

Dewatering Solutions Case Study: A Solution for The Cheese Industry

Cheese Producers across Ontario are seeking alternative methods to managing the waste water they produce. New legislation, set to take effect in January 2010, will ban the land application of whey and wash water produced at Ontario's cheese factories.

Municipal waste water treatment facilities can typically not accept these waste streams, as the Biological Oxygen Demand (B.O.D) is too high, and can cause problems in the operation of the plant. Building new waste water treatment facilities can be so costly that it is not a feasible option.

Bishop Water Technologies has been working with cheese producers across Ontario to provide effective, affordable means of waste water management using the Geotube[®] dewatering technology at a fraction of the cost of conventional waste water treatment plants.

Geotube[®] containers are constructed of a special woven polypropylene material which is extremely efficient at retaining solids and producing a clear, cleaner effluent. Essentially the Geotube[®] is a large dewatering bag.

In March of 2009, Bishop Water Technologies visited a rural Ontario cheese factory to prove the effectiveness of the Geotube[®] technology for the dewatering of waste streams produced at cheese factories. A sample of wash water was collected from the factory and conditioned with a polymer prior to being dewatered with the Geotube[®]. The addition of polymer causes the solids to separate from



On the left is wash water from an Ontario cheese factory prior to being dewatered by the Geotube[®] technology. On the right is wash water after having been dewatered by the Geotube[®] technology.

the liquid, increasing the efficiency of the Geotube[®].

The chemically conditioned sludge was then dewatered using a portable onsite Geotube[®] test kit. In order to evaluate the effectiveness of the process the factory management had the dewatered sample analyzed in comparison to the raw sample. The results were impressive. B.O.D levels had been decreased more than 72 %, Phosphorus by 62% and Total Suspended Solids by over than 98%.

Not only does the Geotube[®] dewater effectively, it also offers increased onsite storage capacity to the client. By trapping and consolidating the solids, clients needs to only dispose of solids once a year and because these solids are consolidated, the volume to be disposed of is greatly reduced.

As Ontario's cheese producers move forward in assessing and implementing alternative solutions to waste water management, Bishop Water Technologies will continue to work closely with them to provide solutions which are affordable, effective and environmentally responsible.

Parameter	Raw Wash Water mg/l	Geotube [®] Filtrate mg/l
B.O.D	1830	510
C.O.D	3190	1050
Phosphorus	49	18.5
Total Oils and Greases	123	14.5
TSS	1040	16

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