7-Dec, 2015

To: City of Toronto Council Members
From: Len Mackenzie, President of Mac & Co Environmental Solutions
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Subject: Comments for 2015.PW9.5 on December 9, 2015 City Council

RE: The Code of Practice-CSA B484.4:

In principal, we agree that a Code of Practice will greatly assist in the reduction of Fats, Oil and Grease (FOG) that plagues the City of Toronto in addition to many other municipalities across Canada. However, if passed in its entirety to include CSA B481.4 specifically, this inclusion will eliminate the opportunity for the city to work with many treatment companies that work to achieve the same FOG reduction and pollution reduction goals. In order for the council members to make an informed decision, they must be made aware of the great advances that have been achieved in the field of micro-biology as a means of managing FOG at the source, in collection and at WWTP.

We would like to have the opportunity to present our position to the city council regarding the City of Toronto reference to CSA-B481.4. of the proposed city by-law that states:

"An operator of a food services facility shall not use or permit the use of chemical agents, enzymes, bacteria, solvents, hot water, or other agents to facilitate the passage of FOG through a grease interceptor." We agree that harsh chemicals, solvents and emulsifiers shall not be used, however...

Should this by-law be passed to include B481.4, not permitting the use of bacteria would be counterproductive to the goals of the city and environmental initiative programs. Many drain additives contain surfactants and emulsifiers that "'liquefy" FOG from food service kitchens and pass it through grease traps to eventually enter the collection system. Natural bacteria treatments do the opposite. Bacteria are living organisms that consume FOG, digest it and release a by-product of water and carbon dioxide. Bacteria products permanently remove FOG from the collection system, not pass it through.

With the utilization of natural occurring bacteria treatments one is able to greatly reduce FOG, BOD, COD, TSS and NH3 which decreases loadings in collection systems and WWT plants. By using natural bacteria treatment in manholes and lift stations, municipalities can greatly reduce FOG coming from commercial, residential and industrial "source"; sewer lines act as a pre-treatment facility, which eases the burden on the entire waste water treatment system and preserves the existing infrastructure, greatly reducing haulage and jetting costs. (Wastewater treatment plants work by growing the natural bacteria in the wastewater to degrade the organics. We use the same bacteria strains to treat the "source" of the problem). This treatment must not be confused with degreasers or dispersants which simply break up the grease trap waste and allow it to recollect further down the sewer.

We feel that **naturally occurring bacteria treatment should be part of the solution vs. one that is recommended to be eliminated.** Prohibiting the use of bacteria treatments prevents any opportunity for the City of Toronto to use the latest micro-biology technology to help solve the expediential FOG and related pollution problems. We should be working for the same goal!

Links to bio-treatment companies:

www.macandco.ca

www.microspringintl.com

www.bioscienceinc.com

www.in-pipe.com

In closing, before the CSA-B481.4.6.1.3 standard is adopted in whole, we would request the opportunity to present our micro-biology treatment and case studies that demonstrate CBOD reduction from 1200 mg/L to compliance levels within 3 months, another with FOG levels of 9810 mg/L to 13 mg/L within 6 months. To date these "source" clients are still within compliance nearly 5 years later.

Respectfully,

Len Mackenzie

Len Mackenzie

President

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