



Documentation for
Sludge Bioremediation Project
Using:

Micro-Solve®
grease and odor control

with



PROJECT – Sludge Bioremediation with Micro-Solve®
CLIENT – City of Hondo, Texas
LOCATION – WWTP



Stephen Winters-WWTP Chief Operator
202 Plant Drive
Hondo, TX

April 30, 2020

Re: Sludge Bioremediation Using Micro-Solve® Solubilizer-Demulsifier/Bacteria Accelerator

Gentlemen,

This report is being generated after 14 weeks of Micro-Solve® treatments at the WWTP in Hondo, TX. There are still several treatments remaining before we reach our mixed liquor goals, and it is recommended that a token amount of Micro-Solve® be applied to avoid a reoccurring sludge build-up.

Mr. Winters, Isaiah, Jose and Daniel have been super accommodating with supplying information and assisting by adjusting our plan as we go along. There is no success without teamwork in this situation, no matter how well Micro-Solve® works. We appreciate the professionalism, flexibility and support. This report will outline the process and adjustments that have been made, while illustrating the progress.

Up to this point, we have experienced reductions in sludge build-up, along with a much-improved overall health of the basin. The color has improved to a light 'cocoa' brown and the smell is of a healthy 'mossy' aroma. It's typical in situations with problematic 'septic' build-up, that after introducing Micro-solve® the biological effects are visually noticeable. Color and aroma are obvious signs of a healthier environment. Micro-Solve® climatized the environment to allow for optimal bioremediation.

Regards,

Chuck Jones

Angle 1:



4/8/19



5/31/19

This Wastewater Treatment Facility is located at 202 Plant Rd. in Hondo, Texas. The basin has some basic measurements of 192'l x 77'w x 7'd and is designed to hold 108,862 cu.ft. of material or 814,344 gallons of raw sewage and sludge.

Issues: This "Race Track" basin is not a part of the standard wastewater treatment process in Hondo, but instead is being utilized as a secondary digester to help deal with solids. As a result of outdated equipment and sludge accumulation the basin became overwhelmed with solids in recent years. Although recently the racetrack had been updated with 4 x new shaft-drive propelled aerators, the area remained overwhelmed as a result of bonded solids and a lack of movement throughout the entire oval basin. The potential for significant digestion was there, but the half circle ends with the designed baffles were still inhibiting proper circulation.

Progress: Going into the project when we guaranteed Mr. Winters that we would 'help' him with the situation, which meant being a 'part' of the solution. With only 40 gallons of Micro-Solve® being used in a basin throughout the 90 day project, there was nothing short of a team effort needed to get the basin moving. As I consistently reminded our Hondo Team, "the magic is in the wastewater". Our Micro-Solve® solution was merely igniting nature's process by releasing trapped nutrients and exponentially increasing the populations of naturally occurring microorganisms to increase the bioremediation process. The process included plenty of wasting, introducing new wastewater, washing down floating solids/mixing and some angle adjustments to the propellered pontoon aerators.

Current Dosage: The current dosage is recommended to use 5 gallons of Micro-Solve® per month to eliminate solid build-up and 10 gallons per month to keep optimal digestion and continue to reduce the sludge blanket.

Angle 2:



11/18/19



2/21/20

Angle 3:



12/2/19



2/21/20



Benefits that Micro-Solve® Offers:

- Reduces toxic and dangerous SSO's in the community
- Reduced lift station O&M costs
- Reduced call-outs
- Relief of awkward politics associated with residents coming in contact with H₂S
- Significant reduction in fats, oils and grease in the collection line and WWTP
- Significant reduction of jetting and vacuuming as it relates to grease
- Reduction in the use of polymers and other chemical at the WWTP
- Reduction in the amount of drying bed sludge
- Reduction in electricity and time treating wastewater
- Increased facultative microorganisms
- Risk management, like dealing with hazardous gases
- Opportunity cost

Micro-Solve® is NOT an enzyme, a bacteria, or a 'quick-fix' emulsifier. Micro-Solve® makes hard grease loose and soluble. It also bonds to the grease and aids in oil-water phase separation. These processes release bound oxygen, nitrogen, and trapped micronutrients strengthening and increasing the population of the microorganisms already living in the system, so they can more effectively bioremediate. Through these processes, Micro-Solve® climatizes the ecosystem. It also accelerates the bioremediation process at point of application all the way to the treatment plant. Grease and sludge will not re-solidify downstream. All of this is great for the entire treatment process.

With regular applications, Micro-Solve® eliminates grease and sludge build-up in the collection and treatment system and saves O&M cost. Micro-Solve® is 100% biodegradable.

Thanks for your time and consideration.

An ounce of prevention, worth a pound of cure.