New SCU™ trace metals removal media helps power generator treat dewatering process for discharge to public sewer

Overview

In February 2011, Xylem was contacted by a large Southern California power utility. The customer was in the first phase of a large investment at the site and required assistance to drain a large cooling water intake system. The National Pollutant Discharge Elimination System (NPDES) permit levels for this facility required treatment of nickel to 6.7 ppb along with low level organic compounds in a seawater background ionic chemistry. Xylem evaluated treatment with the new SCU adsorptive media and was capable of reaching the desired treatment goal.

The initial project successfully treated 150 gpm and allowed repair of the intake manifolds. Once the repairs were completed, the treatment system was transitioned to dewatering excavation and the location of the site's newly poured foundations. The system was expanded to 600 gpm to successfully treat the process water during the two month project.

Xylem provided a complete, service-based treatment process that included pretreatment equipment, storage tanks, vessels containing media and activated carbon. As well, full on-site service was performed by Xylem's AQUA pro service professionals on a 24/7 basis during project completion.

Treatment systems by Xylem offer ultimate flexibility and can expand to larger vessels as a customer grows, or exchange more frequent as the production volume is increased.

When the media capacity is exhausted, Xylem local service technicians remove spent media/vessels from the site and replace them with fresh tanks containing new media. The vessels are transported to our company-owned RCRA-permitted and licensed TDSF treatment facility for compliant treatment and recovery of metals. The system's modular design allows for easy exchange and service with minimal disruption to daily operation.

Significant accomplishments

Xylem designed and provided the power utility with a multi-treatment approach to meet the desired discharge requirements in a cost efficient manner.

Xylem responded within a week of the customer's inquiry and provided a 150 gpm system capable of treating seawater for very low metals discharge. The flexibility of the Xylem solution allowed easy modification when the customer flow requirements later increased to 600 gpm.

Xylem managed the waste carbon media and provided a turn-key system that minimized capital investment and provided metals removal from the wastewater stream to below the discharge requirements established by the City.

Off-site resin regeneration provides the customer with an advantage of simple operations with compliance to all RCRA regulations. The exchange service at Xylem eliminated the need for on-site storage of treatment chemicals for improved site and personnel safety. Removal of the contaminant off-site also eliminated the potential for recontamination.

Facility	Power generation
Application	Construction dewatering for NPDES discharge
Technology	Ion exchange/adsorbtive media
Scope of services	• Laboratory service • Field service • 24/7 monitoring/recording • Media/Trace level adsorbents • Waste removal, handling and treatment
Start date	June 2011
Project duration	4 months



Xylem North America service network

North America service network

Xylem's 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

- Filter media supply and removal
- Ion exchange resin supply and regeneration
- 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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