

ceased between 200 and 400 feet from the shore or 500 and 700 feet from the intake, and it is unlikely that under ordinary conditions the contents of the tailrace enter the St. Cunegonde supply. Still, as under altered conditions of the current, water level or bed of the river it is not impossible that this may occasionally happen, especially when the shallow flats lying inshore are packed with ice.

It would seem safer to divert the drainage of the St. Pierre into the city sewers, though I never found any evidence of such pollution in the samples examined.

I was not able to detect any evidence of pollution from the tanneries either in the water or the ice of this locality, but the probability that the Verdun shore may soon become densely populated is a further objection to the site.

An interesting point in the analysis was the increase in bacteria, was almost entirely caused by a species apparently identical with the colon bacillus. Corresponding with this increase there was a falling off in the proportion of the *Bacillus fluorescens liquefaciens*, which formed from 30 to 40 per cent. of all the colonies in the pure water of the river and only 0.5 to 1.0 per cent. of those in the polluted water of the tailrace. At 100 feet out the proportion of *B. fluorescens liq.*, rose to 12 per cent. at 200 feet to 25 per cent. and at 400 feet to 33 per cent. It would seem that any unusual deficiency of the proportion of this organism to the total colonies during summer should be regarded with great suspicion.

*St. Lawrence Water.*—The results of the examinations show that this water is not better from a sanitary point of view than the present city supply, as far as can be judged from the number of bacteria and the nature of the sediment. Although informed that the line of the pure St. Lawrence water would always be met with at a point 800 feet south of Nun's Island, I have on two occasions seen the Ottawa water extend as far as 1500 feet south of the island. Of the St. Lawrence water it can safely be said that it is a perfectly clean and pure river water. One point in favor of the St. Lawrence is that it is far less