

# THE Sanitary Review

SEWERAGE, SEWAGE DISPOSAL, WATER SUPPLY AND  
WATER PURIFICATION

## LINDSAY OZONIZATION AND THE ONTARIO PROVINCIAL BOARD OF HEALTH.

A few weeks ago we had occasion to make some remarks upon the ozonized water at Lindsay. The criticism was confined to an examination of an analysis made by Dr. Archibald, of Toronto University. The deductions made were: (a) That the analysis showed that ozone removed less bacteria than the rough filters by which the water was primarily treated. (b) That the total number of bacteria removed by the joint process of both rough filtration and ozone was below the standard required of ordinary mechanical filters. The above deductions were simply matters of fact apparent at once upon an examination of the analysis.

The local Lindsay newspapers, however, made other deductions and came to different conclusions. In fact, they went into hysterics over the wonderful work and efficiency of the plant. It was stated that mose impure water was rendered pure by ozone to a degree never rendered by any other method. These conclusions have been advertised by other papers, with the result that an altogether false impression has got abroad with reference to this, the first instalment of ozone water purification in Canada.

The town council of Lindsay, we consider, are much to blame in the matter. Instead of waiting until the supreme authority of Ontario, viz., the Provincial Board of Health, has given its verdict on the plant, they adopted the plant as satisfactory on the strength of Dr. Archibald's analysis, which he, himself, admits as being practically useless as a measure of the efficiency of the ozone, there being so small a degree of biological contamination in the raw water to commence with.

For some reason or another a report has been circulated that the Provincial Board of Health has shown no anxiety to test or examine the Lindsay plant; in fact, have looked askance upon the whole venture. It is a fact that up to the present the Board of Health has not made any final or conclusive test, nor has it pronounced any verdict upon the process. Apart from the above report, however, we find that another has also got abroad, viz., that the Provincial Board of Health has accepted the process as satisfactory. This is no doubt due to a false understanding that Dr. Archibald has some connection with the Board. Dr. Archibald's tests, analysis, and reports are entirely in a private capacity, and are not recognized by the Board.

As to the question of any apathy on the part of the Provincial Board, we find, on enquiry, that the facts prove the reverse. It, as a body, is anxious and ready at the present time to make a thorough and complete examination and report, but is only stopped from so doing by those responsible for the plant, as they claim that certain alterations and additions have yet to be made to complete the work. It is expected that these alterations, etc., will be completed about the 10th of September. As soon as the plant is in a complete state, and ready to the satisfaction of those responsible for the process, the Board will make a thorough and extended examination, taking samples for analysis from day to day, in order to show the efficiency of the preliminary

filtration and the amount of purification effected by the ozone contact.

There exists neither in this journal nor in the mind of the Provincial Board of Health any prejudice in the matter. Ozone treatment of water is no new experiment; it is new, however, in Canada. There exists no definite data anywhere as to the practical efficiency of ozone as a sterilizing agent in practice, although many laboratory experimental results have been published. Unfortunately, laboratory experiments have a tendency to give efficiencies which are not always obtained in practice. It is, therefore, natural that we keep an open mind until some real working data based on conclusive tests are made. We have said that the council are much to blame, in that conclusive deductions were published before the works received the Board's sanction. As a matter of fact, the Lindsay council at the very commencement of the work ignored Section 30 of the Public Health Act, and never submitted plans or gave notice of their scheme to the Board of Health. It was not until Dr. Amyot was communicated with on May 3rd, 1909, that the Board had any knowledge that such work was in progress. Dr. Hodgetts (Secretary to the Provincial Board of Health) at once called the attention of the Lindsay authorities to this section of the Act, and on May 13th Lindsay supplied the Board with particulars and copy of contract with the company responsible for the installation.

On June 1st, the earliest date possible, a meeting of the Provincial Board of Health was held, it was decided that the chairman (Dr. Sheard) and secretary (Dr. Hodgetts) should inspect the plant and decide what tests and examination were necessary.

On June 7th, the Provincial Board received a letter from the contractors, asking that the visit be deferred, as some improvements to the works were yet necessary.

On June 26th, the contractors asked that an appointment be made for the above inspection. Dr. Hodgetts replied that he would arrange with Dr. Sheard to make the inspection at an early date, Dr. Sheard being at that time on a vacation. In the meantime the Lindsay authorities asked for sterilized bottles in order to convey samples of the water to Dr. Amyot for analysis. Dr. Hodgetts replied on June 30th that no analysis or test should be made until the Board had made its inspection and arrange for such. The inspection was delayed, owing to Dr. Hodgetts having to visit the West on or about the return of Dr. Sheard to Toronto. Lindsay then determined to ignore the Provincial Board of Health for a second time, and called in a private chemist, who produced the analysis on which we have formerly commented, and which, as far as the efficiency of the plant is concerned, is of no value.

On July 20th, the Provincial Board of Health "en masse" made a visit to the Lindsay plant, and at the request of the mayor undertook to at once make a complete test and examination of the whole plant. Dr. Amyot and Dr. Nasmith visited the works to make the arrangements, and were informed by the contractors that such could not be made until the 10th of September as the works required further alterations and additions to complete them.