National Research Council Canada

Nova Scotia, Canada

Commissioned in 2020

Algae Thickening

30,000 GPD

Influent: 1,000 ppm TSS

Concentrate up to 150,000 ppm

8 V8 PermaFlux™ Modules

Challenge:

NRC is involved in is the cultivation, growth, and harvesting of various algae strains. A far more concentrated algae solution is required for various testing as well as storage and transport purposes.

Thickening the dilute algal mixture via centrifugation is labor intensive, requires high energy consumption, and can rupture the algae cells over time. Finding an alternative thickening option is paramount to reducing costs and providing a higher quality product.

PermaFlux™ UF Membrane Solution:

After a successful pilot study Thetis was awarded the contract to provide a standalone PermaFlux™ filtration solution to thicken algae as an intermediate step between the photobioreactors and the centrifuges. The system draws freshly grown algae and thickens the contents until they are sufficient to be sent to a centrifuge. The thickening is done recirculating the algae solution through a loop of 8 PermaFlux™ modules until a desired concentration is achieved.

Implementing the PermaFlux™ solution reduced the required centrifugation time by >90% and also significantly lowered the labor required due to fewer centrifuges needing to be operated, monitored, and cleaned.

Contact Thetis Today!

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