

An Evaluation Of The Removal Efficiency Of Zebra Mussels From Raw Water By Primar Filtration Ceramic Filters

Approaches to control Zebra Mussel (*Dreissena* spp.) bi-fouling in raw water systems can be broadly categorized as either chemical, physical, or biological. No biological methodology has proven to be effective, may be limited by present and/or future environmental regulations. Small water withdrawers, such as cottage owners, will probably not be able to obtain permits to inject a chemical, such as chlorine, at the intake to keep the intake-line mussel free. Back flushing with chemicals is also not permitted. An environmentally-benign, low maintenance alternative is to install, at the intake, a filter with uniform-sized small openings that would exclude the planktonic Zebra Mussel life forms commonly referred to as Veligers.

On October 24, 1995, representatives from FERRO Corporation (FERRO), Primar Filtration, and Acres International Corporation (Acres) met to discuss the logistics and practicality of conducting a pilot-scale field based study to evaluate the biological effectiveness of the Primar Filtration ceramic filter manufactured by FERRO to exclude Zebra Mussels from a residential-sized water line. A proposal that included a proposed study plan was prepared by Acres and accepted by FERRO and Primar Filtration.

The ceramic filter assembly proposed for testing was constructed of ceramic-bonded alumina particles that are shaped into a tube. The units proposed for testing were FERRO grades, FAO 100, FAO 70, and FAO 50. The tube size was 4 inches OD by 17 inches long.