

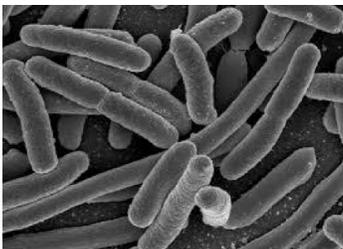
# MOISTURE RELATED FUEL ISSUES

This Spring, we need to give extra attention to potential moisture-related issues that might arise as a result of the unusual winter we had this year. So far, many regions throughout the US have experienced substantial temperature swings in 2020 that could contribute to an increase in moisture-related issues. Tank maintenance programs that use a combination of fuel cleaning, tank maintenance, and biocide products are instrumental in solving moisture-related issues that have occurred and preventing recurrence of future issues.

There are several reasons why the fluctuating temperatures that many regions experienced this winter can lead to a higher occurrence of moisture-related issues. When temperatures change, warm air loses its ability to hold as much water vapor resulting in condensation, and this causes water to accumulate. Freezing and thawing temperatures also lead to water in storage tanks because water can seep into cracks and crevices and expand as it freezes, leading to openings that can let water in. As customers get moving this Spring, they should pay extra attention to moisture levels in tanks, and when care is needed, additional levels of moisture control will help to suspend and remove moisture.

Because of the weather patterns that we experienced so far in 2020, it is a good idea to have a plan in place to deal with potential moisture-related issues and prevent future occurrences. ET Products has several options to help solve these issues and ensure customer satisfaction. Please contact your sales representative to find out more about how we can help you this Spring.

## WHAT IS MICROBIAL GROWTH?



Microbial growth (commonly referred to as bugs or algae) goes hand in hand with high levels of moisture. When conditions are right for growth to occur, these microorganisms thrive and can cause a wide range of issues in fuel storage tanks and vehicles.

These organisms use fuel as a food source, but they also need water to become active. As water saturates out of fuel and settles to the bottom, it turns into a breeding ground for microbial growth to flourish.

Proper treatment with biocides and tank cleaning chemicals can help ensure that customers' tanks are clear of bacteria related issues.

# TELL TALE SIGNS



Common indicators that a microbial issue is occurring typically start with slowed fuel flow caused by filter plugging.

Filters that are clogged often become coated with and contain dark slimy substances in the filter media.

Many forms of microbial growth also cause damaging corrosion that can cause a host of other problems once it has started. By far, the most common shared element between all types of microbial growth is the presence of a

water bottom in the tank where the growth is occurring.

No matter how it shows up, microbial growth can be very frustrating to end-users.

## TANK MAINTENANCE PROGRAMS

Tank maintenance programs are great for keeping microbial growth at bay and helping to ensure that fuel storage tanks are in good shape.

Typical tank maintenance programs include the use of fuel cleaning additives that can help maintain tank cleanliness, housekeeping operations to ensure that tanks are not allowing water and moisture in, and fuel testing programs.

## RECOMMENDATIONS

- 1) Use a tank cleaning additive that can maintain fuel and storage tank cleanliness, prevent corrosion, safely remove water, and provide long term stability for fuels while in storage.
- 2) Use a biocide once or twice a year to ensure that microbial growth is not active.
- 3) Regular inspection of fueling systems can identify weaknesses that could allow moisture to infiltrate tanks early on. Proper housekeeping measures are a key prevention measure that allows us to identify issues before they become severe enough to cause an operational issue.
- 4) Test bulk fuel tanks during Spring and Fall seasons to get a snapshot of the fuel quality and ensure that potential issues can be dealt with before they become problematic.