

ChemTreat OC9106 (Histosol Bio5) Reduces Objectionable Odors at Hog Farm Lagoon

BACKGROUND

A Hungarian pig farm raised 15,000 animals annually. The inhabitants of a nearby village complained of offensive odors coming from the direction of the pig farm. Farm management installed a modern wastewater treatment system, but was unhappy with the strong malodor emanating from the lagoons holding the wastewater tanks. The system collected animal waste from a dozen sheds, which then flowed into a collection tank. A screen was used to separate the solids from the collection tank. The remaining wastewater was sent to a lagoon for aeration, then a second lagoon with an overflow system, and finally a larger 20,000 m³ capacity lagoon. The water from this lagoon is used to water the agriculture fields nearby. The existing treatment could not eliminate the odor from the wastewater treatment facility.

SOLUTION

During a 2004 trial, Organic Products Company (OPC) injected an initial 50 ppm of ChemTreat OC9106 (Histosol Bio5) into the separator tank and first lagoon after solids separation.

The lagoon volume was 5.5M gallons. OC9106 was applied using a high-pressure 1.5-inch hose at a rate of approximately 45 ppm. The flow rate was 150 m³ per day. The dosage was gradually reduced to 10 ppm over the next four weeks. Odor around the lagoons and separator was significantly reduced after four weeks of treatment.

After this treatment, OPC injected 200 ppm of OC9106 into the shed water reservoirs, not the separator and lagoon, to simplify the method and begin controlling shed odors. The quantity of animal waste was lower and more concentrated in the sheds, and the amount of OC9106 applied was based on this parameter. The dosing rate was reduced to 50 ppm within a week.

The treatment reduced the malodor in the sheds, especially the ammonia odor. Odor around the lagoon and separator also remained at an acceptable level. The odor control system reduced the ammonia and hydrogen sulfide odors in the air, but did not reduce the odor typically associated with the animals.

RESULTS

Complaints from people in the nearby village reduced significantly. The farm owner was satisfied with the approach to solve the odor problem and happy with the technical support services.

