







- Biological treatment: bacteria have been used for over a decade to remove oil from oil spills. Studies have shown that bacteria that produce lipase enzymes can be very successful in degrading high levels of oil in wastewater. These bacteria use oxygen for respiration and the hydrocarbons in oil as a food source. This process can take large amounts of time to occur, often over 44 hours. If enough time is given to the bacteria, around 90% of the oil can be removed. The equipment needed for the bacteria to live on can be varied. Rotating biological contactors (RBC) units, trickling filters, moving bed biofilm reactor (MBBR) units and aeration basins are all types of systems that can work for the process. Each system requires oxygen to be readily available to the bacteria to keep them alive, which is known as aerobic digestion. While anaerobic bacteria can work for oil degradation, it is an even longer process that is not as efficient as aerobic bacteria.

The issue with FOGs is one that can be treated successfully with the help of trained professionals.

### 5-Step Plan for Reducing FOG Issues in Manufacturing Operations

To stay within discharge limits, manufacturers must

Hall technicians determine this because they have sold chemistry into upstream processes for over 170 years, so they understand how to optimize the downstream effluent. Here is a typical review and implementation process:

- Step 1: On-Site Process review: Hubbard= processes, chemical usage, and sludge generation.
- Step 2: Equipment check:9.96 T01(lu)-3(dfor )-5(o)-t s@.01 63/F7 9.96 Tf11 303.55 417.F035B>t s@ (timi)4ET@.00000912 OC--



Will a manufacturer need to change its waste treatment? Possibly not, but Hubbard-Hall can help manufacturers identify process changes that can be made upstream so they minimize the downstream issues. This often means helping a manufacturer use less chemistry.

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For more information on this process,  
please call us at 203.756.5521 or email: [techservice@hubbardhall.com](mailto:techservice@hubbardhall.com)

Hubbard-Hall holds certifications for ISO 9001:2015, Responsible Distribution, as accredited by the ACD (Alliance for Chemical Distributors) and as a Women-Owned Small Business, as well as maintaining an association with Omni-Chem<sup>136</sup>.

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