

Orelis Inc. has developed a highly mobile membrane wastewater treatment plant that is engineered specifically for portable wastewater rental fleets in the remote camp industry. Orelis Inc. has built the plant around the needs of the industry and used their MP4® membrane as the main differentiator between its wastewater treatment plants and its competition.

Orelis Inc. designed the plant with five key engineering goals in mind:

- SAFETY:** Orelis Inc. has committed to eliminating confined spaces, H2S exposure and other safety issues related to traditional membrane wastewater treatment plants.
- OPERATION:** Operating the plant is kept as simple as possible to ensure that all operators can do walkthrough checks of the plants.
- MAINTENANCE:** We kept the mechanical parts to a minimum to reduce the potential of mechanical breakdown. The plant operates off a total of 5 pumps and motors to make inventory and replacement as simple as possible.
- PERMITTING:** Permitting for the plants is streamlined because of Orelis Inc. participation in the Environmental Technology Verification Program. Customers will benefit for agreements in place with Alberta Environment and the ETV program to streamline the permitting process.
- MOBILITY:** The compact size of the MP4® membrane allows for an easier transportation to remote sites.

Why the Mp4 Membrane



The Orelis MP4 membrane is key to all aspects of the wastewater treatment plant design. All other successful portable wastewater treatment plants have had submerged membranes which create huge logistic and maintenance problems while with operation. Traditional membranes are located inside a bioreactor tank which is filled with activated sludge. This makes maintenance difficult because the plant needs to be taken offline, and the bioreactor tank drained in order to gain access to the membranes. Submerged membranes need cranes, access platforms and a lot of automation in order to work properly which is expensive to build into a portable wastewater treatment plant. Orelis has combined their patented MP4 membrane with years of experience in the remote camp industry to engineer the system specifically for use in remote camp industry. The significant advantages the membrane and the plant design have given customers, have set standard for safety, operation and regulatory compliance.

100 men plant with a 25 m³/day capacity of effluent processed

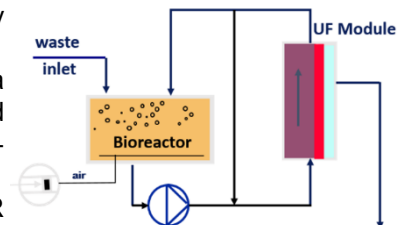
15 minutes to replace the MP4® Module on-site

ETV Program

The Environmental Technology Verification is an independent program which only purpose is to assess the performances of innovative environmental technologies.

The ETV is piloted and accredited by Environment Canada (EC), and provides a specific and precise performance claim of the technology. Its credibility and recognition, in Canada and worldwide, are major benefits for both vendors and end-users.

The 3 month test was run at Gold Bar wastewater treatment plant in EPCOR facilities, using the effluent from the city sewage system.



Quality of water produced
 CBOD < 10 mg/L
 TSS < 10 mg/L
 Fecal Coliform < 100 CFU/100ml

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