

Metropolitan Council Environmental Services – City of Rosemount, Minnesota

Total Suspended Solids and Phosphorus Removal in Municipal Wastewater Treatment Effluent.

In February 2004, Siemens Water Technologies, formerly USFilter, commenced a three-month service contract with the City of Rosemount, Minnesota for treatment of phosphorus in the effluent discharge from the city's wastewater treatment facility.

The customer's 0.75 MGD facility was permitted to discharge wastewater with a maximum average monthly total phosphorus level of 1.0 mg/l; however the effluent from the facility's newly installed disc filters was exceeding the NPDES permit limit.

Extremely cold winter temperatures was determined the cause of the problem with total suspended solids (TSS). New disc filters were installed to remove TSS and the associated phosphorus, but soon after the installation it was determined that the phosphorus concentration had not been reduced.

A water sample was sent to Siemens Water Technologies for testing where it was confirmed that soluble and insoluble phosphate was attaching itself to the suspended particles in the water. The unusually cold temperatures were preventing the disc filters from effectively removing the suspended solids in the waste effluent which explained the presence of phosphorus.

Siemens Water Technologies solution provided a high-rate mobile clarification unit for the removal of suspended solids and thus reducing phosphate levels. The clarification system is a self-contained, trailer-mounted unit that treats water with high turbidity, high total organic carbon (TOC), algae or very cold water.

Four days after the clarification system began treating water, the total phosphorus level of the treated effluent was 0.75 mg/l, comfortably below the permitted 1.0 gm/l maximum provided by the NPDES.

Significant Accomplishments

Siemens Water Technologies solution enabled this customer to solve their phosphorus problem within a short enough timeframe to still meet their monthly average discharge limits.

The facility was able to stay in compliance without the threat of shutdown or financial penalty.

No further capital investment was required to solve a temporary, weather-related condition.

Facility	0.75 MGD Municipal Wastewater Treatment Plant
Application	TSS and Phosphorus Removal
Scope of Services	Analytical testing, delivery, installation and start-up
Technology	Mobile Clarification
Start Date	February 2004
Duration of Project	Three Months

Mobile clarification provided a temporary solution to a weather related condition





Siemens Water Technologies 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, Siemens Water Technologies 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

Siemens Water Technologies 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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