

Reducing Foam and Increasing Stability Using BIO GENESIS®

CASE STUDY

Location: Idaho Municipal Wastewater Treatment Facility

Problem

A municipal wastewater treatment facility in Idaho uses a small activated sludge system to treat 35,000 gallons per day (gpd); waste activated sludge (WAS) is removed from the system approximately every 2 to 3 weeks. The system frequently experienced intermittent foaming and settling issues, as well as seasonal impact from grease relating to the commencement of the winter tourist season. The operator was looking for a reliable ecofriendly solution to the foaming, scum accumulation, and settling issues that could also help reduce polymer addition.

Solution

An analysis was conducted using existing data that the plant normally tracked and recorded to meet permit-reporting requirements. Operator concerns and operational parameters—such as sludge generation/accumulation; foaming issues; hydraulic loading issues (design versus actual loading); BOD loading; and seasonal fats, oils, & grease (FOG) accumulation—were also evaluated. Once the analysis was conducted it was determined that BIO GENESIS® would be the most appropriate product for this system.

Due to the infrequency of the WAS removal from the system, it was determined that starting a low dose at 1 ppm of BIO GENESIS® would be most appropriate. Dosing would increase if 1 ppm was not found to sufficiently improve the identified issues. The ultimate goal was to bioremediate the problem—resolving the issues with sludge generation, scum, and FOG accumulation—and then establish the maintenance dose to ensure that the resolved issues do not return to the facility.

Resolution

The operator found that using BIO GENESIS® resulted in the removal of the scum/foam layer in the aeration basin, reduced impact of seasonal grease releases experienced during the tourist season, and better overall system stability throughout the year. Additionally, with the foam removal the operator reduced the number and frequency of typical maintenance issues associated with foam and grease freezing around the equipment during the winter time. It was determined that the 1 ppm dosage is appropriate for this system. By adding the product, polymer use has been greatly reduced.

The operator stated: “Thanks so much for your BIO GENESIS® product. Without the grease bubbles on the basin this winter I had no problems with the surface freezing, even when the temperature dropped to below zero. And this was the first spring I’ve not had some sort of upset condition: it’s as though weather patterns and seasonal flows don’t matter anymore. I’ll keep providing a maintenance dose going forward. It is as if the product is free, since I’ve been able to reduce my system dosing of alum and polymer.”

Product Information

Probiotic Solutions® BIO GENESIS® is a formulation of nutrients, organic acids, natural biological stimulants, and energy systems that balance the natural microbial ecosystem to increase bio-oxidation capacity in activated sludge systems. BIO GENESIS® reduces operating costs by lowering BOD/COD and improving settleability while controlling filamentous bacteria and reducing FOG.



Clarifier is free of foam, floating solids, and FOG after BIO GENESIS® use.

Probiotic Solutions® Product Information

For many years wastewater operators have continued to use BIO GENESIS® to cut sludge hauling costs.

Operators Using BIO GENESIS® Report:

- 1) **Reduced foam caused by filamentous bacteria.** BIO GENESIS® diversifies beneficial bacteria colonies to out compete filamentous bacteria.
- 2) **Improved settling to improve turbidity and water quality.** BIO GENESIS® improves the bacterial colonies, increasing natural flocculation to deliver a clearer effluent.
- 3) **Reduced sludge generation.** BIO GENESIS® stimulates the existing bacteria, reducing the quantity of bacteria required to process the wastewater.

BIO GENESIS® enhances endogenous respiration for faster and more complete oxidation of sludge into carbon dioxide and water.



Our Probiotic Solutions® Products

are Highly Efficient and Effective Due to Our Unique Delivery System

Call Toll Free Today for Your Free Quote and System Evaluation.

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