



Continuous Microfiltration System Ensures Safe Drinking Water For Wisconsin Residents

The Kenosha Water Utility treatment facility, located on the shores of Lake Michigan in Wisconsin, needed to upgrade its two plants to meet the expanding water needs of the community it services.

The facility had two conventional water treatment plants on a small site trapped between a park and Lake Michigan, leaving little room for expansion. One of the plants was built in 1916 and needed to be decommissioned. In addition, the public was demanding that the facility take extra precautions to prevent *Cryptosporidium* contamination of its drinking water. *Cryptosporidium* is a dangerous and potentially deadly bacteria that had previously been found in Milwaukee's water system, a community only a stone's throw away from Kenosha. The city faced a costly upgrade, a size constraint that limited options and growing public concerns.

The Kenosha Water Utility and the engineering firm of Montgomery Watson conducted an extensive pilot test of USFilter's Memcor® Continuous Microfiltration (CMF) system, and eventually commissioned the installation of the Memcor Model 2 X 8 X 90M10C.

Microfiltration is a process that uses a thin, semi-permeable membrane to remove suspended solids and micro-particles from water. Memcor CMF-S (Continuous MicroFiltration-Submerged) systems are designed to provide maximum economic efficiency in removing a wide range of contaminants which include suspended solids, particles, colloids, algae, bacteria, yeast, protozoa and cysts. The CMF system also significantly reduces suspended BOD. The submerged microfiltration system offers the capability to retrofit existing conventional filters cells.

The CMF-S system design is based upon the solid foundation of the Memcor CMF technology that has been proven in more than 700 installations across all countries and markets. The high performance of Memcor CMF

Microfiltration is useful and affordable for municipal water, wastewater, and water reuse treatment. These systems are capable of 6 log removal of *Giardia* and *Cryptosporidium*. Memcor CMF-S unique in-situ integrity testing validates removal down to two-tenth of a micron.

Kenosha found that the CMF could produce excellent quality drinking water regardless of the feed or incoming water quality, even in temperatures ranging from 33°F to 75°F — a concern on Lake Michigan — and in wide ranges of water turbidity or cloudiness.

Membrane technology enabled the facility to achieve the assurance of complete *Cryptosporidium* removal and saved \$10 million in total project cost when compared to conventional treatment options.

Furthermore, the compact CMF system provided a simplified expansion and eliminated the need to destroy the older plant. Today, the facility can treat more than 40 million gallons of water per day.

The people of Kenosha can be confident their drinking water is safe from infection by the potentially deadly *Cryptosporidium*. In addition, taxpayers have saved \$10 million that could be used for other municipal purposes.

Based in Palm Desert, Calif., USFilter is the largest provider of commercial, industrial, municipal and residential water and wastewater treatment systems, products, and



USFilter's Memcor Continuous Microfiltration (CMF) system installed at the Kenosha Water Utility treatment facility in Wisconsin.

services in North America. Its parent company is Paris-based Vivendi Environment, a worldwide leader in environmental services providing customers on every continent with a complete range of water, waste, energy, and transportation services.

For further information, phone USFilter at 800-525-0658 or write in 1110 on this issue's Reader Service Card.