



CASE STUDY

A Solid Solution and Impeccable Service Wins Over This Client

Canada's oldest cheese company looks to Newterra for systems and support

Market Served: Dairy Manufacturing Facility
Application: Decentralized Wastewater Treatment
Location: Madoc, Ontario
Challenge: Stringent Discharge Requirements
Solution/Service: MBR Industrial Sewage Treatment Plant

The Client

Ivanhoe Cheese, a member of the Gay Lea family, is a growing, successful cheese company with a reputation for quality and customer service. Established as a co-operative in 1870, it is the oldest cheese company in Canada and is recognized as HACCP, Kosher and Halal certified.

The Challenge

Historically, the Ivanhoe Cheese facility had collected and sprayed its high nutrient wastewater on surrounding agricultural land. However, the introduction of more stringent government regulations that would ultimately eliminate the practice prompted the company to review treatment options to ensure continued environmental compliance.

The Solution (Part 1)

Of the various technologies reviewed by the client, Newterra's Industrial MBR (Membrane Bioreactor) system was selected for its simplicity and its high-effluent quality, based on the 11,883 GPD (45 m³/day) design flow. Roughly 90% of the wastewater comes from the cheese making process and the remaining 10% consisting of domestic wastewater from the facility.

It also utilized extended aeration to compensate for the high loadings in the wastewater (Influent BOD levels of approx. 3,000 mg/L). The system enabled the facility to continue their direct discharge into a weeping bed and even offering the potential to recycle the water for use in their cooling towers and boilers.

The Newterra MBR system houses the membrane tanks, control systems and blowers in an above ground 40' ISO-certified shipping container, while below-ground tanks are utilized for aeration. The use of below-ground tanks for aeration in wastewater treatment provides a range of practical advantages, including space efficiency, environmental control, safety, and aesthetics.

In addition to the MBR System, DAF (Dissolved Air Flotation) System was added to remove excessive fats, oils and greases that are a by-product of the cheese making process. DAF systems are particularly useful in applications where traditional sedimentation methods may be less efficient or where high-quality treated water is required. This component was originally installed as a temporary rental system for a compatibility testing, but when the system exceeded expectations, it was then replaced with a permanent Newterra DAF System created by Newterra.

The Solution (Part 2)

The Ivanhoe Cheese facility started receiving a new a source of milk for the creation of whey, which is a by-product of the cheese-making process and is separated from the solid curds during cheese production. Whey has several uses and applications, including being used in the production of various food products.





MBR Industrial Sewage Treatment

To achieve concentrated whey, milk is treated through an RO (Reverse Osmosis) System which separates the whey – a liquid that contains a mixture of water, lactose, proteins, minerals, and some fats from the excess wastewater that goes to the MBR system for treatment and discharge.

To treat this additional permeate from the whey process, another 40' ISO-certified shipping container MBR System was added for rapid scale-up, doubling capacity. The addition of this extra permeate from the whey is adding extra clean water into the system, so more membranes were added more membranes to take the clean water out of the system. The aeration in the wastewater holding tanks never had changed as the overall amount of pollutants didn't change, but the membranes had to double in size as they now treating roughly twice as much water through the system.



Service, Service, Service!

Newterra is committed to aligning our work with your company's purpose, mission, and core values. And we recognize our Field Service Team is a crucial part of Newterra's operations – especially one that serves all of our technologies and customers.

Our team visited with the personnel Ivanhoe Cheese at their site for several days, reviewing their equipment, setting them up for success, and provided training on how to successfully operate. All in accordance with our robust commissioning and start-up procedures.

Our Field service team are the expertise our customers come to rely on. Our team's knowledge and timely response ensure that our customer's operations run smoothly and efficiently, that they know we value them all while minimizing downtime, minimizing cost, and ensuring

their ongoing compliance. And perhaps at the most crucial juncture of our customer's experience, they help get our customers off the ground with start-up and commissioning services.

“Eddy and the crew ... were great to work with, knowledgeable and an overall pleasure. I feel lucky to have had such a great experience training with these guys.”

Campbell Thomson, Ivanhoe Cheese – Gaylea Foods

Our field service team's efforts to up their game and provide superb service is central to our approach and integral to our strategy. And our focus on customer service really showed in the accolades the team received afterward.

“We want to express our thanks to Newterra for the great team of guys that came for the startup ... those kind of people are invaluable to get us going on the right track... [We] were very confident we could operate this 100% when Eddie cut us loose on Saturday!!!”

Chris Spencer, Ivanhoe Cheese – Gaylea Foods

The field service team's work is crucial to our customers' experience. Over the years, repeat customers Ivanhoe Cheese have to value us not just as technology providers, but partners who will wrap our arms around the customer and work diligently to ensure their success. Following our team's startup, our Ivanhoe Cheese signed up for ongoing support services to keep the relationship (and the system) working strong.

Overall, the Newterra Field Service team's contributions help to strengthen our reputation as a leader in the water and wastewater industry as a company that is committed to providing high-quality, reliable services.

What's Your Unique Water Question?

Contact us at **+1 800.420.4056** to solve your most challenging water issue.



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