts and expendables
- Service contracts
- Temporary/emergency water systems

Technologies available

- Reverse Osmosis (RO) membrane filtration
- Conventional clarification and filtration
- Oil / water separation
- Granular activated carbon adsorption
- Demineralization
- Inorganic metals removal
- Chemical addition

Xylem delivers cost-effective, reliable systems guaranteed for quality, safety, and compliance. Our trained service staff is available to make sure your systems is running at peak performance and to your specification. For your water treatment system, choose the partner that is committed to taking care of the world's water…and yours.

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