

Synopsis of the Qualities of Histosol OP-9840

Histosol OP-9840 is used for the remediation treatment of paper mill effluent.

Because most pulp production utilizes acids that contain "S" compounds, the removal and/or reduction of these odor-causing compounds is a primary concern.

Atmospheric "S" compounds have been reduced via the use of scrubbers. The primary effluent problem is the release of noxious gases from the retention ponds.

When liquid effluent containing cellulose, hemicellulose and lignin reach a paper mill retention pond, it becomes a nutrient for microorganisms that metabolize these nutrients and release the components as respiratory by-products, where these by-products become noxious pollutants.

While it is not possible to make odor-causing compounds vanish, it is possible to prevent them from being released into the atmosphere.

Organic Products Company's approach in solving the above challenge is two-fold.

First, Histosol OP-9840 provides a chemical solution. Histosol OP-9840 has a solid suspension content of approximately 9%. One fourth of this material is composed of reactive lignins. (Note: While paper mill effluent also contains lignins, due to the heat and acid used in processing, this lignin has been rendered inert.) The reactive lignins in Histosol OP-9840 have an average of 7 to 9 carbon oxygen and oxygen hydrogen open bonding sites per molecule. This quality enables these lignins to serve as macromolecular sponges adsorbing and absorbing odor causing compounds, forming covalent and trivalent chemically bond cross-linked polymers. These polymer compounds are very difficult for bacteria to hydrolyze. Thus, this approach effectively removes most of the odor causing elements from the pond suppurate preventing them from being released as noxious gases. (Because the lignins in Histosol OP-9840 are so reactive, they link into chains that can hold over a thousand times their own mass in potential pollutants.)

The second part of the Organic Products Company's approach includes the addition of microbial inocula that have been selectively adapted for more than 25 years, specifically to metabolize noxious effluents. This product is called Histosol Bio - Series.

The microorganisms in the Bio - Series products consume nutrients from the effluent, enzymatically hydrolyzing them into carbon dioxide, oxygen and water.

This process removes nutrients from septic organisms that produce noxious by-product gas, such as methane and hydrogen sulfide.

NOTE: The Histosol product works extremely well in recovery smelt scrubbers and lime kiln scrubbers. The product's effectiveness in NCG scrubbers has not been as impressive.