BIO-ORGANIC CATALYST
THE POWER IN NATURE®

CASE STUDY

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Results Of BOC Treatment Of FOG's In Secondary Clarifier Influent Channel B With EcoCatalyst

Deer Island WWTP

Program Description

On May 7, 2012; BOC treatment began on a large mass of hard solidified FOG's located in the B17 section of the influent channel of the secondary clarifier B. The mass of FOG's filled the influent channel tightly from side to side across the six foot wide channel. The FOG mass 95 feet long and 6 ½ feet deep.

From May 7 to May 18; EcoCatalyst was introduced into the influent channel with turbulence and completely eliminated the mass of FOG's which broke down and did not reform in the secondary clarifiers.

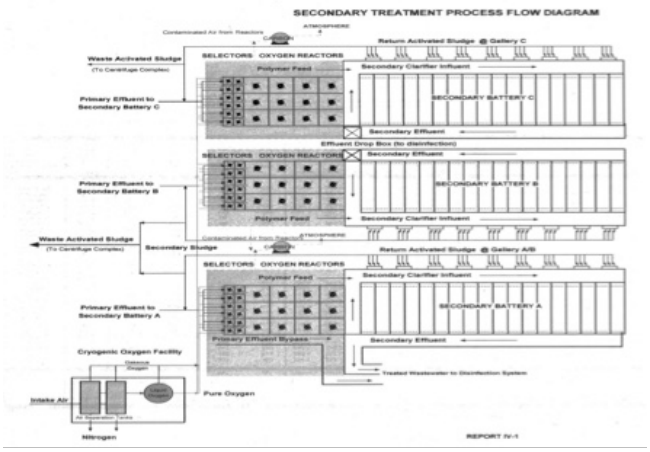
The program benefits demonstrate in the treatment of fats, oils, and greases (FOG) components, the lipids, and other non-solubilized organic wastes in wastewater with EcoCatalyst can have a number of beneficial effects. FOG's are solubilized, preventing their accumulation on surfaces. This solubilization is part of a sequenced process in which lipid ester bonds are instantaneously cleaved, reducing the molecular structure to glycerol and fatty acids.

Glycerol is water soluble and readily degradable by wastewater microorganisms. Essential fatty acids, released from the lipids, can then be metabolized through the biological processes as a high energy food in Anaerobic Digestion,increasing biogas production and source of carbon for denitrification reduction processes.

- FOG's broken down will not reform in other parts of the plant.
- Plastics / debris were completely separated from FOG's
- Odors completed eliminated in treatment area.

BOC Injection Point- Equipment Set Up

Deer Island WWTP - BOC Injection Point



Equipment Set Up

The mass of FOG's filled the influent channel tightly from side to side across the six foot wide channel. The FOG mass 95 feet long and 6 ½ feet deep.

Secondary Clarifier B Influent Channel Site

The "Before" and Day 1 Of BOC Treatment

Progress Day 5 to 11

Day # 5: This photo shows the north end with the turbulence of aerator and the floating plastics released from the FOG mass as it was solubilized. Large sections the FOG mass, 2 to 3 Feet deep had come away from the walls of the channel on each side and fallen into the channel that had been opened the day before. Large sections of the FOG mass were soft and had collapsed. The total volume of FOG's was about 50% of its original volume. This photo shows the thickest part of the mass with the trough opened.

Day 11: With aeration turned on in the channel was turned off, the Plastic mass moved toward the end of clarifier channel B. The mass consisted of floating plastic and grease balls that were smaller still: grape and pea sized. The original volume of FOG's was more than 99.5% solubilized.